

CHAPTER – II

SOCIO- ECONOMIC STATUS OF RURAL WOMEN IN ASSAM

The status of women is a relative and multidimensional concept. It has legal, socio-economic and attitudinal dimensions. The socio-economic status of women generally refers to the life-style that a woman is entitled to lead within the family or society. The position of women in the society is based on the relative powers the women enjoy in comparison to the men's in a given society (Nadel, 1969: 36). Conventionally in a patriarchal society the status of women is guided by the enactment of various functions through traditions, customs, religion and culture. Status includes a woman and the society's perception of the role vis-a-vis man's (White, 1947). Thus, the position of women in the society is based on the relative powers that a woman enjoys in comparison to a man in a given society. The concept refers to the rights and privileges of a woman and the role assigned to her purely on the basis of gender. The rights and privileges of a woman in a given society are commonly measured by the socio-economic factors, freedom of choices, access to education, and employment opportunities, parent's educational aspirations for girl child, women's freedom of movement and access to money she can spend as she wishes. Besides these socio-economic attributes to the status of women, there are some other demographic attributes, which are also commonly used to measure the status of women.

Demographic attributes such as birth rate, death rate, infant mortality rate, life expectancy at birth, age composition, sex composition, age at marriage etc. indicate both the physical quality of human population and the level of socio-economic development of any region. These attributes are equally important to understand the physical well-being of women population of the region. An understanding of the demographic profile of women in the region is thus an essential precondition towards addressing the issues of women and development linkage (Duza, 1989), because these demographic attributes, though often remain invisible, have profound influence upon the health and socio-economic condition of women. However, the degree of influence may vary depending upon the factors associated with the attributes. In view of this, an attempt is made to examine the demographic characteristics of women population of Assam in terms of age and sex composition, fertility and mortality pattern, infant

mortality, life expectancy, marital status and age at marriage, labour force participation, and educational status. These attributes would certainly provide some insight into the physical well-being of women population in the state.

2.01 SEX RATIO

The study of sex ratio (number of females per thousand males, as defined by the Census of India) is vital in population study in a number of ways. Sex ratio is a function of three basic factors: sex ratio at birth, sex ratio at death and sex selective migration. It is an index of the socio-economic conditions of the population in an area. As a matter of fact, sex ratio has a profound impact on the demographic structure of any region including the growth of population, marriage, working force and employment pattern. Moreover, an imbalance in sex ratio may lead to the emergence of many social and moral evils. In addition, differentials in sex ratios are linked to variations in well-being and are vitally related to biological and social reproduction and also economic production (Momsen and Townsend, 1987). It is in this background that an analysis of the pattern of sex ratio in Assam in the light of national average is made to understand the status of women population in the region.

TABLE – 2.01
PERCENTAGE OF FEMALE POPULATION AND SEX RATIO

Year	Percentage of female population in total		Females per 1000 males	
	Assam	India	Assam	India
1951	46.45	48.48	877	946
1961	46.49	48.52	876	941
1971	47.25	48.17	899	930
1981	N/A	48.27	N/A	933
1991	47.98	48.25	923	927
2001	48.31	48.26	932	933
2011	48.81	48.56	954	940

Source: Census of India, Assam 1951, 1961, 1971, 1981, 1991 and 2001.

Provisional census report of India and Assam, 2011

The data pertaining to the trend in sex ratio (Table 2.01) in Assam during 1951-2001 reveal that it has always been lower than the national average. The prevalence of higher rate of mortality among females than that of males and the immigration of males in excess of females from outside the state may be the reasons behind shortage of females throughout the period 1951-2001. However, the sex ratio in Assam increased by about 3 percent as against negative growth at national level which was about -0.6 percent during 1951-2001. It is further satisfactory to note that the sex ratio of Assam is considerably higher than all India average in 2011. The shortage of females per one thousand male was only 46 in Assam as against 60 at national level in 2011. Ban on sex determination test at prenatal stage and rising trend of female literacy rate may be the reason for such satisfactory development.

Region wise, sex ratio of Assam are quite uneven. It is depicted in Table 2.02.

TABLE: 2.02
Region wise average sex ratio of Assam

Region	1991 (Female per 1000 male)	2001 (Female per 1000 male)	2011 (Female per 1000 male)
Lower Assam	930	940	957
Central Assam	928	936	956
Upper Assam	911	921	949
Assam	923	932	954
Barpeta District	939	941	958

Source: Statistical Hand Book, Assam, 2002 and 2004

Provisional census report of India and Assam, 2011

The sex ratio varies from as low as 949 in the Upper Assam to as high as 957 in the districts of Lower Assam in 2011. Lower Assam witnessed higher sex ratio than Central and Upper Assam. In fact, sex ratio of Lower and Central Assam are higher than average sex ratio of Assam during 1991-2011. Similarly, sex ratio of Barpeta District is also higher than average sex ratio of Assam during this period. Again, similar reasons like ban on sex determination test at prenatal stage and upward movement of female literacy rate may have contributed to such higher sex ratio in Central Assam and Lower Assam including Barpeta District. But, the sex ratio of Upper Assam has been lower than average sex ratio of Assam during the period 1991-2011. Prevalence of large number of tea gardens and low socio-economic status of females among the tea garden labourers may be the reason for such lower sex ratio in Upper Assam than that of Lower Assam, Central Assam and Assam as a whole.

The picture of sex ratio in the state becomes clearer when it is treated at the different age group level.

TABLE: 2.03
Age specific sex ratio of females in Assam

State/ Country	Age Group	1991	2001	2011
Assam	0 – 14	968	969	N/A
	15 – 59	912	920	N/A
	60 +	810	816	N/A
India	0 – 14	940	942	N/A
	15 – 59	995	898	N/A
	60 +	958	965	N/A

Source: Social and Cultural Tables, Series 1, India,
Census of India, 1991 & 2001

According to 2001 census, the sex ratio of females in the younger age group 0-14 is higher in Assam by about 1 percent in comparison to national average. This is indicative of higher percentage of birth rate and larger proportion of children in Assam causing a large number of dependent consumers. This means that the burden of dependence on the population is excessive in Assam in comparison to national level. It is however satisfactory to note that the working population (15-59 yrs) in Assam increased by about 0.4 percent during 1991-2001 as against substantial fall at national level by about 5 percent during this period. But the sex ratio of females in the older age group (60+) is considerably lower in Assam than national level both in 1991 and 2001. It was about 8 percent less in Assam than national level in both 1991 and 2001. Low sex ratio in age group 60+ in Assam is indicative of low life expectancy of the females.

2.02 AGE COMPOSITION

The age structure of population is considered as one of the basic demographic characteristics of population. Its study is important in a number of ways. Being basically determined by fertility, mortality and migration, the age structure of any population influences the growth of population, employment pattern, age at marriage and education in any region. The areas with high fertility rates constitute a large proportion of economically dependent population in the young age group 0-14. Such a situation may have a far-reaching impact on the population structure including high natural growth of population, high dependency ratio, increase of unemployment, lower age at marriage and lack of proper education. The impact of all these is likely to be even more pronounced upon the physical quality of life and socio-economic status of women population, and it may be more so in the developing countries. With these views, an attempt is made to analyse the age composition of population in Assam broadly in terms of age groups 0-14, 15-59, and 60+ as depicted in Table 2.04.

TABLE: 2.04
AGE COMPOSITION OF POPULATION IN ASSAM AND INDIA
(in percent)

State/ Country	Age Group	1991	2001	2007-08 (As per DLHFS)	2009 (est)
Assam	0 – 14	40.22	37.85	31.9	--
	15 – 59	54.23	56.15	60.9	--
	60 +	5.55	5.89	7.3	--
India	0 – 14	37.25	36.65	--	31.1
	15 – 59	55.67	56.20	--	63.6
	60 +	7.08	8.15	--	5.3

Source: a) Census of India, Series 1, India, Social and Cultural Tables, 1991 and 2001

b) District level Household and Facility Survey, Assam, 2007-08

c) 2009 (est) figures of India has been collected from Demographics of India – wikipedia, the Free Encyclopedia

It has been observed from Table 2.04 that the percentage of population in the age group 0-14 is higher in Assam as compared to national average in 1991 indicating high dependency ratio and fertility rate in Assam. However, with gradual improvement in the physical quality of life over the years in Assam, as elsewhere in the country resulting the fall in birth rate, death rate and infant mortality rate, the percentage of population in the young age group (0-14) has fallen significantly by about three percent in 2001 and eight percent in 2007-08 as against less than one percent at the national level in 2001 and eight percent in 2009. But, the percentage of population in the older age group 60+ has increased in Assam during the period 1991 to 2007-08 indicating gradual improvement in the physical quality of life. But the rate of increase was slow by about three percent during 1991-2001 and jumped to around ten percent during the period 2001 to 2007-08 as against around seven percent at national level during 1991-2001 and negative rate of increase during 2001-09 which was around 21 percent. However, the percentage of working population in the age group 15-59 has been lower in Assam than national average during 1991-2009. It was only one percent less than national level in 1991 which increased to around three percent during the period 2007-08 to 2009 indicating high dependency ratio in Assam than at national level.

2.03 Region wise average age composition of population in Assam

TABLE: 2.05

Region wise average age composition of population in Assam (in %)

Region	Age Group	1991	2001	2007-08
Lower Assam	0 – 14	41.48	36.72	32.8
	15 – 59	53.02	57.95	61.7
	60 +	5.48	5.33	7.1
Central Assam	0 – 14	42.10	37.62	32.5
	15 – 59	52.09	57.81	61.9
	60 +	5.72	5.25	7.4
Upper Assam	0 – 14	38.84	35.90	30.4
	15 – 59	55.44	59.11	59.2
	60 +	5.64	4.99	6.9
Assam	0 – 14	40.22	37.85	31.9
	15 – 59	54.23	56.15	60.9
	60 +	5.55	5.19	7.3
Barpeta District	0 – 14	42.23	37.87	32.2
	15 – 59	51.59	56.60	61.3
	60 +	6.17	5.83	6.7

Source: a) Census of India, Series 1, India, Social and Cultural Tables, 1991 and 2001

b) District level Household and Facility Survey, Assam, 2007-08

c) 2009 (est) figures of India has been collected from Demographics of India – wikipedia, the Free Encyclopedia

Table 2.05 reveals that the percentage of younger population (0-14) is higher in Barpeta District during the period 1991 to 2007-08 than the average figure of Assam during the same period indicating high dependency ratio and fertility rate in the district. However, the percentage of population in the age group 0-14 decreased in Barpeta District during the period 1991 to 2007-08. Moreover, the rate of decrease in Barpeta District was higher than Assam as a whole. The percentage of population in the age group 0-14 decreased in Barpeta District at the rate of 13 percent from 1991 to 2007-08 which was only 11 percent in Assam. Improvement in literacy rate and fall in the incidence of poverty are possibly the reasons for comparatively faster decrease in

population in the age group 0-14 in Barpeta District than Assam. Among the three regions of Assam, although the percentage of population in the age group 0-14 is the lowest in Upper Assam in 2007-08 and highest in Lower Assam, yet the percentage of population in the age group 0-14 have decreased during the period 1991 to 2007-08. But the rate of decrease is uneven. The rate of decrease is highest in Central Assam which is around 13 percent and it is about 12 percent in Upper Assam and Lower Assam indicating uneven development of educational attainment and success of poverty alleviation measures as poverty and illiteracy are directly related to fertility rate.

But the percentage of population in the older age group 60+ has increased in Barpeta District and Assam during the period 1991 to 2007-08 indicating increase in average longevity. However, the rate of increase of the percentage of population in the age group 60+ is faster in Assam than Barpeta District. It was only four percent in Barpeta District during 1991 to 2007-08 as against fourteen percent in Assam as a whole. Although it indicates lower dependency load in Barpeta District than Assam, yet it also indicates slow rise of average longevity of the said district. Region wise, the percentage of population in the age 60+ is the highest in Central Assam in 2007-08 followed by Lower Assam and Upper Assam. In fact, the percentage of population in Central Assam in the age group 60+ is almost similar to the average figure of Assam. During 1991 to 2007-08, the percentage of population in Central Assam and Assam as a whole in the age group 60+ increased by 13 percent as against only 10 percent in Lower Assam and Upper Assam. It indicates that the improvement in the physical quality of life in Central Assam has been better than Lower and Upper Assam in general and Barpeta District in particular.

Although, the percentage of population in the working age group 15-59 is marginally higher in Barpeta District than Assam as a whole, yet the difference is negligible (only 0.4 percent). However, the percentage of population in the working age group 15-59 years increased by 9 percent during the period 1991 to 2007-08 as compared to only 6 percent in Assam indicating social and economic development of the district is faster than Assam as a whole during this period as workforce is closely linked with the developmental level of an economy. Region wise, the percentage of working population is highest in Central Assam in 2007-08 and lowest in Upper Assam. In fact, the percentage of population in the age group 15-59 is almost one percent more in Central Assam than average figure of Assam. During 1991 to 2007-

08, the increase in the percentage of population in the working age group was highest in Central Assam i.e. around eight percent which was seven percent in Lower Assam and only three percent in Upper Assam indicating uneven socio-economic development of different regions of Assam.

2.04 Sex disparity in age composition

Table 2.06 depicts the sex disparity in age composition of population in Assam and other regions of the state i.e., Lower Assam, Central Assam and Upper Assam.

TABLE: 2.06
Sex disparity in age composition in Assam (in percentage)

Region/ State	Age group	1991		2001		2007-08	
		Male	Female	Male	Female	Male	Female
Lower Assam	0 – 14	42.07	40.68	38.99	38.66	32.6	33.1
	15 – 59	53.62	52.55	55.93	54.99	62.1	61.6
	60 +	5.63	5.34	5.43	5.98	7.8	6.4
Central Assam	0 – 14	43.08	41.20	40.19	38.54	31.9	33.4
	15 – 59	52.58	51.56	55.60	54.15	62.8	61.0
	60 +	6.19	5.34	5.85	5.65	7.10	7.9
Upper Assam	0 – 14	40.12	37.68	36.89	35.71	30.1	30.8
	15 – 59	56.06	54.75	58.39	57.52	60.1	58.4
	60 +	6.23	5.00	5.76	5.57	7.3	6.6
Assam	0 – 14	41.23	39.27	37.96	37.12	31.10	33.50
	15 – 59	54.66	53.43	57.07	56.05	61.90	60.10
	60 +	5.65	4.97	5.81	5.89	7.10	6.40
Barpeta District	0 – 14	42.61	41.87	40.37	40.12	31.4	33.6
	15 – 59	52.01	51.14	54.12	53.91	61.8	60.2
	60 +	6.11	6.23	5.75	6.72	6.8	6.2

Source: a) Census of India, Series 1, India, Social and Cultural Tables, 1991 and 2001

b) District level Household and Facility Survey, Assam, 2007-08

c) 2009 (est) figures of India has been collected from Demographics of India – wikipedia, the Free Encyclopedia

It has been observed from Table 2.06 that the percentage of female population in the younger age group (0-14 yrs) is less than males in Barpeta District and Assam as a whole during the period 1991-2001. However, the percentage of both male and female population decreased in Assam and Barpeta District during the period 1991-2001. But the rate of decrease of female population was about four percent in Assam as against three percent of males during the decade 1991-2001. Similarly, the rate of decrease of female population in Barpeta District was more than males during the same period. It was three percent for females as against two percent of males. Almost same picture has been observed in different regions of Assam. The percentage of female population was less than their male counterparts in Lower Assam, Central Assam and Upper Assam during the period 1991-2001 in younger age group. However, the percentage of both male and female population decreased in all the three regions of Assam in the younger age group during the period 1991-2001. But, the rate of decrease of female population was faster than males in almost all the regions. The rate of decrease of female population in the age group 0-14 yrs was about four percent in Lower Assam as against only two percent of males during the period 1991-2001. It was three percent for males in Central Assam as against four percent of females. In Upper Assam, the rate of decrease of female population was about four percent in the younger age group during the period 1991-2001 in comparison to three percent of their male counterparts. No generally acceptable and satisfactory explanation can be given for the overall picture of a lower number of females. However, a few reasons may be indicated. First is that, girls in Assam as elsewhere in India are not as adequately looked after as boys. As a result, infant mortality among girls is high. Secondly, the burden of bearing children at an early age, and the greater frequency of births at short intervals lead to death of many women. Last but not the least is the all-pervasive male child preference which has been the cause of female feticide. However, the percentage of female population in the age group 0-14 yrs is marginally higher than males during the period 2001 to 2007-08 in Assam in general and Barpeta District and the three regions of Assam in particular. Ban on sex determination test and improvement in literacy rate may be the reasons for higher percentage of females than males.

Although the percentage of females in the working age group 15-59 yrs is almost same in the Barpeta District to the average figure of Assam in 2007-08, yet the percentage of female population is lower than males in Assam and Barpeta

District during the period 1991 to 2007-08. The percentage gap between male and female in the working age group 15-59 yrs was almost one in 1991 in Barpeta District and it increased to almost two in 2007-08. The picture is also same for Assam during the period 1991 to 2007-08. Such unsatisfactory demographic situation in Assam is the combined result of negligence of females in the infant age, maternity death mainly due to early age of marriage and prevalence of low mobility rate among the females from rural to urban. Region wise, the percentage gap between males and females in the working age group 15-59 yrs is almost same in Central and Upper Assam. It was around one percent in 1991 and increased to two percent in 2007-08. The only difference is the Lower Assam where the percentage gap between males and females in the economically active group 15-59 yrs was almost one percent in 1991 and the said gap was decreased to less than one percent in 2007-08. This may be due to higher percentage of urban population in Lower Assam as the capital city of Assam and BTAD (Bodoland Territorial Area Districts) head quarters are included within the Lower Assam in this present study.

Although the percentage of male and female population in the age group 60+ increased in Assam during the period 1991 to 2007-08, it is almost stagnant in Barpeta District. The percentage of female population in the age group 60+ increased in Assam at the rate of almost twelve percent from 1991 to 2007-08. But, the rate of increase of female population in Barpeta District is almost negligible during the same period. It indicates that the life expectancy of females in Assam has been increasing and in Barpeta District it is almost stagnant during the period 1991 to 2007-08. Region wise the rate of increase of male and female population in the age group 60+ is unequal during the period 1991 to 2007-08. For example, the rate of increase of male population in age group 60+ in Lower Assam was about sixteen percent during the period 1991 to 2007-08 as against only nine percent of female population which indicates slow increase of the longevity of life of females than that of male counterparts. But, the rate of increase of female population in Central and Upper Assam was higher than males during the period 1991 to 2007-08. It was 14 percent for females as against 12 percent for males in Central Assam and 13 percent for females as against only eight percent of males during the period 1991 to 2007-08. But, still there are male-female gap in both the two regions in 2007-08 where percentage of male population in the age group 60+ is marginally higher than females indicating the same thing i.e. longevity of life of male population is marginally more than females.

2.05 Population in the age groups 0-6:

The population in 0-6 age group of state / region shows whether the population is increasing or decreasing or has stabilized. Table 2.7 depicts region wise distribution of percentage of population in the age group 0-6.

TABLE: 2.07

Region wise distribution of percentage (average) of population in Assam in the age group 0-6

Region	1991		2001		2011	
	Male	Female	Male	Female	Male	Female
Lower Assam	20.15	21.01	17.03	17.50	14.09	14.66
Central Assam	20.35	21.46	17.37	17.89	15.00	15.09
Upper Assam	18.13	19.51	15.76	16.30	14.31	14.42
Assam	19.20	20.29	16.62	17.15	14.45	14.98
Barpeta District	21.01	21.47	18.78	19.26	16.28	16.96

Source: Census of India, Series 1, India, Social and Cultural Tables, 1991 & 2001

Provisional census report of Assam, 2011.

It has been observed from Table 2.07 that the population of Assam in the age group 0-6 yrs is declining from one census to another. However, the percentage of female population declined more rapidly than male population. While the percentage of male population declined by around fourteen percent from 1991 to 2011, the percentage of female population declined by fifteen percent during the same period although the percentage share of the population in the age group 0-6 years is higher among the females in Assam than males. Similar trend has also been observed in Barpeta District where percentage share of male population in the age group 0-6 yrs

declined by eleven percent from 1991 to 2011 as against twelve percent of females, although percentage of both male and female population in the said age group in Barpeta District is higher than the average figure of Assam in 2011. Among the regions of Assam, the percentage of female population in the age group 0-6 yrs declined more rapidly in Upper Assam followed by Lower Assam and Central Assam during the period 1991- 2011. It declined by about twenty eight percent in Upper Assam from 1991 to 2011 as against only twelve percent of males. In Lower and Central Assam the rate of decline of female population was eighteen and seventeen as against seventeen and fifteen of their male counterparts, although the percentage share of females were more than that of males. No satisfactory explanation can be given for the fast decline of females than males. However, a few reasons can be indicated. One is that male child preference which has been the cause of female feticide. Secondly, higher infant mortality among the girls as girls are not as adequately looked after as boys in male dominated society like Assam and finally, lack of adequate medical facilities in rural areas and lack of adequate family planning awareness.

2.06 Fertility, Mortality, Natural Growth Rate and Infant Mortality Rates:

Fertility which is expressed in a variety of ways is the most important determinant of natural increase of population in any region. It may be expressed in terms of general fertility rate, age-specific fertility rate, marital fertility rate and crude birth rate. The fertility rate is also considered as an important indicator of physical well-being of women population. It is closely associated with the health conditions of child bearing women, and educational advancement, economic condition and socio-cultural background of the population of a region.

Like fertility, mortality is another important determinant of natural increase of population in any region. It is also considered as an indicator of physical well-being of the population. As fertility rate is linked to a great extent with the mortality rate, the physical well-being of the women particularly of the child bearing age is also indicated by the mortality pattern of population of any area. However, the influence of other associated socio-economic factors in this regard cannot be ignored.

Similarly, the quality of human population and health status of women population can be judged by looking into the infant mortality pattern. It is because the fertility rate of any population is directly related to the infant mortality pattern.

The data obtained from Sample Registration Bulletin published by the Registrar General of India (Table 2.08) depicts some features about the trend in the birth and death rates, natural growth rate and infant mortality rate in the state.

TABLE: 2.08
Birth Rate, Death Rate, Natural Growth Rate and Infant Mortality Rate in India and Assam (Per Mille)

Year	Birth Rate		Death Rate		Natural Growth Rate		Infant Mortality Rate	
	Assam	India	Assam	India	Assam	India	Assam	India
1991	30.9	29.5	11.5	9.8	19.4	19.7	81	80
2001	27.0	25.4	9.6	8.4	17.4	17.0	74	66
2005	25.0	23.8	8.7	7.6	16.3	16.3	68	58
2006	24.6	23.5	8.7	7.5	15.9	16.0	67	57
2007	24.3	23.1	8.6	7.4	15.7	15.7	66	55
2008	24.0	22.7	8.4	7.2	15.6	15.5	64	53
2009	23.9	22.8	8.6	7.4	15.4	15.4	64	53

Source: Sample Registration Bulletin, R.G.I., New Delhi, Demographics of India – Wikipedia, The Free Encyclopedia and The Economic Survey, Assam, 2009-10

Data presented in Table 2.08 indicates that the birth rates of Assam are higher than all India average during the period 1991-2009, but there has been a gradual decline of birth rate from 1991 to 2009 compared to birth rate in many states of India, this is very high. For instance, according to the SRS Bulletin, 2009, the birth rate is 18.3 per mille for Andhra Pradesh, 14.7 for Kerala, 17.0 for Punjab, 16.3 for Tamil

Nadu and 17.2 for West Bengal. Thus, in comparison, birth rate in Assam is high. It is also higher than national average during 1991-2009.

Not only birth rate is high, it has remained almost stable at a high level during the five years period from 2005 to 2009. In the eighteen years or since 1991, there has not been any marked decline. For example, it fell from 30.9 (1991) to 23.9 in 2009. There is thus a fall of only 7 in as many as eighteen years. High birth rate in any region is a special feature of underdevelopment. Many economic and non-economic factors may be indicated for this high birth rate. Among them, the major ones are poverty, early age at marriage, illiteracy and a large ignorance of family planning.

Although, the death rate in Assam has been declining during the period 1991-2009 due to improvement of medical facilities and public health services along with sanitation facilities, yet the death rate has remained higher than national average. The death rate in Assam was around eight percent more than national average in 1991 which marginally declined to almost seven percent in 2009. It indicates that a large section of people are still deprived from adequate medical and health facilities. Most of them are ignorant about health and hygiene.

It has also been observed that the national growth rate of population has been falling in Assam as well as in India during 1991-2009. It is mainly due to fall in birth rate and death rate. But, birth rate exceeded death rate during the whole period. The national growth rate of population declined only by 4 per mille during the eighteen years period (1991 to 2001), indicating that the state has remained at the second stage in the theory of demographic transition.

The infant mortality rate which is an index of health status of women has been declining in Assam and India during the period 1991-2009. But, the rate of decline of IMR in Assam is slower than national level during this period. During 1991-2009, the IMR in Assam fell from 81 to 64 per mille. There is thus a fall of only 17 per mille as against 27 per mille at all India level. In other words, the IMR of Assam declined by only 12 percent from 1991 to 2009 as against 20 percent at national level. Moreover, the IMR of Assam has remained higher than national level during the period 1991 to 2009 indicating low health status of women population of Assam than national level. It also indicates higher rate of maternal mortality as there is the possibility to increase infant mortality where pregnancy occur repeatedly and in quick succession. One very

important matter that has been observed is a high degree of positive correlation (+0.95) that exists between the IMR and birth rate in Assam. This implies that high IMR of Assam is associated with high birth rate as it induces couples, especially among the poor, to maintain a larger size of family.

2.07 Sex Specific Mortality Rate:

It is however satisfactory to note that the female mortality rate in Assam (also India) is less than that of males (Table 2.09). But female mortality rate in Assam is quite high than the national average during 2001-2009.

TABLE: 2.09
Sex specific mortality rate in Assam and India (per mille)

Year	Country / State	Total	Male	Female
2001	Assam	9.6	10.4	8.8
	India	8.4	9.1	7.8
2003	Assam	9.1	9.2	9.1
	India	8.0	8.4	7.5
2005	Assam	8.7	9.3	7.9
	India	7.6	8.0	7.1
2006	Assam	8.7	9.2	8.1
	India	7.5	8.0	7.0
2009	Assam	8.4	9.3	7.4
	India	7.3	7.8	6.7

Source: SRS, RGI, India.

It has been observed from Table 2.09 that the female mortality rate in Assam is less than that of males during the period 2001-2009. The male mortality rate has declined by only about 6 percent from 2001 to 2009 as against by 14 percent in case of female mortality rate. The factors which have largely contributed to this lower female mortality rate include rise in the age at marriage and sharp decline of child marriage, reduction in the probability of unsafe delivery at home and improvement of public health measures like drinking water supply, improved hygienic and sanitation facilities and the improvement of medical and hospital facilities. But, the female mortality rate of Assam is higher than national average during the period 2001-2009. Moreover, the gap of female mortality rate between Assam and India was almost same during the whole period 2001 to 2009. It was 1 per mille in 2001 which marginally declined to 0.7 per mille in 2009. It indicates that the health status of Assamese women is lower than national level.

2.08 Life Expectancy:

Life expectancy reflects very well the physical well-being of population in a region. The life expectancy at birth is dependent on a host of demographic and health parameters. It is also associated with the infant mortality rate of any population. It is generally observed that the life expectancy is high where the infant mortality rate is low and vice-versa. Again, in most of the cases, the life expectancy is directly associated with the level of economic development.

In spite of the improvement of medical facilities and significant fall in the infant mortality rate, the life expectancy at birth (LEB) in Assam has still been as low as 58.95 years in 2002-06 as against 63.4 years at national level for the same year (Table 2.10).

It is evident from Table 2.10 that there exists a male-female differential in life expectancy. In the 10 year period (1970-80) the female life expectancy of Assam was lower than males. The male-female gap in life expectancy was more than one year during 1970-80. However, the female life expectancy increased by almost 6 percent during the period 1970-80 as against 5 percent of male life expectancy. But the life expectancy of both males and females were lower in Assam than national level during 1970-80. However, the rate of increase in male and female life expectancy was more

in Assam than national level during the period 1970-80. The rate of increase in male and female life expectancy at national level was 3 percent for females and 2 percent for males during 1970-80.

In the subsequent period, Assam as well as India has witnessed a higher female LEB as compared to the male. Over the seventeen year period (1989-2006), the male-female gap in life expectancy was almost stagnant at 0.7 years in Assam. It indicates that the quality of life of women has not increased rapidly, although female LEB is higher than males. Moreover, the rate of increase of male and female LEB was around 3 percent during 1989-2006 which was lower than 1970-80 decade. In other words, the rate of increase of female LEB was almost half during 1989-2006 as compared to 1970-80 indicating that the medical and health care facilities for women had not developed satisfactorily as per requirement. Further, the life expectancy of both males and females in Assam were lower than national level during 1989-2006. It was almost 4 percent lower than national level during 1989-2006. Moreover, the rate of increase in life expectancy of both male and female in Assam was slower than national level during 1989-99 to 2002-06. It was around 3 percent in Assam as against 4 percent at national level. Thus the improvement in the quality of life of population in Assam including women was not only slower but also lower than national level indicating slow rate of economic development.

TABLE: 2.10
Life Expectancy at Birth in India and Assam

State/ Country	1970 - 75			1976 - 80			1989 - 99			1998 - 02			1999 - 03			2000 - 04			2001 - 05			2002 - 06		
	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F
Assam	45.5	46.2	44.8	51.0	51.6	50.4	54.95	54.6	55.3	57.9	57.7	58.1	58.05	57.8	58.3	58.3	58.0	58.6	58.6	58.3	59.0	58.9	58.6	59.3
India	49.75	50.5	49.0	52.3	52.5	52.1	59.3	59.0	59.7	62.4	61.6	63.3	62.6	61.8	63.5	62.9	62.1	63.7	63.1	62.3	63.9	63.4	62.6	64.2

Source: SRS, RGI of India, based Abridge Life Tables 1976 - 80, 1998 - 02 and 2002 - 06

An important aspect that has been observed is the low degree of negative correlation (-0.35) that exists between infant mortality rates and LEB for females in Assam during 2001-06 as against high degree of negative correlation (-0.98) between the two at national level during the same period. This implies that LEB is high where the IMR is low and vice-versa.

It has also been observed from Table 2.11 that there exists a male-female differential in the projected levels of LEB during 2011-25 in Assam and India. The female LEB was almost 2 years higher at national level than males as against less than 2 years in Assam over the projected period 2011-25. This increase in the LEB has become possible due to fall in the IMR, improvement in ante-natal and post-natal care, and general improvement in medical facilities and better control of diseases. However, such favourable development is slow in Assam than national level as male-female gap of LEB in Assam is lower than national level. Further, the projected LEB for both males and females were low in Assam in comparison to national level during the period 2011-25. However, over the ensuing fourteen years (2011-25) the female LEB has been projected to increase by 4 years in Assam as against almost 3 years in India.

TABLE: 2.11

Projected Levels of Expectation of Life at Birth in India and Assam

Country / State	2011-15		2016-20		2021-25	
	Male	Female	Male	Female	Male	Female
India	67.3	69.6	68.8	71.1	69.8	72.3
Assam	63.6	64.8	65.6	66.8	67.1	68.8

Source: Report of the Technical Group on Population Projections, May 2006, National Commission of Population / MOHFW and National Health Profile, 2008, MOHFW.

2.09 Marital Status:

Marital status may also be used as an indicator of women's well-being. It is associated with both demographic and social aspects of human population of a region. Marital status of any population includes never married population, married population, widowed or widower population and divorced or separated population in respect of both male and female. The proportion of never married at the younger age is considered as an important indicator of

possible access to options other than marriage and the relative acceptability of remaining single for each sex and age group (United Nations, 1984). Besides the economic and socio-cultural factors including fertility and mortality behaviour, the marital status significantly influences the overall quality of human population. The influence of marital status upon the womenfolk is again more striking.

Never Married Population in Assam:

It has been observed from Table 2.13 that the percentage of never married male and female population in Assam have been quite high than the national averages. The percentage of never married female was almost 18 percent higher in Assam than national level in 1971 which was declined to 8 percent in 2001. But, for males it was almost 11 percent higher in Assam than national level in 1971 and it has remained stagnant in 2001. Though, the percentage of unmarried female population as found in Assam is primarily the result of relatively late marriage of females, yet the percentage of unmarried female population of Assam has been declining over the period 1971-2001 indicating higher intensity of marriage leading to probability of higher birth rate. Moreover, the male-female differential of never married was significantly higher in Assam than the country as a whole. The male-female gap of never married was almost 6 percent in Assam in 1971 which increased to almost 10 percent in 2001. But, at national level it was almost 9 percent in 1971 and rapidly declined to almost 7 percent in 2001. This happens due to fast decrease in the percentage of never married women in Assam than national level. During 1971-2001, the percentage of never married women declined by 4 percent as against only 0.28 percent for males in Assam. But at the national level, the percentage of never married women increased by almost 2 percent during 1971-2001 as against no increase or decrease in the percentage of never married males. This indicates that the percentage of never married women had declined rapidly over the period 1971-2001 in Assam enhancing the possibility of higher percentage of married population.

Married Population in Assam:

It has been observed from Table 2.12 that the percentage of married male and female has been increasing in Assam as well as India over the period 1971-2001. It has also been observed that the percentage of married male and female is less in Assam than national level during 1971-2001. But, the rate of increase of married female was higher in Assam than

national level. Over the period 1971-2001, the percentage of married female has been increasing in Assam by 8 percent as against only 2 percent at national level. However, the rate of increase of married male is almost same in Assam and India during 1971-2001 i.e. around 1 percent. Although the possibility of early marriage in Assam is less than national level due to lower percentage of married female in Assam in comparison to India, yet such possibility has been decreasing over the period 1971-2001. This may be possible due to high growth of population in Assam which is around 2 percent per annum. Further, the percentages of married females have been higher than males in Assam and India during the period 1971-2001. It indicates that the females are married earlier than males resulting in large number of births.

Widow Population in Assam:

It has been observed from Table 2.12 that the proportion of widows is more than that of widowers in Assam as elsewhere in the country. Although the percentages of widows have been decreasing over time both in Assam and the country, the percentages of widows remain high in comparison to widowers during 1971-2001, which may be due to prevailing social restriction of widow remarriage unlike the widower remarriage. Although the percentage of widows and widowers are less in Assam as compared to the country as a whole, the rate of decrease of widows is slower over the period 1971-2001. It decreased by about 24 percent at national level as against only 16 percent in Assam from 1971 to 2001. It indicates that the rate of decrease in male mortality is slower in Assam than national level although medical and health facilities have been improving over the period.

Divorced / Separated Population in Assam:

The situation is quite discouraging in respect of the proportions of male/ female divorced/ separated population in Assam as well as the country as a whole. It is because of the percentage of female divorced / separated populations in Assam as well as the country as a whole are higher than males. Female divorced/separated population was 56 percent higher than males in 1971 and it was 46 percent higher in 2001. However, at national level, it was 47 percent higher than males in 1971 and it was about 44 percent in 2001. The incidence of divorced/separated among the female is found to be more, because most of the divorced/separated females seldom get remarried due to social restrictions unlike in the case

of male divorced/separated ones. All these have adverse effect upon the demographic and social quality of human population and more so among women in Assam.

2.10 Age at Marriage:

Marriage which forms basis of social life is almost universal in India. Although marriage is a social phenomenon, "age at marriage" is considered a demographic one. It is because age at marriage determines the fertility and natural growth of population. In India, child marriage was the norm till the recent past. It was more common in the states of northern India than those of southern India. During the last few decades, various laws have been enacted in India to prevent child marriage. The Child Marriage Restraint Act called "Sarada Act" enacted in 1929, placed restrictions on marriage of girls and boys below the ages of 12 and 15 respectively. Following an amendment of this Act in 1949, the legal minimum ages at marriage for females and males were raised to 15 and 18 respectively. Again, according to Child Marriage Restraint Act of 1978, the legally prescribed minimum age at marriage in India is 18 years for girls and 21 years for boys. Nevertheless, due to a number of socio-economic problems, the registration of marriages is not yet made popular in Assam as well as the country.

2.11 Mean age at Marriage:

It has been observed from Table 2.13 that the mean age at marriage for both male and female population in Assam is higher than national level. For example, the mean age at marriage for females in Assam was 1 year more than national level in 1971 which increased to only 1.4 years in 2001. But, for males the mean age at marriage for Assam was only 1.3 years more than national level in 1971 and increased to almost 3 years more than national level in 2001. Two important things have been observed from such increase of the mean age at marriage. Firstly, although the mean age at marriage for both male and female population in Assam is higher than national level, yet the increase of the mean age at marriage has been slow indicating that marriage is not only universal, but it takes place at an early age. Secondly, male-female differentials of the mean age at marriage have been widening indicating that the parents are willing to marry their girl child at an early age rather than to wait and invest resources for a longtime to create assets for them.

Region wise, the mean age at marriage for both males and females are highest in Upper Assam and lowest in Central Assam during the period 1971 to 2007-08, although sex ratio of Central Assam was 1000:956 as against 1000:949 in Upper Assam in 2011 indicating limited impact of the Child Marriage Restraint Act of 1978 and tendency for early marriage. Although the increase in mean age at marriage is different in different regions of Assam, yet it has been observed that the increase of the mean age at marriage has been slow and the male-female differentials of the mean age at marriage have been widening over the period 1971 to 2007-08. It also indicates that girls are allowed to get married at an early age than boys and hence they get limited scope to equip themselves through modern education as probability of engaging in education is very low particularly of a poor family.

TABLE: 2.12

Sex-wise Marital Status in Assam

(As percentage of Total)

State/ Country	Year	Never Married		Married		Widow		Divorced / Separated		Unspecified Status	
		M	F	M	F	M	F	M	F	M	F
Assam	1971	61.96	55.39	35.50	37.38	2.22	6.72	0.27	0.48	0.05	0.03
	1991	62.17	53.58	36.22	40.27	1.45	5.74	0.12	0.39	0.01	0.02
	2001	61.61	51.27	36.38	43.56	0.98	4.86	0.14	0.30	0.89	0.01
India	1971	54.90	45.62	41.80	45.08	2.94	8.86	0.25	0.39	0.09	0.05
	1991	56.12	46.28	42.60	46.89	1.95	6.36	0.15	0.41	0.08	0.06
	2001	54.82	47.32	42.89	46.75	2.01	5.37	0.21	0.48	0.07	0.08

Source: Socio-Cultural Tables, Census of India, 1971, 1991 and 2001.

TABLE : 2.13
Mean age of marriage in Assam

Region/ State/ Country	1971		1991		2001		2007-08	
	Male	Female	Male	Female	Male	Female	Male	Female
Lower Assam	19.2	17.6	22.8	18.8	24.8	19.4	27.1	20.8
Central Assam	18.9	17.2	22.1	17.4	24.1	19.2	26.1	20.6
Upper Assam	20.6	18.8	24.2	19.8	25.1	20.8	27.0	21.1
Barpeta District	—	—	23.1	18.42	24.6	19.8	26.8	19.8
Assam	19.5	17.8	22.8	18.9	25.7	19.7	26.9	20.8
India	18.2	16.8	20.1	17.1	22.6	18.3	—	—

Source: a) Census of India, 1971, 1991 and 2001
b) DLHFS, 2007-08, Assam.

2.12 Maternal Mortality Rate:

Maternal death or maternal mortality, also “obstetrical death” is the death of a woman during or shortly after pregnancy. According to the World Health Organization (WHO), a maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. Maternal mortality is a sentinel event to assess the quality of health care system.

Maternal Mortality Ratio is the number of maternal deaths per 100,000 live births. The MMR is also used as a measure of the quality of a health care system.

Table 2.14 depicts Maternal Mortality Ratio in India and Assam.

TABLE : 2.14
Maternal Mortality Rate
(Per 100,000 live birth)

State/ Country	1997-98	1999-2001	2001-03	2004-06
Assam	568	398	490	480
India	398	327	301	254

Source: a) SRS, Maternal Mortality in India: 1997-2003, Trends, Causes and Risk Factors, RGI, India.
b) Special Bulletin on Maternal Mortality in India 2004-06, SRS, RGI, April 2009

It has been observed from Table 2.14 that the maternal mortality ratio of Assam has been decreasing very slowly in comparison to national level during the period 1997-98 to 2004-06. While, the rate of decrease of MMR in Assam was almost 9 percent during 1997-98 to 2004-06, the rate of decrease of MMR at all India level was almost 22 percent. Moreover, the MMR of Assam is quite higher than national average during the said period. In fact the MMR of Assam was almost 30 percent higher than national level in 2004-06. It indicates that the quality of female health care system in Assam is poor than all India level. According to the WHO in its 2005 World Health Report, the major causes of MMR are severe bleeding/hemorrhage, infections, unsafe abortions, eclampsia, obstructed labour, malaria, anaemia, HIV AIDS and cardiovascular disease, complicate pregnancy etc. The Report also pointed out that the high rates of maternal deaths occur in some areas that have high rates of infant mortality, reflecting generally poor nutrition and medical care. In Assam, infant mortality rate was 67 per mille in 2006 (Table 2.8) with high MMR at 480 per 100,000 live birth. It was 74 per mille in 2001 with high MMR at 398 per 100,000 live births. Further, low birth weight of child is correlated with maternal death from cardiovascular disease (WHO). Conversely, heavier child birth weight is correlated with lower risk of maternal death (ibid). Another issue that is associated with maternal mortality is the lack of access to skilled medical care during child birth and distance of traveling to the nearest clinic to receive proper care. Even so, the nearest clinic may not provide decent care because of the lack of qualified staff and equipment. Table 2.16 depicts causes of maternal death from 2001-03 in Assam and India.

It has been observed from Table 2.16 that 37 percent of maternal death occurred in Assam due to bleeding/ hemorrhage as against 38 percent at national level. 33 percent of maternal death was occurred in Assam due to other conditions like lack of access to skilled medical care during child birth, distance of traveling to the clinic, lack of qualified staff and equipment etc. as against 34 percent of national average. 11 percent of maternal death was occurred in Assam due to sepsis, 4 percent due to hypertensive disorders, 5 percent due to obstructed labour and 10 percent due to unsafe abortion. The corresponding national rate was 11 percent due to sepsis, 5 percent due to hypertensive disorders, 5 percent due to obstructed labour and 8 percent due to unsafe abortion. Such phenomenon indicates that female health care facilities in Assam and India are still backward. But Assam is more lagging behind in providing better female health care facilities than all India level.

TABLE : 2.15

Causes of Maternal Death from 2001-03
(in percent)

Causes	India (%)	Assam (%)
Hemorrhage	38	37
Sepsis	11	11
Hypertensive Disorder	5	4
Obstructed Labour	5	5
Abortion	8	10
Other Condition	34	33

Source: SRS, Maternal Mortality in India: 1997-03 Trends, Causes and Risk Factors, RGI, India.

2.13 Literacy rate:

Literacy and educational attainment are considered to be the hallmark of modern society. The traits of modern society such as urbanization, industrialization and modernization are closely associated with the level of literacy and education. In addition, the issue of educational development is so basic and fundamental to human life that its

differential level results in disparities among people and places (Desai, 1991). In recognition to this, developing countries like India view literacy and education as necessary and basic ingredients of economic and social development planning (Sharma and Rather Ford, 1987). Unfortunately, a major part of Assam is lagging behind in respect of literacy and education than many other parts of the country. This is even more so in the case of female population of Assam. Again, spread of women's education is not only vitally important for balanced socio-economic development of any region via socio-economic uplift of a society but also as a factor for overall educational development.

Further, female education which influences fertility and mortality rates and age at marriage of women, in turn helps control population. As a matter of fact, literacy attainment is a part of larger societal changes and it needs to be placed in proper perspective, without which the regional inequality as well as gender discriminations will not disappear even as general literacy rate rises (Raju, 1993).

As elsewhere in the country, in Assam also, the level of female literacy is not only lower than that of the males, but also varied regionally. Table 2.16 depicts literacy rate of males and females during different census period.

TABLE: 2.16
Literacy Rate of Assam and India by Sex
(in percent)

Year	Assam			India		
	Total	Male	Female	Total	Male	Female
1951	18.53	28.01	7.58	18.33	27.16	8.86
1961	32.95	44.28	18.62	28.30	40.40	15.35
1971	33.94	43.72	22.76	34.45	45.96	21.97
1981	N/A	N/A	N/A	43.57	56.38	29.76
1991	52.89	61.87	43.03	52.21	64.13	39.29
2001	63.25	71.28	54.61	64.84	75.26	53.67
2011 (P)	73.04	78.81	67.27	74.04	82.14	65.46

Note: N/A : Not available because 1981 census was not conducted in Assam
Source: Census of India.

The definition of literacy used in the present study is the one taken by Census of India (1961-1991). Accordingly, a person who has the ability to read and write with understanding in any language is termed as a literate. To be classified as a literate, a person need not have received any formal education or passed any minimum standard to qualify as literate. A person who could merely read but not write was not defined as literate.

Children below 5 years of age were also defined as illiterate till the 1981 census. But in 1991 census the age has been raised to 7 years.

There has been change in the definitions of literacy rate from one census to the other. During 1961-81 censuses, the literacy rate was defined as the proportion of literates to the total population and expressed in percentage. But, in 1991 census, it has been defined as the proportion of literates to total population of the age group 7 years and above and also expressed in percentage.

TABLE: 2.17
Region wise Literacy Rate in Assam

Region	1991		2001		2011 (P)	
	Male	Female	Male	Female	Male	Female
Lower Assam	57.00	37.61	67.66	50.09	75.25	64.12
Central Assam	61.81	42.80	71.14	53.81	77.83	66.15
Upper Assam	65.65	46.79	79.66	57.98	84.04	71.75
Barpeta District	52.61	33.20	57.35	47.07	70.72	59.04
Assam	61.87	43.03	71.93	54.61	78.81	67.27

Source: Census of India.

It has been observed from Table 2.16 that the total literacy rate has been on the increase in Assam and India, with a sharp step-up in the latest 1991 to 2011. As per Provisional Census Report of 2011, the literacy rate at 73.04 percent in Assam and 74.04 in India marks around 9 percentage points rise over the previous rate of 2001. Although female literacy rate in Assam is higher than national level since 1991, yet there is male-female differential of literacy rate. However, the male-female differentials of literacy rate have been reducing over the period 1951-2011 both in Assam and India. In 1951, the male-female differential in literacy rate in Assam was almost 20 percent as against 18 percent at national level. It was reduced to around 11 percent in Assam and 17 percent at national level in 2011. Expansion of educational facilities and improvement of attitude towards girl child are some of crucial factors behind the reduction of gender gap in literacy rate. Despite a noticeable uptrend in the female literacy rate, it continues to be low and much below that achieved in some other states of India, and as such it is unsatisfactory. For example, the female literacy rate of Kerala is 92 percent and the female literacy rate of neighbouring state Mizoram is 89.4 percent and it is 83.10 percent in Tripura in 2011.

Not only there are male-female differentials in literacy rate in Assam, but also there are significant regional variations. Table 2.17 depicts region wise literacy rate in Assam.

It has been observed from Table 2.17 that the female literacy rate in Lower Assam and Barpeta District were lower than average literacy rate of Assam during the period 1991-2011. The female literacy rate of Lower Assam was almost 5 percent less than average literacy rate of Assam in 1991 as against almost 10 percent less in Barpeta District. However, it was reduced to around 3 percent in Lower Assam and 8 percent in Barpeta District in 2011. Although female literacy rate of Central Assam is marginally lower than the average figure of Assam, the difference is negligible. In fact, the female literacy rate of Upper Assam was the highest among the three regions of Assam during 1991-2011 as the mean age of marriage was highest in Upper Assam. Early marriage of females and poverty may be the major impediments in achieving higher literacy rate in Lower Assam and Barpeta District. Moreover, the female literacy rate in the three regions of Assam is lower than male literacy rate during the period 1991-2011. The male-female differential in literacy rate was around 19 percent in all the three regions of Assam including Barpeta District. However, it declined to around 11 percent in 2011. Although the gender gap in literacy rate has been declining in the three regions of Assam including Barpeta District, yet the pace of decline is very slow indicating that males are enjoying better educational opportunities and females are at a

disadvantage in accessing such opportunities due to early marriage and pressure of household work as the society is still underdeveloped.

Prevalence of low literacy among women in various regions of Assam, as elsewhere in the country has been attributed to the cumulative effects of physical, economic and social constraints including the legacy of the past (Guha, 1979). Briefly speaking, continuance of strong societal prejudices against women's mobility and education including late marriage in most parts of the state is quite discouraging at least at this age of modern science and technology. Such a practice has generally brought the status of Assamese women lower in the society.

The variation in women literacy rates in Assam will be further clear when it is viewed separately for rural and urban areas of various regions of Assam as is depicted in Table 2.18. At the state level, the rural-urban differential of female literacy rate was 33.81 percent as against lower differential of male literacy 25.46 percent in 1991. However, the rural urban differential in female literacy declined to 28.3 as against 20.76 percent differential for males in 2001. Two important aspects may be noted from this rural-urban gap. Firstly, rural-urban gap in female literacy is higher than males. Secondly, rural-urban gap in female literacy has been decreasing over the period 1991-2001, although, such decrease is slow. The prevalence of high rural-urban differential in female literacy may be due to the availability of better educational facilities accompanied by educational consciousness among the urban residents. In contrast, lack of adequate educational facilities and awareness both among the girls and their parents has been responsible for low female literacy in rural areas. Women in rural areas, particularly those having least access to the outer world, are much deprived due to gross neglect of women's education. Better economic condition of the majority of urban dwellers has also been an additive factor in this regard.

Although female literacy rate of Central Assam was almost the same as average female literacy rate of Assam and that for Upper Assam it was higher than the average figure of Assam, there still exists a rural-urban differential. The rural-urban gap in female literacy was almost 34 percent in Lower and Upper Assam and it was 31 percent in Central Assam in 1991. The rural-urban gap in female literacy rate in Barpeta District was highest i.e. almost 35 percent in Assam in 1991, in comparison to all the three regions and that of Assam (34 percent). Although there has been reduction in rural-urban gap in female literacy rate in 2001, the pace of decline has been slow. It decreased to only 30 percent in Lower Assam which was almost the same as the rural-urban gap in Assam. However, the rural-urban gap in female

literacy rate decreased rapidly to 25 percent in Central Assam as against 28 percent in Upper Assam and Barpeta District. In comparison to females, the rural-urban gap in male literacy rate was much lower. It was around 18 percent in Upper Assam and Central Assam which was lowest in 2001 and highest in Lower Assam and Barpeta District which was 24 percent and 27 percent respectively. Three important factors emerge from this discussion. Firstly, literacy rate of rural women are far behind than urban women in all areas of Assam indicating lack of adequate educational facilities, gross neglect of women's education and poverty in rural areas of Assam than urban areas. Secondly, the pace of decrease of rural-urban gap in female literacy during 1991-2001 was slow indicating marginal improvement in attitude towards women's education. Thirdly, rural-urban gap in female literacy was lower than male literacy indicating better opportunities for males in accessing education than females.

TABLE: 2.18

Sex wise Rural and Urban Female Literacy Rates (in percent) In Various regions of Assam

Region	1991				2001				2011(Provisional)			
	Rural Female	Urban Female	Rural Male	Urban Male	Rural Female	Urban Female	Rural Male	Urban Male	Rural Female	Urban Female	Rural Male	Urban Male
Upper Assam	34.13	68.52	53.89	82.58	47.74	78.18	64.98	89.36	N/A	N/A	N/A	N/A
Central Assam	40.72	72.19	60.04	84.02	53.26	78.61	69.42	88.84	N/A	N/A	N/A	N/A
Lower Assam	42.60	77.11	62.49	86.11	55.39	83.47	72.84	91.37	N/A	N/A	N/A	N/A
Barpeta District	30.53	66.07	50.10	82.81	45.54	77.04	63.73	90.40	N/A	N/A	N/A	N/A
Assam	39.24	73.05	58.96	84.42	52.27	80.57	69.36	90.12	N/A	N/A	N/A	N/A

Source: Census of India

2.14 Gross Enrollment Ratio in Schools:

The gross enrollment ratio (GER) or gross enrollment index (GEI) is a statistical measure in education sector to give a rough indication of primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population at official school age for the three levels. GER is another indicator regarding performance of a region in the field of education. A sharp fall in the enrollment ratio indicates increasing number of dropouts, which

in many cases adds number in the labour market in the form of child labour due to economic necessity (Sarma, 2007)

Table 2.19 depicts Gross Enrollment Ratio in schools for general education of Assam and India.

TABLE: 2.19
Gross Enrollment Ratio in Schools for General Education in Assam and India

Years	Region	Classes I – V (6 – 11 years)			Classes VI – VIII (11 – 14 years)		
		Boys	Girls	Total	Boys	Girls	Total
1999 – 2000	Assam	124.25	105.35	114.95	81.02	64.63	72.99
	India	104.08	85.18	94.90	67.15	49.66	58.79
2000 – 2001	Assam	125.44	106.44	116.08	80.02	63.67	72.00
	India	104.91	85.92	95.66	66.68	49.94	58.64
2001 – 2002	Assam	127.18	107.42	117.43	78.73	62.27	70.63
	India	105.29	86.91	96.30	67.77	52.09	60.20
2002 – 2003	Assam	88.17	85.43	86.83	52.00	50.39	56.22
	India	97.53	93.07	95.39	65.34	56.22	60.99
2003 – 2004	Assam	88.22	88.09	88.16	66.02	61.15	63.65
	India	100.8	95.70	98.30	66.90	57.70	62.50
2004 – 2005	Assam	105.59	104.80	105.20	72.05	67.22	69.70
	India	110.70	104.67	107.80	74.30	65.13	69.93
2006 – 2007	Assam	97.63	99.23	98.42	67.55	63.46	65.55
	India	114.42	107.84	111.24	77.41	69.51	73.63
2010 – 2011	Assam	106.00	106.1	106.1	92.0	90.5	91.3
	India	115.3	112.6	114.0	81.5	74.4	78.1

Source: Economic Survey, Government of India.

Table 2.19 shows that the total GER for Assam at the Primary Stages (Classes-V) was increasing during the period 1999-2000 to 2001-02, although the pace of increase was minimal. During 2002-03, GER of Assam at 86.83 marks around 30 points fall over the previous year 2001-02. However, during 2002-04 to 2010-11, the GER of Assam was on the rise. Thus, the GER of Assam is not only fluctuating during 1999-2000 to 2010-11, but also lower in the latest year (2010-11) by around 9 points in comparison to 1999-2000. However, since the GER for India at the Primary Stages has been increasing gradually over the period 1999-2000 to 2010-11, it indicates that number of dropouts in Assam had been increasing than the national level.

The GER for girls at the Primary Stages (Classes I-V) of Assam increased marginally during the period 1999-2000 to 2001-02 as against almost stable GER of India around 86 to 87 during the same period. During 2002-03, the GER for girls had fallen by around 22 points over the previous year. However, during 2003-04 to 2010-2011, the GER of Assam was increasing. Thus the GER for girls in Assam has been fluctuating over the period 1999-2000 to 2010-11. The GER for girls in India had been increasing gradually over the period 2002-03 to 2010-11. However, the GER for boys in Assam increased by around 2 to 3 points during 1999-2000 to 2001-02 and the GER for boys in Assam was higher than national level during this period. During 2002- 03 to 2003-04, the GER for boys in Assam was around 88 and lower than national level. But the GER for boys was higher than girls in Assam like national level during the period 1999-2000 to 2003-04. However, the GER for boys and girls in Assam was almost same during the period 2004-05 to 2010-11, although GER for boys was lower than national level during the nine year period 2002-03 to 2010-11. Some important points may be mentioned from this discussion. Firstly, although the GER for girls in Assam was on the increase during the last seven years (2002-03 to 2010-11), it was lower than national level indicating higher dropout rates in Assam. Secondly, the male-female gap of GER in Assam is almost negligible during 2003-04 to 2010-11 as against significant male-female gap of GER at national level during the same period. However, the growth of the GER in Assam for girls is very slow during the twelve year period 1999-2000 to 2010-11 in comparison to national level indicating lower level of educational attainment for girls in Assam than all India level.

It has also been observed from Table 2.19 that the total GER for Assam at the middle stages (Classes VI-VIII) decreased by around 17 points from 1999-2000 to 2002-03 as against almost stable rate of GER at national level. However, the total GER for Assam at the

middle stages was higher than national level during this period except 2002-03. During the two year period (2003-04 and 2004-05) the GER of Assam showed an uptrend and it was almost same to the national level. However, the GER of Assam again decreased in 2006-07 and it was lower than national level. But, during 2010-11, the total GER for Assam at the middle stages again increased to around 91 and it was around 13 points higher than national level. Thus the GER of Assam at the middle stages has also been fluctuating over the twelve year period (1999-2000 to 2010-11) as against rising trend at national level indicating higher dropout rates in Assam even in the middle stages than national level.

The GER for girls at middle stages (Classes VI- VIII) of Assam decreased to almost 14 points from 1999-2000 to 2002-03. However, the GER for boys also decreased during the same period. As against these trends of Assam, the GER for both boys and girls at middle stages was higher than national level. Although the GER for both boys and girls was on the increase during 2003-04 to 2010-11, such figures were lower than national level. During the twelve year period (1999-2000 to 2010-11) the GER for boys and girls of Assam was not only fluctuating but also lower than national level except 2010-11 where GER of Assam (both boys and girls) was higher than national level. However, the GER for boys was marginally higher than girls in Assam during 2010-11. All such phenomenon apparently indicates that the number of dropouts who left middle schools were higher in Assam which may be due to economic compulsion and general poverty. Inadequate access to schools may be the other reason but for that data on school availability is required.

It has been mentioned that women in Assam are in a better position than the all India average in terms of literacy. For example, the female literacy rate of Assam was almost 2 percent more than all India average. But attainment of a higher literacy rate alone does not make a community educationally advanced. Completion of primary stage of education and continuation of school up to 15 years of age etc. are taken as indicators of educational attainment. Therefore, the school dropout rate has been represented in the Table 2.20 to get a clear picture.

TABLE: 2.20
School Dropout Rate by Class Range (in %)

Year	State/ Country	Dropout Rates								
		Classes I to V			Classes I to VIII			Classes I to X		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
2004-05	Assam	51.58	48.34	50.07	72.41	74.60	73.38	75.18	74.69	74.96
	India	31.81	25.42	29.00	50.49	51.28	50.84	60.41	63.88	61.92
2006-07	Assam	45.7	42.8	44.3	72.7	74.7	73.6	78.2	77.1	77.7
	India	24.4	26.6	25.4	46.6	45.3	46.0	58.6	61.5	59.9
2008-09	Assam	39.82	37.26	38.54	72.89	74.9	73.89	79.22	78.51	78.86
	India	20.98	24.42	22.7	42.71	43.3	43.00	56.79	60.12	58.45

Source: Gender Statistics, Assam, 2008-09, Directorate of Economics & Statistics, Assam

It has been observed from Table 2.20 that total dropout rates of Assam for classes I-V were decreasing during the period 2004-05 to 2008-09. The rate of decrease was almost 13 percent from 2004-05 to 2008-09 period. However, the school dropout rates of Assam for classes I-V were higher than national average during the said period indicating mass poverty in Assam which compel majority of the children to leave school to help their parents in work. Disaggregated by sex, it has been observed that the school dropout rates of girls for classes I-V were declining over the period 2004-05 to 2008-09 for both Assam and India. However, the dropout rate for girls in Assam was more than all India level during the whole five year period (2004-05 to 2008-09). But the dropout rates of girls for classes I-V declined in Assam by almost 10 percent from 2004-05 to 2008-09 as against only 1 percent at national level. Moreover, the dropout rates for boys in Assam were almost 3 percent higher than girls in 2004-05 where it was almost 6 percent higher for boys than girls at national level. But, the differences in dropout rates for boys and girls were almost the same in Assam in 2008-09 as

against marked decline at national level where dropout rates for girls were almost 3 percent higher than boys. Although the cause of fast decline of school dropout rates for girls in Assam for classes I-V may indicate the rise in per capita income, expansion of educational institutions and change in attitude towards female education yet the role of Mid-day Meal Programme through which mid day meal has been supplied in schools during classes I-V cannot be denied as most of the poor families prefer to send their children to schools for nutritional support.

On the other hand, the school dropout rate of Assam (total) for classes I to VII was almost same for the period 2004-05 to 2008-09 and it was far higher than national level. Moreover, the gap between Assam and India has been widening over the period 2004-05 to 2008-09. It was almost 22 percent in 2004-05 and increased to almost 31 percent in 2008-09 indicating mass poverty in Assam as most of the children particularly in rural areas were compelled to drop out from schools to help their parents in work due to poverty. Disaggregated by sex, it has been observed that the school dropout rates for girls in Assam for classes I-V was almost 2 percent higher than boys and it was also higher than national level during the period 2004-05 to 2008-09 indicating possibility of child labour and gross neglect of girls' education.

It has also been observed that the total dropout rates for classes I to X increased by almost 2 percent in Assam as against almost 3 percent decrease at national level indicating that the level of educational attainment in Assam is lower than all India level although the total literacy rate of Assam was only 1 percent less than national level in 2011. Further, the dropout rates for both boys and girls in Assam for classes I to X have been increasing over the period 2004-05 to 2008-09 where the rate of increase was almost 2 percent for girls as against 3 percent for boys. Moreover, the drop out rates for boys and girls of Assam was more than national level during 2004-05 to 2008-09. But the gap between Assam and India was almost 15 percent for boys as against 11 percent for girls during 2004-05 which rapidly increased to almost 22 percent for boys and 18 percent for girls during 2008-09 indicating again higher incidence of poverty in Assam which compel majority of students to leave school out of necessity.

The District Level Household and Facility Survey, 2007-08 of Assam pointed out some important reasons for dropping out of school as depicted in Table 2.21.

TABLE: 2.21
REASONS FOR DROPPING OUT OF SCHOOL

(Percent distribution of household population aged less than 18 years who dropped out of school by main reasons, Assam, 2007-08)

Reason	Male	Female
School too far	2.7	4.1
Transport not available	1.0	1.7
Further education not necessary	6.8	5.4
Required for household work	17.9	20.7
Required for work on family/ business	4.8	1.8
Required for outside work	19.3	9.9
Cost too much	16.3	21.2
No proper school	0.0	0.4
Not safe to send girls	0.3	1.1
For taking care of siblings	3.9	4.7
Not interested in studies	16.6	10.8
Repeated failures	5.1	5.0
Got married	0.3	7.1
Others	5.0	6.2
Total percent	100.0	100.0

Source: Gender Statistics, Assam, 2008-09, Directorate of Economics & Statistics,
Assam

Among various causes for dropping out from school (below 18 years) as mentioned in Table 2.21, some important causes are necessity to support their parents in household work and outside work, unable to bear cost, disinterested in studies, marriage, necessity to care for siblings and greater distance of school from habitation. Majority of girls dropped out from school as their parents cannot bear the costs related to education reflecting poverty and low

per capita income. The second important reason in engagement in household work due to which almost 21 percent of girls dropped out from schools as against 18 percent for boys in 2007-08 indicating gross neglect of female education in Assam. Again, the mobility of females for work may be less than males in Assam as almost 19 percent of males dropped out from school compared to only 10 percent of females due to requirement of outside work. Moreover, the duty to care for siblings mainly go to the girl child as almost 5 percent of girls dropped out due to this reason as against 4 percent of males. Although the female literacy rate of Assam was almost 2 percent higher than national level in 2011, yet around 11 percent of females were not interested in studies leading to higher school dropout rates. Marriage is another factor for higher school dropout rates in Assam. Almost 7 percent of females dropped out from school due to early marriage (less than 18) as against negligible percentage for boys. Further, 4 percent of females dropped out from school due to greater distance to school as against almost 3 percent of males. It reflects inadequate educational institutions in some selected areas of Assam.

2.15 Basic amenities of life:

The extent to which life of a common man is becoming better can be assessed in terms of availability of basic amenities like safe drinking water, access to health care, access to sanitary facility, availability of pucca houses and decline of underweight children at birth. Such human development indicators are depicted in Table 2.22.

Safe drinking water is direct safeguard against various diseases. It has been observed from Table 2.22 that majority of people in Assam are still deprived from safe drinking water in both the periods 1999 and 2007-08. Although the percentage of people without safe drinking water has been declining over the period 1999 to 2007-08, yet the rate of decrease is very slow. During 1999 to 2007-08, it declined by only 11 percent. It means almost 66 lakh people in Assam are still deprived of safe drinking water in 2007-08 indicating high degree of incidence of several water borne diseases like diarrhea and jaundice. Region wise, the percentage of people deprived from safe drinking water is highest in Upper Assam and lowest in Lower Assam in both 1999 and 2007-08. Although, the percentage of people without safe drinking water has been declining in all the three regions of Assam during the period 1999 to 2007-08, yet the percentage of decline is very slow. It declined by almost 15-17 percent in Lower and Upper Assam as against only 0.58 percent decline in Central Assam. Though the

percentage of people without safe drinking water is lower in Barpeta District than average figure of Assam, it declined by only 9 percent during the period 1999 to 2007-08. It indicates two things. Firstly, high probability of water borne diseases and secondly, limited success of Government sponsored water supply scheme particularly in Central Assam and Upper Assam.

Although mortality rate of Assam has declined to 8.4 per mille in 2008 and life expectancy at birth has increased to almost 59 year in 2002-06, yet about 9 percent of the population is still deprived of health care services in 2007-08. However, the percentage of people without access to health care has been declining over the period 1999 to 2007-08. But, the rate of decline was only 5 percent during the said period indicating greater incidence of communicable and non-communicable diseases which may be an impediment for achieving quality human resource. Region wise the percentage of people without access to health care is highest in Upper Assam and lowest in Lower Assam. In fact, the percentage of population without access to health care was higher in Upper Assam by almost 1 percent and lower in Lower Assam by almost 3 percent than average figure of Assam in 2007-08. The percentage of people without access to health care was almost 8 percent in Central Assam and Barpeta District. All these phenomena indicate that there are small regional variations except for Lower Assam, in providing access to health care in Assam, indicating greater incidence of morbidity even though mortality rate had declined.

Further, the percentage of moderately and severely underweight children at birth is also an indicator of human poverty. It indicates possible number of people suffering from malnutrition and undernourishment. As high as 37.6 percent of children in Assam are underweight at birth in 1999 and 36.4 percent in 2005-06 where the rate of decline is only 1 percent indicating that chronic energy deficiency still persists in many parts of Assam, serious malnutrition and even widespread starvation among pregnant women. Region wise, the percentage of underweight children is highest in Upper Assam and lowest in Lower Assam. The possible reason for higher incidence of underweight children in Upper Assam may be due to poverty particularly among large number of tea garden labourers and two hill districts which are included within Upper Assam in our present study. The percentage of underweight children in Barpeta District is almost 2 percent higher than average figure of Lower Assam as the district has vast *char* areas where incidence of poverty and starvation is higher due to soil erosion and recurrent flood.

Sanitary facility is also a direct safeguard against various diseases. Improved sanitation with proper toilet facilities contributes enormously to human health and well-being especially for women. Although, the percentage of people without access to sanitary facility has been decreasing rapidly in Assam during the period 1999 to 2007-08, yet almost 30 percent of people are being deprived from this facility indicating higher incidence of morbidity especially for women even though average longevity of life has increased over this period. Region wise, the percentage of people without access to sanitary facility is highest in Lower Assam and lowest in Upper Assam. In fact, the percentage of people without access to sanitary facility is less than half in Upper Assam to the average figure of Lower Assam and almost half to average figure of Assam. The possible reason may be the higher literacy rate of Upper Assam which was 78 percent in 2011 in comparison to only 70 percent in Lower Assam and almost 73 percent in Assam as a whole. The percentage of people without access to sanitary facility in Barpeta District is almost 26 percent in 2007-08 as the literacy rate was almost same to the average figure of Assam.

Housing character is an indicator of standard of living influencing the health and efficiency of the individuals. It has been observed from Table 2.22 that more than seventy percent of the people of Assam have no *pucca* houses. Although, the percentage of people without having *pucca* houses has decreased over the period 1999 to 2007-08, yet the rate of decrease is only by 4 percent. It indicates that a significant percent of people in Assam have no *pucca* houses even though average longevity of life increased to almost 59 years and mortality rate declined to 8.6 per mille. Region wise, the percentage of people without *pucca* houses is highest in Central Assam and lowest in Upper Assam. In fact, the percentage difference between Central Assam and Upper Assam is almost 20 in 2007-08. The percentage of people without *pucca* houses in Lower Assam is almost same to the average figure of Assam. The percentage of people without *pucca* houses is almost 4 percent higher in Barpeta District than average figure of Upper Assam in 2007-08. The possible reason for lower percent of people without *pucca* houses in Upper Assam may be due to localization of tea, plywood and oil industries of Assam and availability of higher employment opportunities in non-farm sector. The districts of Lower Assam and Central Assam are mainly agrarian with higher incidence of seasonal and disguised unemployment which may be the possible reason for higher percentage of people without having *pucca* houses in these regions.

TABLE: 2.22

Percentage of people without safe drinking water, without access to health care, sanitary facility, pucca houses and underweight children at birth in Assam

Region / State	% of people without safe drinking water		% of people without access to health care		% of underweight children at birth		% of people without access to sanitary facility		% of people without having pucca houses	
	1999	2007-08	1999	2007-08	1999	2005-06	1999	2007-08	1999	2007-08
Lower Assam	36.21	18.98	12.42	6.29	32.93	N/A	81.13	38.57	82.78	73.65
Central Assam	26.18	25.60	15.48	7.81	36.14	N/A	79.24	34.52	94.02	84.80
Upper Assam	44.97	29.45	17.55	9.93	38.31	N/A	74.28	15.96	77.05	64.02
Barpeta District	26.8	17.6	9.8	7.58	34.6	N/A	85.3	26.10	82.7	77.40
Assam	36.4	25.1	13.7	8.93	37.6	36.4	74.8	30.10	76.9	73.15

Source: a) Assam Human Development Report, 2003

b) District Level Household and Facility Survey, 2007-08, Assam

c) NFHS, 2005-06

2.16 Labour Force Participation:

In economics, labour force is a region's combined civilian workforce, including both the employed and unemployed. Normally, the labour force of a country (or other geographic entity) consists of everyone of working age (typically above a certain age around 14 to 16 years) and below retirement (around 65) that is participating workers i.e. people actually employed or seeking employment. People not counted include students, retired people, stay at home parents, people in prisons or similar institutions, people employed in jobs or professions with unreported income, as well as discouraged workers who cannot find work (Henry, 1971).

The economic and social development of a region depends on the number of persons who are in the labour force, the quality of their work and regularity of their

employment. Thus labour force participation is an indicator of economic status of a social group.

The labour force participation of women as per NSSO data have been depicted in Table 2.23.

TABLE: 2.23
Persons in Labour Force : Assam and India
(in percent)

State / Country	1993 – 94		1999 – 2000		2004 – 05		2005 – 06	
	Male	Female	Male	Female	Male	Female	Male	Female
Assam (Rural)	84.7	26.0	84.1	24.9	83.8	24.4	83.7	24.4
Assam (Urban)	76.8	16.2	78.8	17.6	79.1	18.1	79.1	18.2
India (Rural)	87.6	48.8	85.4	45.6	86.9	38.6	85.6	37.6
India (Urban)	79.9	23.4	78.6	20.9	82.7	24.3	82.5	19.7

Source: The 50th, 55th, 61st and 62nd rounds of NSSO data on Employment and Unemployment Situation in India.

It has been observed from Table 2.23 that the female labour force participation in Assam is at least three times lower than male labour force participation in rural areas and it is almost four times lower than male labour force participation in urban areas during the period 1993-94 to 2005-06. Same picture has been revealed at national level where female labour force participation is more than two times lower than male labour force participation in rural areas and it is almost four times lower in urban areas. Although, male and female labour force participation of Assam is higher in rural areas than urban areas, yet both rural and urban labour force participation of Assam is lower than national level during 1993-94 to 2005-06. It is particularly much lower for rural females. For example, the gap between female labour force participation in rural India and rural Assam was almost 23 percent in 1993-94 which decreased to almost 13 percent in 2005-06. In urban areas such gap was only 7 percent 1993-94 and decreased to only 1.5 percent in 2005-06. However, the labour

force participation of both male and female declined continuously during 1993-94 to 2005-06. But the female labour force participation decreased more rapidly than male labour force. For example, the female labour force participation decreased by almost 2 percent as against only 1 percent decrease of male labour force participation of rural Assam during 1993-94 to 2005-06. However, such rate of decrease of male and female labour force participation of rural Assam was slower than national level. For example, the female labour-force participation in rural India decreased by almost 11 percent as against only 2 percent of male labour-force participation during 1993-94 to 2005-06. Further, the male and female labour force participation in urban Assam increased marginally during the period 1993-94 to 2005-06 as against a decrease at national level. Both male and female labour-force participation in urban Assam was increased by almost 2 percent. But, at national level, the female labour force participation in urban areas decreased by almost 4 percent as against 2 percent increase of male labour force during 1993-94 to 2005-06. Some important things may be highlighted from this discussion. First, male and female labour force participation in both rural and urban areas of Assam is lower than national level indicating large number of dependents in Assam workforce. Among the main reasons for such low participation in work may be less availability of work and lack of adequate irrigational facilities in agriculture. Second feature is the low ratio of females in the workforce. It is observed to be broadly more than half of the male-participation: at times it has been still lower. A large part of the explanation lies in the fact that most of the women are housewives, whose work is not counted as part of productive work on the ground that these are neither working nor looking for jobs. This is in line with the tradition accepted for the calculation of national income, wherein the work performed by housewives is excluded. Third is the higher work-participation rate in the rural areas compared to that in the urban areas. This is applicable to both males and females. This is largely due to the fact that the nature of rural work, largely agriculture, where besides males, females can also participate. As the agricultural activities are mainly male-dominated, the male participation in rural work may be higher than females. In urban areas there are for males/females either full-time jobs or no jobs. Again, females of the category of housewives constitute a large proportion of the females residing in urban areas. Fourth is the decrease of both male and female labour force participation in Assam and India during 1993-94 to 2005-06 in rural and urban areas excluding urban Assam. The possible reason may be the increase in

household income and as income rises, some persons may be willing to work fewer hours explaining backward sloping supply curve of labour.

Table 2.24 depicts labour force participation rate of both males and females across the various regions of Assam based on census data of 1991 and 2001.

TABLE: 2.24
Region wise labour force participation rates of males and females in Assam.

Region / State	1991		2001	
	Male	Female	Male	Female
Lower Assam	48.41	14.87	50.40	16.70
Central Assam	49.08	28.76	51.47	28.19
Upper Assam	47.87	24.79	50.04	24.69
Barpeta District	47.46	10.96	47.69	14.01
Assam	48.38	21.61	50.75	20.79

Source: Census of India, 1991 and 2001.

It has been observed from Table 2.24 that the female labour force participation in almost all the regions of Assam including Barpeta District is less than half of the male labour force participation during 1991-2001. Among the various regions of Assam, the female labour force participation is highest in Central Assam and lowest in Lower Assam. In fact, the female labour force participation of Lower Assam is almost 4 percent lower than average of Assam in 2001. The female labour force participation in Barpeta District is much lower than even the average of Lower Assam. It is only 14 percent in 2001. Although female labour force participation increased in Lower Assam by only 2 percent, it is almost stagnant in Central and Upper Assam during the period 1991-2001. However, the female labour-force participation of Barpeta District increased by only 3 percent during 1991-2001. Thus, it may be noted that female labour force participation is less than male in almost all

the regions of Assam. The possible reasons may be the almost unchanged attitudes towards work outside the house, increase in income of husband and underestimation of household work in various censuses. However, female labour force participation in Central Assam is highest in Assam. The possible reason for high female work participation in Central Assam is that a significant proportion of the population here are immigrant Muslims who mainly live in 'char areas' and poverty is common among them. Literature suggests that poverty is an important factor where women work out of necessity, irrespective of age. Although Barpeta District of Assam also has a significant proportion of immigrant Muslims, yet the female labour force participation is less than average figure of Assam which may be due to increases in family income, and/or lack of diverse employment opportunities. It also implies the presence of a large number of dependents on the workforce.

2.17 Physical well-being:

The forgoing discussion concerning certain demographic parameters such as percentage of population in age group 0-6, sex ratio, infant mortality rate, mean age of female marriage, female literacy rate, percentage of underweight children at birth, percentage of people without safe drinking water, percentage of people without access to health care, percentage of people without access to sanitary facility, percentage of people not having *pucca* houses, female labour force participation including their associated correlates has no doubt thrown light on some aspects of the physical well-being of women in Assam. Considering the nature of the variables selected (positive and negative), a composite test (z-test) is undertaken to ascertain the relative standing of each region of Assam in respect of the physical well-being of women. Here, infant mortality rate, percentage of underweight children at birth etc., are negative parameters, as their higher values exhibit low physical well-being. On the other hand, sex ratio, mean age at marriage, etc., are positive parameters, as their higher values indicate better physical well-being. Therefore, signs of observations of all the negative parameters are reversed to make them compatible with positive parameters while undertaking the composite test (Table 2.25).

TABLE: 2.25

SELECTED INDICATORS OF PHYSICAL WELL-BEING IN ASSAM

Indicators	Lower Assam	Central Assam	Upper Assam	Mean	Standard Deviation
1. Sex Ratio (2011)	957	956	949	954	3.55
2. Percentage of female population in age group 0-6 (2011)	14.66	15.09	14.42	14.72	0.27
3. Infant mortality Rate (2009)	65	66	61	64	2.16
4. Mean age at female marriage (2007-08)	20.08	20.6	21.1	20.59	0.416
5. Female Literacy Rate (2011)	64.12	66.15	71.45	67.24	3.089
6. Percentage of underweight children at birth (1999)	32.93	36.14	38.31	35.79	2.209
7. Percentage of people without safe drinking water (2007-08)	18.98	25.60	29.45	24.67	4.32
8. Percentage of people without health care (2007-08)	6.29	7.81	9.93	8.01	1.49
9. Percentage of people without access to sanitary facility (2007-08)	38.57	34.52	15.96	29.68	9.84
10. Percentage of people not having pacca houses (2007-08)	73.65	84.80	64.02	74.15	8.48
11. Female Labour Force Participation Rate (2001)	16.70	28.19	24.69	23.19	4.80
Composite z test Ranking in terms of physical well-being	-5.38 3 rd	+5.56 1 st	-0.036 2 nd		

It is observed that the central region of Assam has witnessed significant social development in respect of physical well-being of women in Assam and hence ranked 1st with composite value (z) of +5.56. The Upper Assam region has ranked 2nd with composite z value of -0.036. At the other extreme, lack of social and infrastructural development has brought Lower Assam region at the bottom with composite z value of -5.38. It can therefore be concluded that the physical well-being of women in Lower Assam (where BARPETA District falls) is worse off in comparison to the women of Central Assam and Upper Assam.

Conclusion: It has been found from the study that some of the key socio-economic and demographic attributes of rural women in Assam have improved significantly; sex ratio has risen; education levels has improved; life expectancy has risen; mean age at marriage has risen; maternal mortality rate has fallen; economic participation has

increased. But there are areas of darkness too; sex ratio, infant mortality rate, life expectancy, mean age at marriage, maternal mortality rate, school dropout rate³ both at primary and middle schools and economic participation are still less than the national level - although female literacy rate of Assam is marginally higher than national level. Such indicators show lower socio-economic status of rural women of Assam than the national level. Region wise, although sex ratio of Lower Assam is highest, yet literacy rate and economic participation are the least. On the other hand, sex ratio, and literacy rate of Upper Assam are highest although economic participation is lower than average figure of Lower Assam. Infant mortality rate however is also quite high in Upper Assam. Although infant mortality rate of Central Assam is the highest of all the three regions, the sex ratio is only 1 point less than Lower Assam and percentage of female population in the age group 0-6 is the highest. Further, economic participation of Central Assam is the highest with a moderate literacy rate. In spite of this the percentage of underweight children is more than the average figure of Assam. Such attributes show the existence of rural poverty in Assam although Central Assam ranked first with composite value (z) of +5.56 in respect of physical well-being of women population.

Thus the socio-economic and demographic characteristics as outlined above do not seem to reveal a clear picture of the physical well-being of women in Assam. It appears that the factors influencing the different indicators of physical well-being show wide variations across different regions in Assam. Such differential experiences in terms of indicators also show atypical behavioral relations between them. For example, increase in literacy rate is not accompanied by decline in underweight children or decline in infant mortality rate, as is the case of Central Assam.