INTRODUCING THE PROBLEM

The journey of life from birth to death is a varied colourful event. The journey which starts from gestation in the mother’s womb to bursting of the amniotic sac during birth is an intrinsic yet complex process, the end result bestowing sumptuous happiness to the parents and the family. The most beautiful part in this journey is no doubt the infancy and childhood. The universal practice of child rearing is as diverse as the graticules and each practice differs from community to community, religion to religion, country to country. Both the infancy and early childhood period is, however, considered as the critical period in the process of human research development.

Children are the most important human resource in any nation and hence they are considered to be the future asset. Their health and well-being is a means of achieving a peaceful, purposeful, productive and prosperous future for mankind. About 1.9 billion of the world’s population is constituted by children and they represent about 27 per cent of the total world population (UN Population Division, 2011). Thus, worldwide children make one third of the population. This very size of child population in the world is the strongest indicator of the importance of child health and its relevance.
Although in the community the children constitute the most priority group, they are also a vulnerable group and a special risk group. The risk is concerned with the survival, growth and development in case of infants and children because they are characterized by feeble defence mechanisms and easy vulnerability to infections and deficiency diseases. Over the last three decades the annual number of deaths among children less than five years old has decreased by almost a third. However, this reduction has not been evenly distributed throughout the world. Hence greater awareness is gaining momentum for societies to owe responsibility not only to their current citizens, but to the future generations as well. At the World Summit for Children held at the United Nations in September 1990, leaders from 71 countries committed themselves to promoting the survival, protection and the development of the present generation of children and all generation to come. Despite this rhetoric, however, the economic, social and environmental conditions in which many children live places them at pernicious peril viz- serious risk for ill-health, malnutrition, lifelong disability (both physical and mental) and even early death. Every year more than 10 million children still perish in developing countries before they reach their fifth birthday. A baby born in developing country is seven times more likely to die before the fifth birthday than one born in the developed countries. (UNICEF, 1991).

Diseases (both endemic and pandemic) among young children are the major causes of morbidity and mortality in the developing countries. The most common causes of infant and child mortality in developing countries are perinatal conditions, Acute Respiratory Infections (ARI), diarrhoea, malaria, measles and malnutrition. These are also the commonest causes of morbidity in young children. According to The Global Burden of Disease projection based on 1996 analysis common childhood illness will continue to be major contributors to child deaths through the year 2020 unless significantly greater efforts are made to control them. The behaviour and practice of the care-givers (mothers, siblings, father and child care provider) to provide food, health care, stimulation and all necessary support determines children’s healthy survival, growth and development. Not only child care practices but also the ways it is performed in terms of effectiveness and responsiveness to the child are critical to a child’s survival, growth and development.
Member States of World Health Organisation (WHO) - South East Asia region account for 28 per cent of under five child death annually. Apart from the high mortality, under five children also bear a heavy burden of disease. When medical science and state-of-the-art-technology has made vast advancement, this is absolutely unacceptable and herein lies the tragedy.

In India the total number of children in the age group of 0-6 years is reported as 158.79 million in 2011 (Children in India 2012 – A Statistical Appraisal). India has about twenty per cent of 0-4 years children population of the world. About twenty per cent of the total live births in the world take place in India (State of the World Children, 2010). Thus live births in India are estimated to be 27 million but 1.83 million children, however, do not live up to their fifth birthday out of which twenty per cent are neonatal deaths. (UNICEF, 2011). It is estimated that out of the total deaths reported in India, 14.5 per cent are infant deaths, 3.9 per cent deaths are between the age group of 1-4 years, 2.7 per cent deaths are between 5-14 years of age group. (Sample Registration System, 2010).

The overall perspective of health problems in our country is dominated by our population. There is no doubt that the brunt of this strain is felt by the under five age group children. In India large number of under five age group children die needlessly from malnutrition and diseases, inadequate drinking water, poor sanitation and other environmental factors. The environmental conditions in which these children live, pose serious threat to their current health as well as future well-being. As the most fragile member of the society they are most vulnerable to diseases and environmental stress. The combined effects of inadequate sanitation, unsafe water supply and poor personnel hygiene are responsible for 88 per cent of childhood deaths from diarrhoea. (UNICEF, 2011). In areas where high disease burden of children is associated with high mortality, knowledge of caretakers and family behavior on health care is vital and is more important. An estimated three quarters of all health care take place at home, when particularly in their role as mothers, generally have responsibility for promoting the health and nutrition of their families. As the health of the children is strongly dependent on maternal health care behaviour it follows that maternal perception of illness is an important consideration. (Tessema, 2002). Hence, in order to bring about a
reduction of childhood morbidity among under five, clear health education messages is required for improving the health seeking behaviour of mothers. (Mbonye, 2004).

In most cultures, individual’s actions to prevent or treat childhood illness are influenced by their perception and understanding, by community norms and other social and peer related factors and by circumstances and resources. Family and community practices related to infant and young child feeding and health seeking behavior during illness are not always optimal in some countries. There are a number of other factors related to under five child morbidity and mortality. These include low levels of per capita income, poverty, poor sanitation, female illiteracy, poor quality of health care services, inadequate nutrition, breastfeeding pattern, immunization coverage, etc. Again, child care cannot be meaningful if isolated from the mother’s health care. Thus child health care commences even before the child is born. Thus, a judicious mix of obligations between the family and the social, cultural and economic order of the society can go a long way for the healthy growth and development of the child (Muttalib, 1990).

Scientists, medical professionals and humanitarian organizations have come to realize that biomedical solutions are only partial remedies. A high under five child morbidity and mortality are not always medical but it also has social and economic dimensions. These socio-cultural dimensions are deeply involved in matters of personal hygiene, nutrition, breastfeeding habits, weaning and rearing practices, seeking early medical care, etc. Favourable social environment can improve health and the quality of life of the young children. Hence due attention to family and community practices and coordinated initiatives across several social sectors to meet local specific imperatives, improvement of health seeking behavior are, therefore, required for reduction of under five morbidity and mortality.

The care scenario in India is not very encouraging. While India is one of the faster growing economies in the world, contradictorily it is also the home of 57 million of the world’s 146 million malnourished children. Malnutrition in children is an outcome of insufficient nutritive value diseases and parasites and low birth weight. While poverty and insecurity contribute to malnutrition in India, some important causes, most of which are preventable, include improper and unsafe infant feeding and
child care practice. It is also to be mentioned here that the need for extra food during pregnancy is hardly realized in rural India. On the contrary a pregnant women’s diet is restricted due to religion and social taboos. To cite a few examples, food of animal origin is denied in certain parts of the country because of the belief that the foetus may become too big and cause difficult labour. Similarly, jaggery and papaya are forbidden for fear of abortion. Bananas are thought to result in one child sterility and hence not allowed. (Rao, 2004). There are innumerable such examples of food restriction on pregnant women across the country which have adverse impact on the mother’s health, thereby affecting the health of the newborn.

Food, health and care are all necessary for healthy survival, growth and development. Care practices defined here are those which are relevant to nutrition and growth and have been specified as most important for child survival, growth and development and care for women, including care for pregnant and lactating women, breastfeeding and complementary feeding, psychological care, food preparation and food hygiene, hygiene practices and home health care practices in the form of prevention of illness, diagnosis of illness, providing home treatment, feeding during illness using preventive and promotive health services, timely seeking of advice of curative health services (Patrice, 1996). Even when poverty causes food insecurity and limited health care, enhanced health care at the family level can optimize the use of existing resources to promote good health and nutrition in women and children. Breastfeeding or the practice of lactation is an example of such a practice that provides food, health and care simultaneously. It is undoubtedly one of the most important and effective child care practices which can ensure healthy growth and development of children. Initiation of breast milk should be as early as possible, preferably within one hour of birth. This is mainly because (i) the newborn is very active and alert during the first hour of life and then goes to sleep, (ii) the baby has strong sucking reflex at this time and (iii) it stimulates the oxytocin and prolactin reflex and hence enhances breast milk production (Breast Feeding Network of India-Print document). Indian and global studies have shown that the first six months of exclusive breastfeeding is associated with optimal growth and low morbidity. Although it is an established fact that breastfeeding is an effective way of ensuring healthy growth and development of infants and protecting them against infections, yet as per the National Family Health
Survey (NFHS-3, 2005-06) only 29 per cent mothers in India start breastfeeding within half an hour of birth in urban areas and 21 per cent in rural areas. Colostrum which is essential for the infant’s nutrition and immunologic value is often discarded as impure milk. Instead infants are fed with prelacteal feeds like honey, diluted milk, *janam ghutti* (a herbal mixture with honey), tea, country-made beverage, etc. in many rural and even urban houses. It is evident that the use of prelacteal feed is universal and established as a common practice. It probably, came into being to meet out the situational need of the child in certain unavoidable critical conditions related to lactation and breastfeeding (Gosvami, 2009). Various studies have, however, established the fact that such customary practices is indeed harmful, thus exposing the newborn to various infections.

Complementary foods are required to ensure adequate growth and to prevent malnutrition from six months onwards. The six to eleven month period is a vulnerable time because infants are now exposed to the external environment related to food and hygiene. However, many families either do not initiate complementary feed when the baby reaches that particular age or gives food with suboptimal nutritive value. Effective intervention right from birth like exclusive breastfeeding upto six months of age, timely and adequate complementary feeding and hygiene practice during preparation of food and feeding, safe food storage, healthy practices and behaviour, etc. can actually prevent not only many childhood diseases but also death of the young ones.

With this background the present study attempts to delve into the morbidity and mortality among the under five children of the Bodos, the Garos and the Caste Hindus in the Rani area of Kamrup (Rural) district of Assam. The three groups of population although living in the same geographical environment exhibit different socio-cultural behaviour with regards to child rearing and child care practices. The study attempts to understand to what extent these different socio-cultural practices of the people living in the same environmental setting play their role in influencing the levels of morbidity and mortality in under five children.
REVIEW OF LITERATURE

Childhood morbidity and mortality is a major problem of all the developing countries in the present day world. Although the health of the world children has improved significantly, yet the developing world still carries a burden of childhood morbidity and mortality. Since the International Year of Child celebrated in 1979 in the United States many organisations and researchers have taken keen interest in the study of childhood morbidity and mortality and have also tried to find out the various causes (environmental and socio-cultural) responsible for their ill health.

Although recognition is growing that societies owe great responsibilities to our future generation, yet it is an irony that children are still vulnerable to various morbidity and mortality. Researches throughout the world have observed that there are some common morbidities which afflicts young children. Most of these diseases are communicable and at the same time highly preventable.

Karrar and Omer (1981) in their study found that cough, fever, diarrhoea are the commonest morbidities. UNICEF (1990) in the State of World’s Children have reported that diarrhoea and respiratory infections are the first and second most common causes of illness and death among children under the age of five years in the developing countries. Diarrhoea is responsible for 4000 episodes and 2.4 million deaths each year in children less than five years of age as observed by Bern et al. (1992). In another study by Muhe et al. (1996) in rural Ethiopia it was found that acute respiratory infections were particularly associated with nutritional status of the child. They also found that fully immunized children were at lower risk of morbidity than the partially immunized ones. Grace et al. (2005) in western Kenya reported that cough and cold, fever and diarrhoea are the commonest ailments. They also found that mothers with more years of schooling had a better health seeking behaviour in relation to morbidity of children. Venkatesh and Bansal (1986), in a longitudinal study among children less than five years in Pondicherry have revealed that a child had 4.85 episodes of illness annually on an average, the incidence rate being the highest during the second quarter
of the year. Respiratory infections and diarrhoea accounted for 64.9 per cent of all illness. Joseph *et al.* (2010) in their study in South India found that the commonest morbidities in infants were Respiratory Tract Infection (62.4%), diarrhoea (42.8%) and skin diseases (21.6%). Singh *et al.* (2005) in another cross-sectional study in a rural area of Manipur have found that ARI was the commonest disease (83.6%) followed by diarrhoea (34.9%), dysentry and scabies (6.7% each), worm infestation (5.9%), measles (3.8%) and pneumonia (1.8%). The topographical condition of the area where drainage system and latrine outlet were drained to the Loktak Lake, the main source of drinking water, have been attributed for higher incidence of ARI and diarrhea in the area. Selvaraj *et al.* (2014) in their situational analysis of ARI in under five children summarized that it is the leading cause of death (4 lakh) and 700 million episodes annually. Substantiated by several community based studies they have reported that low level of literacy, poor socio-economic conditions, malnutrition, suboptimal breastfeeding, cooking fuel used other than LPG are risk factors contributing to increase burden of ARI.


Yohannes *et al.* (1992) in their study *Child Morbidity Patterns in Ethiopia* observed that there were no significant sex differences in morbidity except for higher rates of diarrhoeal diseases in female children.

The environment which sustains human life is also a profound source of ill health for many of the world’s children population. Universal access to safe drinking water and sanitation are two of the international targets for improving the health and well-being of the children. Inspite of these several millions of children are still living in conditions which are posing environmental threats to their lives. Yohannes *et al.* (1992) reported that access to high quality drinking water; sanitary toilet and garbage disposal are strongly related to reduce overall morbidity levels. Van *et al.* (1994) observed that environmental sanitation were important determinants of diarrhoeal disease in under five children. Bhende and Kanitkar (1996) were of the opinion that environmental factors like overcrowding and congested living, unhygienic conditions and
surroundings, lack of proper sunshine, fresh air and lack of poor drinking water may have some effect on infant and childhood mortality.

Pollution in whatsoever form affects children more than adults. Poor children who are exposed to more kinds and higher levels of pollution are affected most by it. One contributing cause to acute respiratory as well as other diseases in children is due to the particulate released by the fuel used in traditional stoves. Singh and Nayar (1996) observed that fuel used for cooking influenced the incidence of ARI in Wardha, Maharastra. Similarly, Acharya et al. (2003) opined that children of poor housing with smoke producing conditions suffered more frequent attacks of ARI. Goel et al. (2012) observed 52 per cent prevalence of ARI in Meerut where 70.94 per cent was due to overcrowded conditions, 74.35 per cent for inadequate ventilation and 56.83% because of use of smoky chullah. Gupta et al. (2012) in their study of morbidity in under five children in a rural setting in Jammu observed that episodes of illness was more in infants and malnourished children and children living in overcrowded and poorly ventilated houses. However, no association was observed with location of kitchen, type of excreta disposal and also infant feeding practices.

The World Resources Institute (1999) observed that in the developing countries, one in five children do not live to see their fifth birthday mostly because of avoidable environmental threats. That translates into roughly 11 million avoidable deaths each year. World Bank (2001) also observed that environmental risk factors account for one-fifth of the total burden of disease in low income countries.

A vicious cycle exists between malnutrition and infection. Infact, this vicious cycle has been termed as the most prevalent public health problem in the world today. More than one third of the developing world’s children under the age of five (excluding China) were malnourished (UNICEF, 1990). Most of these under nourished children reside in Asia. Biswas et al. (1999) in their study in Kolkata found that incidence of ARI was significantly higher in undernourished children. Ramachandran and Gopalan (2009) in their study in under nutrition and risk infections in preschool children found that prevalence of morbidity was low in the first three months when infants were solely breastfed and had lower exposure to poor environmental hygiene, a
progressive increase in prevalence of morbidity between 3-6 months and some reduction after two years.

UNICEF (2006) found that the proportion of children receiving measles vaccine have dropped from 72 per cent in 1995 to 50 per cent in 1999 and again rose to 61 per cent in 2006. The study observed that children in India continue to lose their life due to vaccine preventable diseases such as measles.

Scholars throughout the world support that there is an inverse relation between education of parents specially maternal education, occupation and income of the family with that of morbidity and mortality of young children.

Streatfield (1990) observed that education of a mother is estimated to be twice as effective as education of the father in lowering infant and child mortality. Similarly, Shea (2000) has stated that detailed studies of the developing countries show a nearly consistent inverse relationship between child mortality and mother’s education. Gokhale et al. (2002) in their study suggested that a 10 per cent reduction in female illiteracy would result in the reduction of infant mortality by 12.5 deaths per thousand.

Mbonye et al. (2004) pointed out that to reduce the burden of disease in under five children there is need to design well focused heath education messages. Ali et al. (2011) in their study stated that when the mother is literate the real benefit flows to the child in terms of reduced risk.

Economic status is undoubtedly one of the most significant indicators for health care utilization. The U.S. Department of Health and Human Services (1990) stated that in developing as well as developed countries, it is the poorest segments whose children suffer the most. They are more likely to be ill and have more risk factors for poor health than children in families with high income group. Neumark et al. (1992) and Schellenberg et al. (1992) identified economic status as determining factors for medical care. Similarly in India, a person’s work status and monthly income were important variables for seeking care as observed by Dreze et al. (1995), Engle et al. (1997) and Sunder et al. (2002). In their studies they found that the lowest income group had more morbidity in comparison to high income group. Awasthi and Pandey (1998) observed that morbidity was influenced by family size.
Hanlon (1960) observed that special attention given to pregnant women brings double health benefit, first to her as an adult member of society and second to the product of her pregnancy. Perkin (1968) observed that pregnancies of young mothers (< 18 years) and old mothers (> 35 years) and too many pregnancies at close birth interval are high risk indicators of mother and child health.

Gender inequities in one form or the other with considerable contextual differences are ubiquitous and all pervasive in South Asia. In health, these are manifested in differences in mortality which is observed by overall sex ratio in almost every country of this region. India is no exception in this regard. Discrimination and gender gaps have been observed even in the early years of life which is also well reflected in discriminatory treatment seeking practices among children.

Perkin (1968) found no disparity with regards to preventive health care (immunization) in their study in Darjeeling, West Bengal. However, the curative aspect of treatment seeking behaviour indicated promptness, concern and utmost care for male children and association between health care seeking behavior of mothers and gender of the child was found to be statistically significant. In contrary, Pillai et al. (2003) and Sudharsanam and Rotti (2005) observed that gender had no role in health seeking preferences.

The practice of giving different types of prelacteal feeds is an age old customary practice in India. Prelacteal feeds are the feeds given before breastfeeding is established. Several studies reported that varieties of prelacteal feeds were offered to the newborns in several parts of the country.

Puri et al. (1976), Bhandari and Patel (1973), Nalwa (1981) reported the use of janam ghutti, a herbal mixture with honey, as prelacteal feed. It is believed that janam ghutti and honey act as a laxative and also as a tonic for the growth of the baby. Madhabi et al. (1972) reported that in Fatehpur castor oil mixed with honey was used as a prelacteal feed to get rid of toxic substances formed in the stomach. Patodi et al. (1976) found in Indore that 40 per cent of rural infants receive honey as prelacteal feeds followed by ghutti (28%) and cow’s milk (16%). Das (1986) in a study of 630 neonates in Shillong found that 79.5 per cent newborn have received prelacteal feed in the form
of glucose, plain water and diluted milk. Roy et al. (2009) found that out of 120 study population in an urban area of Kolkata, 29.1 per cent received prelacteal feed in the form of formula milk, cow’s milk and honey. Prelacteal feed was more prevalent among mothers who were less educated. Walia et al. (2009) in their study in Chandigarh found that 22 per cent mothers initiated breastfeeding within a few hours of birth. Prelacteal feed of boiled mixture of ajwain (bishop’s weed), saunf (aniseed), sugar and water, which is probably culture specific to the people of Punjab were administered to 66.6 per cent of the newborn. Gosvami (2009) opined that certain specific situations demand the feeding of prelacteal feed and so there is no valid reason to condemn it. However, this traditional practice should be given a proper scientific base. Wadde and Yadav (2011) in a study at Ambajogai, Maharashtra found that prelacteal feed were offered more by illiterate mothers (54.8%), in joint families (70.5%) and in home deliveries (62.8%). Similarly, Raval et al. (2011) observed in their study in Bhavnagar city, Gujarat that 61.9 per cent newborns received prelacteal feeds. It was given more by illiterate mothers (85.2%), in joint families (52.6%) and 100 per cent in deliveries which took place at home.

Nature has provided breast milk for nourishment of human infants and it has been well proved that human milk is the perfect food for the babies. Even the traditional Indian literatures have immortalized the importance of breast milk. “May four oceans full of milk constantly abide in both your breast, you blessed one, for the increase of the strength of the child, drinking of the milk whose sap of immortal life divine, may your body gain long life, as do the God’s by feeding on the average of immortality” (Susruta Samhita). Ghai and Gupta (1999) have stated that the practice of breastfeeding dates back to more than 100 million years.

Nalwa (1981) in Delhi found that majority initiated breastfeeding on the second day (31.8%) and third day (31.8%) respectively. According to NFHS-2 (1988-89) breastfeeding within one hour in the country was only 16 per cent which has increased to 23.4 per cent in NFHS-3 (2005-06). Grover et al. (1997) in a rural set up in East Delhi reported that only 9.1 per cent mothers initiated breastfeeding within one hour. Again, Bhonsle et al. (1997) in Nagpur revealed that 62.7 per cent neonates received breastfeeding within 24 hours. Indian Pediatrics (2003) in its editorial,
mentioned that breastfeeding was initiated after three days of childbirth (54.3%) considering colostrum dirty and unfit for the baby. Prelacteal feeds like honey, unboiled water, sugar syrup and ghutti were given by 80 per cent mothers considering them cleansing agents. Oddy et al. (2003) in their study in Perth, Australia observed that exclusive breastfeeding for at least six months followed by continued breastfeeding for one year may reduce the prevalence of respiratory illness and infection in infancy. Das et al. (2008) in their study in a rural set up in West Bengal found that the practice of giving prelacteal was highly prevalent (78.2%) and honey was found to be the predominant prelacteal feed. Story and Parish (2008) in their review of fifteen studies have stated that a protective relationship exist between breastfeeding and the incidence of diarrhoea and pneumonia. Jain et al. (2006) were of the view that early and exclusive breastfeeding reduces childhood morbidity and mortality. Similarly, Joseph et al. (2013) in their study in South India observed that incidence of morbidity was least among exclusively breastfed children. Incidences of morbidities were more when infants were weaned. Diarrhoeal incidences were also more in bottle-fed children. Park (2011) opined that breast milk should be initiated within an hour of birth although it is customary to instead wait for several hours as is often customary. Colostrum or the special milk is secreted in the first 2-3 days after delivery. It is produced in small amounts (40-50 ml) on the first day (WHO, 2009). This milk rich in anti-infective factors protects the baby against respiratory infections and diarrhoeal diseases.

The practice of appropriate health care seeking behavior has a great potential to reduce common morbidities and also prevention of occurrence of severe and life threatening illness. Health care seeking behavior is very much influenced by prevailing beliefs and socio-cultural practices, severity of illness, maternal education, economic status etc.

Home remedies for common morbidities especially at the onset of disease have always proved to be beneficial not only in the cure but also further regaining of health. Kapoor et al. (1990) found that home remedies for cough and cold were preferred by 51.9 per cent mothers, 44.3 per cent mothers preferred to take advice from doctors and 8.5 per cent reported that no treatment is required for such ailments. Mishra
et al. (1994) in their study have found ginger, honey, basil leaf, *jaiphal* and even hot fermentation are some of the common home remedies used by them.

Perceptions of severity of illness strongly influence the health seeking behaviour. From studies conducted in different parts of the globe, it is evident that mothers were likely to seek care only when they perceived the illness to be severe. Tessema *et al.* (2002) in their study reported that as the health of the children is strongly dependent on maternal health care behaviour, it follows that maternal perception of illness is an important consideration. Hill *et al.* (2003) in rural Ghana observed that poor recognition of danger symptoms of childhood illness was one of the significant barriers to seek treatment. In another study by Mohan *et al.* (2004) in rural India found that 49 per cent mothers in an intervention group perceived illness episodes to be serious than mothers in non-intervention group (41%).

Proximity to the health care centre is another important indicator for seeking treatment as observed by various researchers like Rajaratnam *et al.* (1996); Awasthi and Pandey (1998); Sundar *et al.* (2002).

Das *et al.* (2008) were of the view that a good number of neonatal morbidity and mortality is attributed to improper delivery and newborn care practices. In their study in a rural block of West Bengal, they found that majority of the home deliveries (83.6%) were conducted by untrained *dhais* (31.5%) and friends and relatives (4.8%). About 18 per cent children were given bath after delivery. Khan *et al.* (2009) found hazardous home delivery practices in two slums of Aligarh. Untrained birth attendants conduct most deliveries making the woman squat, no aseptic precautions are taken and cutting of the umbilical cord was done with the edge of a broken cup. Sharma *et al.* (2013) in their ethnographic studies exploring childbirth in India have observed that there is a need to understand, respect and integrate cultural interpretation of childbirth with the maternal health policies.

All population belonging to different socio-cultural background have their own system of indigenous belief and practices pertaining to illness. These indigenous health care practices often dominate the modern system of medicine. Traditional method of cure though at times may have positive effect, yet it may also pose negative
influence and threat to life of young children. Sircar and Dagnow (1988) found in their study that diarrhoea was caused by God’s will and sorcery. They also reported that traditional healer was more preferred for treatment of diarrhoea.

WHO/SEARO (2004) have estimated that the South East Asia region accounts for 3.1 million under five deaths annually and neonatal mortality accounts for 40 per cent of under five morbidity. NFHS-3 (2005-06) shows the glaring differences in infant mortality rate among the households belonging to various wealth indices. The highest IMR (70.4) was found in the lowest wealth index and the lowest IMR (29.2) was found in the highest wealth index. Das et al. (2010) have observed an age specific pattern of child mortality among India’s tribal population. They have found that high number of child deaths is concentrated among Adivasis in the age group of 1-5 years. Between 0-1 years both tribal and non-tribal faces similar odds to the risk of death. Niswade et al. (2011) in their study among tribal's and rural communities in Central India found that miscarriage and abortion, low birth weight were higher in tribals. Neonatal mortality in both the groups was due to LBW, sepsis and respiratory illness. Preterm delivery was strongly associated with neonatal morbidity.

NFHS-2 (1988-89) shows that 44.8 per cent mothers initiate breastfeeding within one hour of birth in rural areas of Assam and also reported that delayed initiation was seen more in hospital deliveries. Bhuyan (1994) in her study of 4 tribal groups in Assam have found that 53.5 children between 1-5 years were healthy. The study revealed that malnutrition is less prevalent although a large section of the people was poor, educationally backward and unaware of modern concept of child care. This could be attributed to certain commendable practices like early initiation of breastfeeding, exclusive and prolonged breastfeeding. Boruah (1997) observed that tribal mothers of Rani Block of Assam practiced early initiation of breastfeeding and 88.2 per cent mothers were found to initiate within half an hour of birth. It was also found that major cause of delay in initiation was baby separation, mother’s illness and inadequate breast milk. NFHS-3 (2005-2006) reported that 50.5 per cent of babies are introduced to breastfeeding within one hour of birth in rural Assam which is better than the national data of NFHS-2. Gupta and Gupta (2003) in a National Report (BPNI) reported that 46.5 per cent of infants in Assam were breastfed within one hour. Medhi and Mahanta
observed in Dibrugarh that 69.3 per cent mothers exclusively breastfed their infants for six months which is really a healthy practice. They also observed that 5.6 per cent mothers started complementary feeding by 2-3 months, 14.8 per cent by 4-6 months, 56 per cent by 6 months and 23.5 per cent by 7-8 months in the tea estates of Assam. Kalita (2005) in his study in a rural setting in Kamrup found that initiation of breastfeeding, administration of colostrum and exclusive breastfeeding was commendable (74.7%, 93.8% and 69% respectively).

Bhattacharya (2005) in his study in Assam found that 20.2 per cent children suffered from ARI, 21.2 per cent from diarrhoea, 8.6 per cent from measles. Islam (2005) in her study found that incidence of acute respiratory infection was more in Hindu and also among children living in joint family structure. Similarly, Bhattacharjee (2005) found more incidence of malnutrition in joint families.

Phukon (2009) in her study in the Rani Community Development Block of Assam has shown that people by and large are aware of malaria and its routes of transmission in the area. The study also revealed that 97.3 per cent of the population under study were using bed nets and another 30 per cent were using commercially available mosquito repellents. Use of traditional fumigants like organic household wastes (coconut fibre, cow-dung and hay, dried leaves were used by 68 per cent of the population. Thus prevalence of malaria was found to be low in the area.

An interstate comparison reflects that Assam has remained a still high infant mortality state (58/1000). The birth rate in the state is 23.2 per cent while the death rate is 8.2 per cent. (The Assam Tribune, 22nd Feb, 2012). An estimated 6.6 lakh babies are born in the state annually where Dhubri, Kokrajhar, Morigaon, Darrang and Karimganj top the list in infant mortality. Low birth weight and premature birth also make the babies vulnerable to pneumonia and diarrhoea which are major causes of infant deaths in Assam. (The Assam Tribune, 20th April, 2013).

Borah et al. (2014) in their study in Dibrugarh have found the prevalence rate of diarrhoea in under five children to be 26.2 per cent which is above the national average. It was observed that the prevalence rate was high for children with illiterate mothers (29.8%).
AIMS AND OBJECTIVES

The Northeast region of India presents a wide range of regional, ecological, ethnic, socio-economic and socio-cultural variation. Having a strong cultural heritage the region portrays a fertile field in any research area.

Today one of the most important aspects of research in population studies is to identify the causes of infant and childhood morbidity and mortality. These causes are rooted in genetic and environment (natural and socio-cultural). Again knowledge of these facts has also become a prerequisite for designing and implementing various interventional programmes for children less than five years of age. A review of research works done in the field of morbidity and mortality in under five children, however, reveals how various socio-cultural environment contribute their share in determining the health of under five children.

Considering the above scenario an attempt has been made to study the morbidity and mortality in under five children amongst the Bodos, the Garos and the Assamese Caste Hindus in the Rani area of Kamrup District of Assam. The study also attempts to understand to what extent the different socio-cultural practices of the people living in the same environmental condition play their role in influencing the levels of morbidity and mortality. The area for conducting this research work was selected precisely because it is a rural setting where population belonging to different communities like the Assamese Caste Hindus, the Bodos, Rabhas, Hiras, the Garos and a small section of tea tribe population were found to reside in the same ecological backdrop.

With this objective in view the present study aims at examining the following:
1. The morbidity and mortality in under five children amongst the Bodos, the Garos, and the Assamese Caste Hindus in the Rani area of Kamrup district of Assam.

2. The relationship between morbidity and mortality with different socio-cultural factors.

3. The child care practices followed by these communities and how these practices directly or indirectly influence the morbidity and mortality.

Limitations of the Study:

The spectrum of the present research work is very wide. However, quite a few number of limitations and constraints were encountered in the course of the study. It was not possible to cover all the desired parameters and get the results in minute details to the extent of highest level of desire. Moreover the data were collected by recall method (15 days) and therefore short memory, forgetfulness, impatience, evasiveness have at times failed to give accurate information although efforts were made to get the results in every detail. The results of the study are, therefore, to be viewed within the framework of the limitation.