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1.0 INTRODUCTION

The progress and prosperity of a nation does not depend upon a single generation but is dependent upon the quality of successive generations. It would not be wrong to say that welfare of an adult is a part of expenditure while the welfare of a child is an investment. Right to health, as declared by the Supreme Court in India is part of the fundamental right of the individual to his/her life and liberty. But in reality, health is a low priority concern for the government and the people. It receives the attention of many at the outbreak of epidemics.

Children are valuable assets of a nation and it is their welfare that strengthens its social and economic development. They need to be protected and well looked after if the country is to thrive and prosper in different spheres of human activity. Their health is not only an indicator of the socio-economic status and standard of living of the country but also reflects the values and beliefs of society. “A healthy good child is happiness to the parent, eternal joy to the mother, apple of the eye of the family, leader of the community, thrill of the society and hope of the nation”.

According to WHO, (1948), health implies a sound mind in a sound body, in a sound environment. Gurumurthy, C., (1995), pointed out that health depends to a large extent on nutrition, and nutrition on food. Food, in fact is the most important single factor in connection with the attainment and maintenance of health.

Thirty First Session of the Standing Committee on Nutrition, New York, (2004), states that nutrition is a fundamental human right and it plays a key role in health. Eradication of hunger ranks high among international goals because good nutrition is essential for the health and human capacity needed to achieve many of the other Millennium Development Goals. Freedom from hunger is a sound foundation for economic growth in the world’s most impoverished nations. Well-nourished people learn better, produce more, and can more effectively fight off disease, and provide better care for their children and the environment.

All over the world, child malnutrition is linked to poverty, low levels of education, and poor access to health services, including reproductive health services and family planning. It is widely known, for instance, that having babies too closely
together increases the chance of poor nutrition in both the mother and child. Studies show that waiting at least two to three years between births allows the mother to replenish nutritional reserves. It is to be remembered that health services during pregnancy and childbirth provide vital entry points for nutrition interventions. It is also true that adequate health services, especially emergency obstetric care, are needed during childbirth to ensure a healthy outcome for both mother and child. Studies show that the death of a mother reduces the chances of a healthy life for children who are left orphaned. So, clearly all of these interventions are mutually reinforcing. This is important because malnourishment in infants and children, even moderate, increases their risk of death, inhibits their cognitive development and affects health status later in life. Studies show that the under-nutrition of a foetus is linked to chronic disease in adulthood. It is also known that the effect of malnutrition during the first two years of life is mostly irreversible, and actions thereafter have little or no impact on underweight rates and physical and mental problems. Undernourished infants tend to enter primary school later and drop-out earlier. When they are in school, they tend to be less able to learn as compared to better-nourished individuals. Yet, despite this knowledge, malnutrition continues to affect millions of poor infants and young children. Every year, some 30 million infants are born in developing countries with impaired growth due to poor nutrition during foetal life. Every minute, 11 children under five die of hunger-related causes.

Thus, malnutrition is largely a silent and invisible emergency, exacting a terrible toll on children and their families. The result of multiple causes, including lack of food, common and preventable infections, inadequate care and unsafe water plays a role in more than half of the nearly 11 million deaths each year of children under five in developing countries.

In fact, some of the underlying factors that cause malnutrition, such as low birth weight, insufficient breast-feeding, nutritionally inadequate food (especially lack of iodine, vitamin A and iron, frequent diarrhea and respiratory infections) also impair children’s intellectual growth. While the effects of poor nutrition are devastating locally, regionally and globally, the impact of good nutrition is equally powerful. Improving the nutritional status of communities, especially of women and children, can help overcome many of the major health challenges many countries face today.
In India, 80 percent of the population resides in the villages. Of the total rural population, about 50 per cent is still under the poverty line which includes majority of the scheduled caste families. Poverty is an important limiting factor for buying food leading to malnutrition and stunted growth. Health is considered as an integral and essential component of the overall developmental strategy for poverty alleviation, (Promila Kanwar et.al., 1994).

It was reported in The Hindu, (2002), that in addition to chronic protein-energy malnutrition caused by poverty, two billion people in the developing countries, many of them are women and children, who suffer from hidden hunger caused by one or more micronutrient deficiencies, like lack of iron, iodine or Vitamin A. Currently 34 countries are experiencing severe food shortage, the most seriously affected being countries in Southern Africa as well as Afghanistan and North Korea. Developing countries are likely to spend over £23 billion for import of cereals, largely from rich nations.

Children today live in an environment vastly different from that of a few generations ago. Economic development, increased urbanisation and the consequence of war in many countries have added to the traditional environmental hazards, those problems associated with environmental pollution. Thus, while some traditional children’s diseases such as diarrhoea, malnutrition and infectious diseases persist in many countries, environmentally related illnesses such as asthma, respiratory illnesses due to environment tobacco smoke (ETS), as well as mortality and morbidity due to injuries, are increasing. In childhood, cancer in some countries and the potential risks of endocrine-disrupting chemicals are among the emerging health threats that need careful vigilance. Children of lower socio-economic status are likely to suffer disproportionately from all their health threats as a consequence of living in highly polluted environments, poor quality housing, lower levels of education and of restricted access to environmental and health care services. Several international agreements have acknowledged children’s vulnerabilities and have committed their signatories to protect children’s health from the effects of a deteriorating environment, (Narasaiah M.L, 2004).
The Commission on the Nutrition Challenges of the 21st Century, (2004), in its report titled “Ending Malnutrition by 2020: An Agenda for Change in the Millennium”, has pointed out that some 30 million infants are born each year in developing countries with intra-uterine growth retardation, representing about 24% of all new births in these countries, (Philip, et.al., 2000). Low Birth Weight (LBW) children are characterized by mental impairment. Worldwide, there are more than 150 million under-weight pre-school children and more than 200 million stunted children. At current rate of progress in fighting these maladies, about one billion children will be growing up by 2020 with impaired mental development. In contrast, overweight is the major health problem among children in most industrialized countries and some developing ones. It has also recommended in bridging the nutritional divide as the first requisite for a more equitable and humane world.

Pedro Medrano, (2004), reported that for Indian as a whole, the occurrence of both severe and mild under-nutrition among under three-year old is strikingly high at 23 percent and 45.5 percent, respectively. The incidence of severe under-nutrition is particularly acute in the states of Uttar Pradesh, Bihar, Madhya Pradesh, Assam and surprisingly, in Haryana and Gujarat. Bihar is singled out as the state having the highest levels of both severe and mild under-nutrition. Stunting, both mild and severe is also highest in Bihar and Uttar Pradesh, (Sharif, 2001). However, according to the NCAER, (2001) study, on an average, less than 3 per cent of children are severely malnourished across the country, with the exception of Bihar. This is also true of different age groups of incidence. However, about 11.3 per cent of the children are moderately malnourished. Children in the age group of 37-72 months reported relatively high incidence of moderate malnourishment.

The National Rural Health Mission (NRHM), was launched in April, 2005 by the Department of Health, Ministry of Health and Family Welfare, Government of India, to provide effective health care to the rural population, especially the disadvantaged groups including women and children, by improving access, enabling community ownership and demand for services, strengthening public health systems for efficient service delivery, enhancing equity and accountability and promoting decentralization.
In the World Summit for Children, held on 30th September, 1990, during the Convention on the Rights of the Child, it was universally accepted that hunger and malnutrition in different forms contribute to about half of the deaths of young children as malnutrition affects all who cannot afford a balanced diet. The worst sufferers are children, particularly those in the pre-school age group and women who are in the reproductive stage. Considering the magnitude and the seriousness of the problem, a crash programme, known as ‘Special Nutrition Programme’ was undertaken to mitigate the nutritional imbalance amongst the vulnerable group comprising of children and women. This programme was taken up as a Centrally Sponsored Scheme and it was also covered under Minimum Need Programme. Department of Women and Child Development, Ministry of Human Resource Development, Government of India, formulated National Nutrition Policy, which has been adopted by the Government in 1993. The National Standing Committee on Nutrition has also been set up to fulfill the country’s solemn commitment of alleviating various forms of malnutrition amongst the people. All State Governments have been advised to draw its Nutrition Policy, as there is still very high rate of malnutrition among children and women and programmes have to be implemented to provide nutrition services with the object of removing deficiencies in the diet of children and women.

Nutrition is a pre-requisite for optimal growth and development of children. A diet inadequate in quantity and quality is a relevant factor affecting growth and development. While malnutrition affects the people of all ages, it is agreed that children in general are the worst sufferers, (Swaminathan, 1990).

In the developing countries, particularly in rural areas, the lives of children of aged 1-4 years are extremely precarious because of wide range of factors, ranging from low socio-economic status, culture, inadequate health measures, poor environmental sanitation, inappropriate nutritional practices and unbalanced diet. The pre-school period is very important for the growth and development of the child. The foundation for good health and sound mind are laid during this period. Nutrition of the pre-school child is of paramount importance, since the foundation for lifetime health, strength and intellectual vitality is laid during this period. Thus nutrition is one of the most important factors responsible for proper growth in infancy and childhood, (Sunita Mishra & Braja Kishori Mishra, 2002).
WHO, (2000), reported that poverty underlies most of the world’s malnutrition, with attendant inadequate and insecure food supply, inappropriate feeding practices and care, nutritional emergencies, and widespread infection and infestation compounded by lack of health services. Maternal malnutrition remains a major factor for the 30 million infants born each year with intrauterine growth retardation leading to retarded physical, mental and intellectual growth, and heightened risk of infectious diseases and death. Malnutrition contributes to nearly half (49%) of the 10.7 million deaths each year among pre-school children in developing countries.

Health and nutritional practices are developed by people’s tendency to settle into fixed habits. The practices of any community are influenced by socio-economic and political factors. These factors have also had considerable influence not only on the development of medical technology but also in determining the access of different social strata of a community to such technology.

The present study concentrated on the health and nutritional practices carried out by Scheduled Caste Women towards their pre-school children in Thiruverambur block of Tiruchirappalli District will prove to be a significant one.

1.1 CONCEPT OF HEALTH AND NUTRITION

Health is a term that refers to a combination of the absence of illness, the ability to cope with everyday activities, physical fitness, and high quality of life. In any organism, health can be said to be a "state of balance," or analogous to homeostasis, and it also implies good prospects for continued survival. Wellness is a term sometimes used to describe the psychological state of being healthy, but is most often used in the field of alternative medicine to describe one's state of being.

Nutrition is the science of food and its relationship to health. Good nutrition is a fundamental requirement for positive health, functional efficiency and productivity. It is an integral part of the health and well-being of all individuals. Good nutrition is determined by the consumption of an adequate diet, as also person’s ability to resist disease and infections that interfere with the digestive and absorption processes of the
biological system where on the one hand good nutrition enables us to lead a socially and economically active life.

1.2 NUTRITION AND HEALTH

Nutrition is a vital aspect of health that regulates the well-being of the individual. It is important for the maintenance of health and efficiency of the individual. Malnutrition affects the health of children negatively, and often results in diseases and child mortality. A balanced diet is hence necessary for the health of the children as well as adults. Our people generally do not take proper food with sufficient proteins, minerals, vitamins and calories. This leads to malnutrition which in turn is responsible for diseases like scurvy and rickets. Of the several factors responsible for malnutrition, poverty, economic inability and ignorance about balanced diet are the main ones.

1.3 EDUCATION AND HEALTH

Health through education had been of great concern during ancient times and so also in modern times in all the civilized nations of the world. The WHO, 1948, in its constitution defines that health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. To create a healthy world that meets this definition demands the concerted efforts of all, because health is considered a fundamental right of the human being. A healthy mind is always housed in a healthy body. Man today is living in a highly developed and complex industrial society and as such the complexities of technocracy are reflected in his everyday life. Modern science of health brings to him, ample knowledge as to what health is, how health could be enjoyed and why health education is necessary for students of all ages, from the pre-primary to higher classes.

1.4 MEANING OF HEALTH AND NUTRITIONAL PRACTICES

Practices are the activities of both heart and hand and guided by certain beliefs and principles. These are particular and personal and change according to time and place. These are based on deductive reasoning, from the general the particular is inferred. In simple words, practice means pattern of taking action. Practices represent the behaviour of a person and behaviour means manners of acting or conducting oneself may be health habits, health practices etc., in the field of health.
1.4.1 Health Practices

Health practices in any country are sum total of people’s reactions, through personal practical experience, to the health services operating in a community and the way these experiences fit in their frame of reference. This, in turn, is dependent on the prevailing cultural factors in that community. Any assessment (diagnosis) regarding the effectiveness of measures taken to provide health service in a community will have to take this aspect into consideration. The diagnosis or assessment, thus arrived at, provides a clue to the people’s behaviour related to the acceptance or rejection of a service.

To lead a healthy life one has to understand and discriminate between good and bad practices. Preservation of good health depends on the understanding of the factors conducive to good health and factors causing ill-health. Individuals have selective perceptions and in functioning as members of the society they conform to social norms and groups sanctions.

1.4.2 Nutritional Practices

Nutritional practices play a significant role in maintaining the health status of an individual. Practices permitting an adequate diet (in quality and quantity) contribute to the health of the individual. An adequate diet has a marked effect upon a person’s vitality, emotional stability and enthusiasm for life and work.

Nutritional practices or habits may be defined as “the way in which individuals or groups of individuals in response to social and cultural pressures, select, consume and utilize portions of the available food supply”. In other words, the practices are determined by a person’s choices, preferences and preparations and are influenced by a number of external factors such as beliefs, customs, traditions, prejudices and practices in a community.

Nutritional practices and patterns are developed by people’s tendency to settle into fixed habits. Eventually, they characterize regional and national eating practices as either poor or good. Poor food habits are seen in a person who eats only what he/she likes with total disregard to the quality of food and to the possibility that they may not
add up to an adequate diet. These habits may also be due to poverty and other deprivations. Good food habits on the other hand are judged by the willingness and interest a person shows in eating the kinds and amounts of foods, which are needed for nutritional adequacy. Thus the food habits of a community furnish presumptive evidence of the nutritional status of the population.

1.5 NUTRITIONAL WELL-BEING FOR ALL

Nutrition is a fundamental pillar of human life, health and development across the entire life span. From the earliest stages of foetal development, at birth, through infancy, childhood, adolescence, and on into adulthood and old age, proper food and good nutrition are essential for survival, physical growth, mental development, performance and productivity, health and well-being. It is an essential foundation of human and national development.

Achieving Health for All - whereby people everywhere throughout their lives, have the opportunity to reach and maintain the highest attainable level of health, which is impossible in the presence of hunger, starvation and malnutrition.

Human nutrition is a scientific discipline concerned with the access and utilization of food and nutrients for life, health, growth, development and well-being. The scope of human nutrition is vast, ranging from biological and metabolic nutrition, through whole-body and clinical nutrition, to the massive public health nutrition issues of national nutrition programmes and the global prevention, control and elimination of malnutrition and nutritional disorders.

Nutritional well-being depends on four main factors - food, care, health and environment. It is diagrammatically presented in the following Diagram-1.1.
1.6 CURRENT NUTRITION AND HEALTH SCENARIO IN INDIA

1.6.1 Nutrition Scenario

There has been a conquest of nutritional deficiencies – Florid Nutritional Deficiency Syndromes like Pellagra, Beri Beri, Scurvy, Kwashiorkar have disappeared, famines are no more, severe malnutrition among pre-schoolers has reduced appreciably and nutritional status of adults has improved significantly. But still the high levels of malnutrition continue to influence morbidity and mortality rates in the country. The challenges that still remain includes:

- High Malnutrition Levels particularly in Women and Children
- Undernutrition
- Micronutrient Malnutrition
- Emerging diet related diseases
- High Mortality Rates-IMR, U5MR and MMR
- Inadequate Access to Health Care, Immunization etc.,

Undernutrition is defined as the outcome of insufficient food intake (hunger) and repeated infectious diseases. Undernutrition includes underweight (being underweight for one’s age), stunted (being too short for one’s age), wasted (being dangerously thin), and micronutrient malnutrition (being deficient in vitamins and minerals). As per NFHS-2 (1998-99) 47% of children under three years are underweight, 45.5% stunted and 15.5% wasted. India fares poorly even among the South East Asian countries, occupying the third place from the bottom with only Nepal and Bangladesh faring worse than India. The prevalence of low birth weight continues
to be about 30% for last three decades. Low birth weight babies are more likely to die because of neonatal infections and under nutrition.

Iron Deficiency Anaemia prevalence continues to be high particularly among the high risk groups like children under 5 years, adolescent girls, pregnant and lactating women. About 68-78 per cent of these population groups suffer from anaemia, (NNMB, 2003).

Vitamin A Deficiency continues to be a problem of public health significance among pre-school children with prevalence of Bitot Spots, an objective sign of vitamin A deficiency being equal to or more than WHO cut off level of 0.5%. The stagnant prevalence of vitamin A deficiency (Bitot Spots) ranging from 0.7% to 1.1% during the period 1988-90 to 2003 requires a comprehensive approach for its prevention and control.

No state in India is free from Iodine Deficiency Disorders. The Total Goiter Rate (TGR) in 260 districts out of 321 districts surveyed is reported to be more than 10% and its prevalence is more than the WHO recommended cut off level of 5%, indicating endemicity of Iodine Deficiency Disease.

Infant Mortality Rate is still very high, i.e., 58 per thousand live births (as per SRS 2006 for the year 2004). The plateau in IMR observed since 1990 can only be removed by addressing malnutrition in mother-child dyad. Under 5 Mortality Rate and Maternal Mortality Rate are also unacceptably high.

Under-five mortality rate is also high. About 11 million children under the age of five die each year and 98% of them are in developing countries. Almost 40% of these deaths occur in the first 28 days after birth, the neonatal period. Infections account for 36% of these deaths. Malnutrition is closely linked to child mortality; a malnourished child faces a much greater risk of death compared to a well nourished child. More than half of these child deaths are preventable if a set of do-able interventions and practices were to be applied on a large scale. These relatively simple but highly effective interventions and practices include timely and adequate infant
feeding (early and exclusive breastfeeding) practices, treatment of diarrhea, immunization, keeping a newborn baby warm, and others.

Infant and young child feeding practices in India are far from optimal. According to NFHS-2, exclusive breastfeeding falls rapidly from 72% at one month to 20% at six months. Only about 16% babies in India start breastfeeding within one hour.

Other indicators are also disappointing. For instance, complementary feeding practices are very poor: only 33% of children aged between 6-9 months are given solid mushy foods (NFHS-2). Comparison with NFHS-1 highlights that India is able to stop the decline in breastfeeding. However, achieving the national goals will require massive action and resources. Results from a recent study from 49 districts (2003), with data for about 9000 mothers, also show a dismal picture. This is where malnutrition begins as young baby are dependant on parents or other caregivers for their food intake.

Age wise distribution of prevalence of underweight in children reveals that malnutrition peaks during the first two years of life. From 11.9% prevalence among 0-6 month old infants, it reaches 58.5% in 12-23 months old children. This steep rise in malnutrition during the first two years is mainly due to poor infant feeding practices.

Maternal mortality also continues to be high in many parts of the world, especially in Sub-Saharan Africa and some of the countries in Asia. It is estimated that worldwide more than 500,000 women die each year while giving birth. In Sub-Saharan Africa the rate is 940 deaths per 100,000 live births, while in South Asia it is 560. The main causes are depicted in the graph below and include severe bleeding, infection, unsafe abortion and eclampsia. More than 20 percent of maternal deaths are caused by diseases such as malaria, anemia, TB, and HIV/AIDS that are aggravated by pregnancy. Adolescents are at increased risk of dying during pregnancy and childbirth. They are twice as likely to die as women in their twenties and teens younger than 15 are five times as likely to die of complications. As with child mortality, high rates of maternal mortality can also be brought down drastically through a combination of do-able interventions. The chances of survival are greatly increased by availability and access to emergency obstetrical care.
1.6.2 IMR and MMR in India

Major investments in child health in India have not yielded any substantial decline in maternal, infant and young child mortality in the recent decade.

Of the 26 million infants born in India every year, about 2.3 million die before reaching the age of five years, and about 1.2 million of these die before the age of one month, (Dadhich and Paul, 2004). This amounts to almost 30 percent of worldwide neonatal deaths. The current neonatal mortality rate (NMR) of 44 per 1,000 live births accounts for nearly two-thirds of all infant mortality and half of under-five child mortality, (NFHS, 1998-99). In order to reduce child and infant mortality rate it is, therefore, important to address neonatal mortality.

The major causes of neonatal death in India resemble the global picture with infections, prematurity and asphyxia as the leading causes. About a third of all neonatal deaths occur on the first day of life. Approximately an additional one third of deaths occur between the first and seventh day of life. Preventing a substantial proportion of neonatal deaths requires appropriate postnatal care, especially immediately after birth.

However, only 42.3 percent of deliveries are attended by a health professional. Two thirds of all deliveries (66.4 percent) occur at home. The proportion of home deliveries is particularly high in rural areas (75.3 percent) where over three quarters of the population lives. Among home deliveries, a postnatal contact with a health professional occurs only in 2.3 percent during the first two days after delivery, 5.2 percent during the first week and 16.5 percent at any time during the 2 month period following delivery, (NFHS, 1998-89).

Inappropriate newborn care practices are highly prevalent. Colostrum is often discarded; breastfeeding is initiated several hours or even days after birth, and prelacteal feeds given to three quarters of all newborns. The importance of keeping the baby warm is not understood, resulting in about 20 percent babies becoming hypothermic in the first few days of life. Health care seeking is usually delayed because of lack of recognition of signs of early illness, cultural factors and situational constraints.
Child mortality and undernutrition are closely linked with the health and nutritional status of the mother, and the care and services she receives during pregnancy and child birth. In India this is still far from adequate, demonstrated by the high maternal mortality ratio of about 404/100,000 live births and the fact that the distribution of causes has not changed dramatically over the last 20 years. The main causes of MMR are: (i) Hemorrhage, both ante-partum and post-partum; (ii) pregnancy-induced hypertension (eclampsia); and (iii) infection. Only 20 percent receive the sufficient level of recommended antenatal care.

1.7 NUTRITION SITUATION IN TAMIL NADU

Several Nutritional Challenges in Tamil Nadu are as follows:

Low Birth Weights, Some 30 million infants are born each year in developing countries with low birth weights, representing about 24% of all newborns in these countries. Population wide intervention aimed at preventing fetal growth retardation is urgently needed.

Childhood Undernutrition Underestimated, There are still more than 150 million underweight pre-school children worldwide, and more than 200 million are stunted. This wider underweight and stunting is the tip of the iceberg. Sub-optimal growth may affect many more. Stunting is linked to mental impairment. At current rates of improvement about 1 billion stunted children will be growing up by 2020 with impaired physical and mental development.

Pandemic Anemia, Anemia during infancy, made worse by maternal undernutrition, causes poor brain development. Anaemia is also very prevalent in school children and adolescents. Maternal anemia is pandemic, over 80% in some countries, and is associated with very high rates of maternal death.

Extensive Persisting Vitamin A Deficiency, Severe vitamin A deficiency is on the decline in all regions. However, sub-clinical vitamin A deficiency still affects between 140 to 250 million pre-school children in developing countries, and is associated with high rates of morbidity and mortality. These numbers do not take into account vitamin A deficiency in older children and adults and thus seriously underestimated the total magnitude.
Obesity Rates Escalating, Overweight and obesity problems are rapidly growing in all regions, affecting children and adults alike. These problems are now so common in some developing countries that they are beginning to replace more traditional public health concerns such as undernutrition and infectious disease. Obesity is a risk factor for a number of non-communicable diseases, adult-onset diabetes in particular.

Sustaining Iodization Programmes, Efforts are needed to sustain the remarkable progress made in the past decade towards universal iodization and elimination of iodine deficiency disorders. Monitoring systems, quality control and sound legislation are key priorities, as well as improving outreach to isolated communities.

1.8 ACHIEVEMENTS IN THE FIELD OF NUTRITION DURING THE LAST FIFTY YEARS

The Nutrition scene at the time of Independence was very grim. The following problems concerning food and nutrition dominated the nutrition scene:

- Inadequate Food Production, Series of Famines, Florid Nutritional Deficiency Disorders like Beriberi, Pellagra and Scurvy, Severe under-nutrition and malnutrition among children, High infant and child mortality rates, Very low literacy levels and nutritional awareness.

India's concern for nutrition has been as old as her civilization. Its holy books and other ancient scriptures contain guiding principles for nutrition and health. In the post independent India there has been an unequivocal commitment to the cause of nutrition through constitutional provisions. The constitution of India states explicitly in Article 47 that the "State shall regard the raising of the level of the nutrition and the standard of living of its people and the improvement of public health among its primary duties..."

The "Green Revolution" did help the country in overcoming the famines. The country succeeded in eliminating classical nutritional deficiency syndromes like Cardiac Beriberi, Pellagra and Scurvy. Kwashiorkar is of the classical kind and Keratomalacia which used to be a major cause of nutritional blindness in children during 1960s, have almost disappeared.
Severe malnutrition in children has been significantly reduced. The Infant Mortality Rate (IMR) reduced from 146 in 1951-61 to 67.6 in 1999. The Under 5 Mortality Rate has reduced from 236 in 1960 to 105 in 1998. Maternal Mortality Rate (MMR) has reduced from 570 per 1,00,000 in 1990 to 408 in 1998.

The analysis of various phases of nutrition programmes in India indicates that food production and technological advancement to improve nutritive value of foods dominated the nutrition scene during the first two Five Year Plans. During 1960s the Food and Nutrition Board (FNB) was established in the Department of Food, Ministry of Agriculture for diversifying the food habits of the people with the dual purpose of making the diets of the people more nutritious and at the same time reducing the demand for cereal grains. Mobile Food and Nutrition Extension Services and Community Canning and Preservation Centres were set up by the FNB for undertaking Nutrition Education and Training. Applied Nutrition Programme, highlighting production of protective foods through home gardens, school gardens, poultry farms, demonstration and promoting consumption and National Goiter Control Programme for addressing the problem of Goiter in Sub-Himalayan Region through iodisation of salt were launched in 1962.

The Crash Feeding Programme (Special Nutrition Programme) was launched in 1970 for bridging the energy and protein gap in daily diets of pre-school children in urban slums, tribal areas and backward rural areas. Specific nutritional interventions like Prophylaxis against Nutritional Anemia and Nutritional Blindness were launched through the health infrastructure.

Recognising the multi-faceted problem of malnutrition, the Integrated Child Development Services (ICDS) Scheme was launched on 2nd October, 1975. Universal Immunisation Programme, Oral Rehydration Therapy, Nutrition Promotion through poverty alleviation programmes, public distribution of food, health and family welfare measures, adult education, were among the important indirect nutrition interventions undertaken by the Government.
The adoption of National Nutrition Policy (NNP) by the Government under the aegis of the Department of Women and Child Development in 1993 has been one of the significant achievements on Nutrition scene in the country. The Nutrition Policy recognized that "Nutrition affects development as much as development affects nutrition". Integration of Nutritional concerns in various developmental policies and programmes was recognized as an important tool for maximizing the nutritional outcome of developmental measures. The Policy advocates a series of actions in different spheres like food production, food distribution, education, health and family welfare, people with special needs and nutritional surveillance. The direct and indirect instruments of Nutrition Policy were recommended to be institutionalized through inter-sectoral co-ordination mechanism at Central and State levels.

A National Plan of Action on Nutrition (NPAN) highlighting the role of 14 concerned sectors of the Government was announced in 1995.

The India Nutrition Profile, giving the district-wise picture of malnutrition from 187 districts of 18 States/Union Territories was released in July, 1998.

A Task Force on Micronutrients (Vitamin ‘A’ and Iron) was constituted in 1995 for accelerating the control of Vitamin ‘A’ and Iron deficiencies. The report of the Task Force brought out in October, 1996 has been widely circulated for appropriate action by various organizations.

Recognising the importance of Nutrition Surveillance, a project was sponsored by FNB to the National Institute of Nutrition, Hyderabad and the Government of Andhra Pradesh. The project on completion has demonstrated that nutrition surveillance can be undertaken by utilizing the existing infrastructure of ICDS with improved training, monitoring and supervision. It has also brought out that the levels of malnutrition were brought down in different districts of Andhra Pradesh through the Nutrition Surveillance Project.

Creating nutritional awareness has been intensified with special focus on nutrition to 0-2 years old children, pregnant and lactating mothers. A Radio Sponsored Programme on ‘Poshan aur Swasthya’ has been broadcasted in 12 Regional languages
A Food and Nutrition Council (FNC) was constituted in November, 1997 replacing the Inter-ministerial Co-ordination Committee on National Nutrition Policy and the Food and Nutrition Advisory Committee. As per the recommendations of the FNC a proposal on National Nutrition Mission (NNM) has been developed with a view to address the problem of malnutrition in a Mission Mode Approach.

Vigorous awareness campaigns on malnutrition to make nutrition a talking point in the villages, direct interventions in districts with high malnutrition particularly for 0-2 year olds, adolescent girls, pregnant and lactating women and establishing nutrition surveillance in the States in a phased manner are the three major components of the proposed Nutrition Mission. Concerned sectors are being mobilized to promote nutrition through their respective programmes.

1.9 NATIONAL NUTRITIONAL PROGRAMMES IN INDIA

In India, the major Nutrition Programmes are:

- Integrated Child Development Services Scheme.
- Mid-Day Meal Programme.
- Special Nutrition Programme.
- Applied Nutrition Programme.
- Chief Ministers Noon Meal Programme (only in Tamil Nadu State).
- National Nutritional Anemia Prophylaxis Programme.
- National Programme for Prevention of Blindness due to Vitamin A Deficiency.
- National Goiter Control Programme.

1.9.1 Integrated Child Development Services Scheme

Integrated Child Development Services (ICDS) was launched on 2nd October, 1975 in pursuance of the National Policy for children in 33 experimental blocks. Success of the scheme stimulated the expansion of ICDS to 2452 projects by the end of March, 1990. The beneficiaries of this scheme are children below 6 years, pregnant
and lactating mothers and women in the age group of 15 to 44 years. The beneficiaries of ICDS are to a large extent identical with those under Maternal and Child Health and Expanded Programme of Immunization of Health Department.

The major objectives of the ICDS Scheme are as follows:

- To improve the nutritional and health status of children in the age group of 0-6 years.
- To lay the foundations for proper psychological, physical and social development of the child.
- To reduce the incidence of mortality, morbidity, malnutrition and school dropout of children in the age group of 0-6 years.
- To achieve effective co-ordination of policy and implementation amongst various departments providing development services to children.
- To enhance capability of the mother to look after the normal health and nutritional needs through proper nutrition and health education.
- To achieve these objectives, a package of services is rendered essentially through the Anganwadi workers at the village centre called ‘Anganwadi’. The supportive supervision by the functionaries of the nodal and health department is being done regularly.
- Supplementary Nutrition (SN), is given 300 days per year at the Anganwadi. “On the Spot” feeding is done as far as possible. All beneficiaries receive daily ration of 300 calories and 8 to 10g proteins except severely malnourished children. Severely malnourished children, pregnant and lactating mothers receive daily SN providing 600 calories and 18 to 20g protein.

1.9.2 Special Nutrition Programme

The Special Nutrition Programme (SNP) was started in 1970-71. It is operated by Ministries of Social Welfare. It was initially launched as a Central Programme and was transferred to the state sector during the fifth five year plan. The supplementary nutrition is provided under Minimum Needs Programme. Since 1975-76, the SNP is in operation in ICDS projects.

The main objectives of the programme is to improve the nutritional status of poor socio-economic groups of pre-school children, pregnant and lactating mothers in
urban slums, tribal areas and drought prone rural areas. The main activities of the programme are to provide supplementary nutrition and to provide health services including supply of Vitamin A solution and Iron and folic acid tablets (since 1975). The beneficiaries of this programme are pre-school children and pregnant and lactating mothers. They are selected on the basis of their socio-economic group. The pregnant mothers in the last trimester and lactating mothers during the first four months and malnourished children are given priority.

1.9.3 Applied Nutrition Programme

The Applied Nutrition Programme (ANP) was first introduced in 1960 in Orissa and Andhra Pradesh. It was extended thereafter to Tamil Nadu in 1961 and Uttar Pradesh in 1962. By the year 1973, the programme was extended to all the states.

The specific objectives of ANP are:
- To make people conscious of their nutritional needs
- To increase production of nutritious feeds and their consumption
- To provide SN to vulnerable group through locally produced foods

The specific activities of the programme are:
- supplementary feeding
- non-formal pre-school education
- nutrition education
- poultry farming & pisci-culture
- bee-hive keeping
- to provide better seeds and seedings
- raising kitchen gardens/school gardens

The beneficiaries of this programme are children between 3-6 years and pregnant and lactating mothers. The supplementary food is purchased and given to beneficiaries according to the amount of money fixed per head per day and not according to recommended calories and proteins due to financial constraints.
1.9.4 Mid-Day Meal Programme

The mid-day meal programme was initiated in 1962-63 and was extended to the entire country in subsequent years.

The specific objectives of the programmes are:

- To raise the nutritional status of primary school children particularly those belonging to low socio-economic group.
- To improve attendance and enrollment in schools.
- To prevent drop-out from primary school.

The beneficiaries of this programme are children attending primary school to 11 years of age. The main activity of the programme is that the food is purchased and given according to fixed money per head per day. Under the programme, each child should receive 300 calories and 8 to 12g protein per day for 200 days in a year.

1.9.5 National Nutritional Anaemia Prophylaxis Programme

Nutritional Anemia is one of the important health problem affecting women and children in India. The targets of this programme were being increased marginally every year. Under the programme Ironic Folic Acid tablets containing 60 mg elemental iron and 500 mcg of folic acid are distributed to women whose Hb is 10g percent and below, the IFA tablet for children whose Hb is 8 gm percent and below, contains 20 mg of elemental iron and 100 mcg of folic acid.

The major objective of the programme is to prevent overt anaemia. The women and children who have frank anemia are to be given intensive anti-anaemic treatment, which is the responsibility of the state.

The specific objectives of the programme identified from the general description appear to be as follows:

- To assess the baseline prevalence of nutritional anemia in mothers and young children through estimation of Hb levels.
- To put the mothers and children with low Hb levels (less than 10 gm and less than 8 g respectively) on anti-anemia treatment.
To put the mother with Hb level more than 10 g/dl and children with Hb more 8 g/dl on the prophylaxis programme.

To monitor continuously the quality of the tablets distribution and consumption of the supplementation and to assess periodically the Hb levels of the beneficiaries.

To motivate the mothers to consume the tablets through relevant education (and to give to their children).

The main beneficiaries of the NNAPP cover pregnant women, nursing mothers and women acceptors of terminal methods and Intrauterine Device acceptors. The target population is 50% of the total pregnant women, 50% of the total nursing mothers and 25% of total women acceptors of terminal methods and IUDS. The target child population is 50% of the children’s population in the age group of 1-5 years.

1.9.6 National Goitre Control Programme in India

Government of India realizing the magnitude of endemic goiter launched the National Goitre Control Programme (NGCP) in 1982, which included the replacement of edible salt with iodised salt particularly in the goiter endemic regions. Recently, programme of universal iodization of edible salt has been started from 1st August 1986, to iodise all edible salt in a phased manner. The determined effort of planners, administrators and scientists and politicians has included control of IDD in the 200 point programme of the Prime Minister.

The main objectives of NGCP are:

- Initial surveys to assess the magnitude of the iodine deficiency disorders.
- Supply of iodised salt in place of common salt to the entire country by 1992.
- Resurveys to assess the impact of iodised salt after 5 years.

The activities under NGCP are iodisation of salt, notification-banning use of non iodised salt, establishment of Goitre Cells and information education and communication activities.
1.9.7 National Programme for Prevention of Nutrition Blindness due to Vitamin A Deficiency among Children

The scheme for prophylaxis against blindness due to Vitamin A deficiency among children was launched in 1970. It is implemented by the Ministry of Health as a part of the maternal and child health programme. India was the first country to launch a national programme of Vitamin A deficiency distribution for prevention of blindness in children.

Under the programme, a massive dose of vitamin A (2 lakh I.U.) is given once in six months to all children between 1-5 years of age. The nutrition education is given to mothers to promote consumption of vitamin A rich food to their children. The programme is implemented through the primary health centres and actual distribution is done by paramedical workers. The specific objective of the programme is reduction of disease and prevention of blindness due to vitamin A deficiencies.

1.10 HUNGER AND MALNUTRITION IN THE WORLD

To be healthy and active, an individual must have food in adequate quantity, quality and variety to meet their energy and nutrient requirements. Without adequate nutrition, children cannot develop their potential to the fullest, and adults will experience difficulty in maintaining or expanding theirs. Not everyone has adequate access to the food they need, and this has led to large-scale hunger and malnutrition in the world. Nearly 800 million people today are chronically undernourished, unable to obtain sufficient food to meet even minimum energy needs. Approximately 200 million children under five years of age suffer from acute or chronic symptoms of malnutrition; during seasonal food shortages and in times of famine and social unrest, this number increases. According to some estimates, malnutrition is an important factor among the nearly 13 million children under five who die every year from preventable diseases and infections, such as measles, diarrhoea, malaria and pneumonia, or from some combination of these.

The vast majority of the undernourished people live in Asia and the Pacific. This region, which is home to 70 percent of the total population of the developing world, accounts for almost two-thirds (526 million) of the undernourished. India alone has 204 million undernourished people, and the South Asian sub region accounts for
more than one-third (284 million) of the world total. Another 30 percent (240 million) live in Southeast and East Asia, where more than 164 million of China’s 1.2 billion people are undernourished. Almost one-quarter of the undernourished are in Sub-Saharan Africa, which is also the region having the highest proportion of its population as undernourished. The situation is especially severe in Central, East and Southern Africa, where 44 percent of the total population is undernourished.

Malnutrition is one of the prime causes of low-birth-weight (LBW) babies and poor growth. LBW survivors are likely to suffer growth retardation and illness throughout childhood, adolescence and into adulthood, and growth-retarded adult women are likely to carry on the vicious cycle of malnutrition by giving birth to LBW babies. Links between malnutrition in early life - including the period of foetal growth – and the development later in life of chronic health conditions such as coronary heart disease, diabetes and high blood pressure are also emerging. Some 30 million infants are born each year in developing countries with impaired growth caused by poor nutrition in the womb.

Malnutrition in the form of deficiencies of essential vitamins and minerals continues to cause severe illness or death in millions of people worldwide. More than 3.5 billion people are affected by iron deficiency, 2 billion are at risk of iodine deficiency and 200 million pre-school children are affected by insufficient vitamin A. Iron deficiency can result in growth retardation, low resistance to disease, long-term impairment in mental and motor development and impaired reproductive functions; it contributes to approximately 20 percent of pregnancy-related deaths. Iodine deficiency may cause permanent brain damage, mental retardation, reproductive failure, decreased child survival and goitre. In an expectant mother, iodine deficiency can produce varying degrees of mental retardation in her infant. Vitamin A deficiency can result in blindness or death among children; it contributes to decreased physical growth and impaired resistance to infections, with consequent increased mortality in young children.

Even mild forms of these deficiencies can limit a child’s development and learning capacity early in life, which can lead to cumulative deficits in school performance, resulting in higher school drop-out rates and a high burden of illiteracy in
our future populations. Many of the most severe health consequences of these three leading micronutrient deficiencies could be greatly alleviated by ensuring adequate food supplies and varied diets that provide essential vitamins and minerals.

1.11 MALNUTRITION IN INDIAN CHILDREN

Malnutrition is a serious threat to infants and young children (0-6 yrs). It refers to a condition, which results from the deficiency of excess intake of calories and one or more nutrients and is classified as mild, moderate and severe. Nearly 75 percent of infant mortality in India is directly attributed to malnutrition due to low nutritional levels of pregnant mother. Malnutrition is the direct cause of death of 5,00,000 children every year. Malnutrition is undoubtedly the biggest public health problem in our country today. The economic condition of a very majority of our population is so poor that they are in no position to effort even the least expensive balanced diets.

In fact, some of the underlying factors that cause malnutrition, such as low birth weight, insufficient breastfeeding, nutritionally inadequate food (especially lack of iodine, vitamin A and iron, frequent diarrhea and respiratory infections) also impair children’s intellectual growth. While the effects of poor nutrition are devastating locally, regionally and globally, the impact of good nutrition is equally powerful. Improving the nutritional status of communities, especially of women and children, can help to overcome many of the major health challenges that many countries face today, (WHO, 1998).

Early Childhood Care and Development (0-6yrs) is a fundamental right of every child. But they are the most neglected. Malnutrition exists among all children irrespective of the class they belong to because of the changing food and societal patterns. The Globalization process has augmented it even more. The causes for malnutrition though always attributed to poverty and unemployment has other contributory factors. Maternal malnutrition contributes to poor child health and rates of survival.
1.12 CAUSES FOR PREVALENCE OF MALNUTRITION

- **Economic Factors:** Mass poverty and unemployment, low income and purchasing power, increase in cost of living, aggravation due to globalization, urbanization and migration.

- **Cultural Factors:** Gender discriminatory practices, traditional beliefs and fallacies, taboos, superstitions.

- **Social Factors:** Population explosion, early marriages, poor living conditions, environmental degradation.

- **Nutritional Factors:** Adulteration of food, lack of knowledge about nutritious foods, absence of breast-feeding due to absence of maternity entitlements.

- **Health System:** Poor health care services. Lack of awareness of ante-natal and pre-natal check ups. Non-existence of public health care services.

- **Family System:** Large size of the family, breaking down of joint families, increased percentages of working women, mother’s monotonous work with no time for the child. No voice for women in the family, family break ups.

1.13 HEALTH PROGRAMMES/ POLICIES INTRODUCED DURING THE FIVE YEAR PLAN PERIODS OF INDIA

The Health Programmes / Policies introduced during the Five Year Plan Periods of India was consolidated by Parthasarathy, K., and Kavitha, R., (2004), and the same is presented in Table-1.1.
<table>
<thead>
<tr>
<th>Planning Period</th>
<th>Type of Programmes / Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Five Year Plan (1951-56)</td>
<td>• Seven-Point Public Health Programme</td>
</tr>
<tr>
<td>Second Five Year Plan (1956-61)</td>
<td>• Control of Communicable Diseases</td>
</tr>
<tr>
<td></td>
<td>• Control of Malaria</td>
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<tr>
<td></td>
<td>• Provision of Family Planning</td>
</tr>
<tr>
<td>Third Five Year Plan (1961-66)</td>
<td>• Environment Sanitation- Specially rural and urban water supply</td>
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<tr>
<td></td>
<td>• Control of Communicable Diseases</td>
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<tr>
<td></td>
<td>• Organization of institutional facilities for providing health services and for training</td>
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<td>health persons</td>
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<td></td>
<td>• Health Education and Nutrition</td>
</tr>
<tr>
<td>Fourth Five Year Plan (1969-74)</td>
<td>• Primary Health Centres</td>
</tr>
<tr>
<td></td>
<td>• Control of Communicable Diseases</td>
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<tr>
<td></td>
<td>• Training Programmes for Para-medical personnel</td>
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<tr>
<td>Fifth Five Year Plan (1974-79)</td>
<td>• Minimum Needs Programme (MNP)</td>
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<tr>
<td></td>
<td>• National Malaria Eradication Programme</td>
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<td></td>
<td>• National Leprosy Control Programme</td>
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<td></td>
<td>• National Scheme for Prevention of Impairment of Vision and Control of blindness</td>
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<tr>
<td>Sixth Five Year Plan (1980-85)</td>
<td>• National Health Policy</td>
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<tr>
<td></td>
<td>• Production and Processing Schemes</td>
</tr>
<tr>
<td></td>
<td>• Processed and Fortified Food</td>
</tr>
<tr>
<td>Seventh Five Year Plan (1985-90)</td>
<td>• Further Augmentation of Public Health Centre</td>
</tr>
<tr>
<td></td>
<td>• Minimum Needs Programme</td>
</tr>
<tr>
<td></td>
<td>• Effective Co-ordination and coupling of health and health-related services and activities</td>
</tr>
</tbody>
</table>
1.14 NUTRITION EDUCATION

In India, several dietary and clinical surveys carried out in different parts of our country have revealed that malnutrition is rampant. Nutrition education assumes special significance in the Indian context because the problem of malnutrition in India is mainly due to ignorance, poverty and lack of knowledge regarding the value of foods. Dietary practices, especially in children and pregnant and lactating mothers, are often governed by social taboos based on food fads. Nutrition education is the foundation for improvement in the dietary habits of his/her vulnerable set of population. Rigid dietary habits need correction and only systematic nutrition education programmes can bring changes in dietary habits. Nutrition awareness is essential to bring changes in dietary habits and creating nutrition awareness entirely depends on education and training.

Nutrition education requires identification of needs and collection of baseline data enables to identify the needs. Studies on nutrition education in our country have proved that even elderly women need education as they are the ones who mislead the youngsters. Various topics of nutrition can be selected for nutrition education.
Selection of foods and preparation of foods, feeding practices of various groups, special diets during pregnancy and lactation, infancy, pre-school age, supplementary feeding, weaning foods, low cost recipes, food sanitation, food-borne infections, food adulteration, nutrition and health, therapeutic diets, food fads and fallacies and deficiency diseases and their prevention are some common topics used in nutrition education.

Extension education methods can be utilized for nutrition education. Collection of background data, analysis of problems, plan of action, calendar of activities, selection of audio-visual aids, methods of teaching and evaluation are the various steps involved in nutrition education programme.

The various approaches suitable for nutrition education are:

- Individual contacts through home visits, consulting individual training
- Group contacts through simple talks, demonstrations and discussions
- Group demonstrations
- Hospital visits and
- Nutrition rehabilitation training.

These are the methods suitable for rural groups.

Good nutrition, if followed effectively, can be a useful tool to bring economic development in the country as it provides good health. Better health enables people to improve their productive efficiency and it enhances the purchasing capacity and the consumption patterns of the population. Food and nutrition is thus intimately linked with production and economic development of a country. Various feeding programmes and nutrition programmes which are implemented through various organizations can be used as nutrition education channels. Feeding programmes under the family and child welfare departments, school feeding programmes, the composite programme for women and pre-school children, the applied nutrition programmes, world food programmes and other state programmes can be utilized for education purposes.
1.15 HUMAN RESOURCE DEVELOPMENT FOR HEALTH

During the new century medical education faces newer opportunities and challenges. The country has to train an adequate number of health professionals with appropriate knowledge, skill and attitude to meet the health care needs of the growing population and dual disease burden. Priority areas for Human Resources Development for Health are:

- Creation of a district database on requirement, demand and availability for health manpower in the government, private and voluntary sectors;
- Periodic updating of information on requirement availability and of different categories of health manpower;
- Health manpower production based on the needs;
- Improvement in quality of undergraduate/postgraduate education;
- Promotion of equitable and appropriate distribution of health manpower;
- Continuing medical education for knowledge (using distance education technology and IT linkages) and skill upgradation and appropriate people and programme orientation; and
- Continuing multiprofessional education for promoting team work and intersectoral co-ordination.

In this era of globalization, India with its excellent teachers and abundant clinical material can become a key player in medical education. The health care institutions can transform India into a major medical tourism destination. Appropriate investment in research and development and quality control can result in a massive expansion of the pharmaceutical sector. The next two decades will show whether the country has successfully used these opportunities to train and provide gainful employment to the highly skilled medical manpower by

- Improving community awareness, participation and effective utilisation of available services;
- Use of Panchayat Raj Institutions (PRIs) in improving community participation and monitoring the programmes.
Currently the major nutrition related public health problems are:

- Chronic energy deficiency and under-nutrition
- Micro-nutrient deficiencies
  - Anemia due to iron and foliate deficiency
  - Vitamin A deficiency
  - Iodine Deficiency Disorders
- Chronic energy excess and obesity

1.16 DETERMINANTS OF CHILD SURVIVAL AND DEVELOPMENT

The different inputs related to Determinants of Child Survival and Development is presented in Diagram-1.2.
Diagram-1.2
Determinants of Child Survival and Development

Source: UNICEF, 1997
1.17 CONCEPTUAL FRAMEWORK: THE DETERMINANTS OF CHILD HEALTH

The Conceptual Framework of the Determinants of Child Health is presented in Diagram-1.3.

**Diagram-1.3**

**Conceptual Framework: The Determinants of Child Health**

- Child Health
  - Nutritional Status
  - Maternal and Child Health
  - Environmental Health Factors
  - Socio-Economic Factors
  - Breast Feeding and Infant Feeding
  - Maternal Health Care
    - Vaccination Status
    - Use of Curative Services
  - Water and Sanitation
    - Household Conditions
  - Residence
    - Electricity Supply
    - Women’s Education
1.18 PROBLEM TREE FOR UNDER NUTRITION

The problem tree for under nutrition is presented in Diagram-1.4.

Diagram-1.4

Problem Tree for Under Nutrition

Under Nutrition

- Inadequate Food Availability at Household Level
- Inadequate caring capacity at Household Level
- Inadequate Health Services
- Poor Housing Conditions

1.19 IMPORTANCE OF NUTRITION FOR YOUNG CHILDREN (2-6 YEARS)

Adequate nutrition is necessary for young children to achieve their full growth and developmental potential.

For the proper growth of the pre-school child, the diet should contain cereals, pulses, vegetables, milk, oils, meat and eggs and sugar and jaggery in necessary quantities. A cereal pulse mixture like rice and dal, khicheri or idli is a traditional food for young children in many communities. Such foods should be encouraged. These foods could be further improved by the addition of vegetables, particularly red, orange or green coloured, into them. Children who do not eat flesh foods and eggs should be given more quantities of dal and if possible, more of milk and milk products.

Exposure to sunshine is one of the best ways of getting enough vitamin ‘D’. Encourage young children to play in the sun for at least an hour per day.

Cleanliness in feeding the child is very essential. Besides maintaining high standards of hygiene during handling and preparation of food, and feeding, children should be helped to develop good hygienic habits particularly during meal times such as washing hands before eating, cleaning mouth after meals and so on.
The nutritional requirements of young children are much higher than those of adults when compared on per kilogram body weight basis. But small children cannot eat bulky meals at a time. Care is, therefore, necessary to ensure that foods of right quantity and quality are prepared in proper consistency for young children. Addition of fat or oil to his/her food is extremely important as it increases the energy value of food without increasing its bulk.

During pre-school years, for proper growth of the child, not only is diet important but the child should be given the necessary immunization to protect him/her from some of the diseases common during childhood.

1.20 NUTRIENT NEEDS FOR PRE-SCHOOL CHILDREN

1.20.1 Appetite

As during the toddler year’s, growth is slower for young children than in infancy, which is reflected by a lower appetite and interest in food. It is important for parents to understand that a decrease in appetite is normal at this age. Appetite and food intake tends to increase in advance of a growth spurt, causing young children to gain some weight that will be used for an upcoming spurt in growth.

An important aspect of nutrition for young children is a young child’s ability to self-regulate food intake. If allowed to decide when to eat and when to stop eating without outside interference, young children will eat as much as they need. Young children have an innate ability to adjust calorie intake to meet their calorie needs. Young children’s food intake may fluctuate widely from meal to meal and day to day; however, over a week’s time, young children’s calorie intake remains fairly stable. Forcing a young child to eat or using food as a reward can cause a young child to lose their ability to self-regulate food intake and detect satiety cues.

1.20.2 Calories

The RDA for calories for one to three year olds is 102 calories/kg body weight. The RDA for calories for four to six year olds is 90 calories/kg body weight. The decrease in the RDA for calories with age reflects the decrease in growth rate.
1.20.3 Protein

The RDA for protein for children one to six years of age is approximately 1.2 grams protein/kg body weight. This amount is easily met with a typical diet. Adequate calories have a protein sparing effect, in that when calories are adequate protein is used for growth and tissue repair instead of for energy. Intake of high-quality protein, such as milk and animal products, lowers the amount of dietary protein needed to provide the essential amino acids.

1.20.4 Fat

The American Academy of Pediatrics does not advise restriction of fat during the first two years. However, after two years of age, the American Academy of Pediatrics recommends children gradually adopt a diet that by the age of 5 years reflects the following pattern:

- Total fat not more than 30% and not less than 20% of total calories
- Saturated fat less than 10% of total calories
- Dietary cholesterol less than 300 mg/day

The American Academy of Pediatrics cautions against restriction of meat and dairy products, as a way to lower fat intake, because they serve as the primary dietary sources of protein, iron and calcium, as well as other essential nutrients needed for growth and development.

1.20.5 Vitamins and Minerals

Dietary Reference Intakes (DRI’s) and Recommended Dietary Allowances (RDA’s) have been established for vitamins and minerals for young children. Based on nationwide surveys most children from birth to five years of age are meeting the recommended intake of most vitamins and minerals with the exception of iron, calcium and zinc.

1.20.6 Iron

Iron deficiency and iron deficiency anemia are prevalent nutrition problems among young children in the United States. Rapid growth combined with low iron intake places young children at risk for iron deficiency. The CDC recommends children
one to five years of age to drink no more than 24 ounces of milk each day due to the low iron content. Larger intakes may displace intake of iron rich foods.

1.20.7 Calcium

Adequate calcium intake in childhood affects peak bone mass, which protect against osteoporosis later in life. Many children do not consume enough calcium. An important aspect of adequate calcium intake early years is the development of eating patterns that lead to adequate calcium intake later childhood.

1.20.8 Fiber

Adequate dietary fiber helps prevent constipation in young children and is part of a healthy diet. Some of the best food sources of dietary fiber for young children are whole grain breads and cereals, fruits and vegetables appropriate for age. Too much fiber, however, should be avoided because young children can easily develop diarrhea from excessive fiber intake. In addition, excessive intake of high-fiber foods may decrease the intake of nutrient and energy-dense foods.

A reasonable dietary fiber intake for children three through twenty years of age is the sum of their age plus five. For example, a five year old child’s dietary fiber goal would be 10 grams per day.

1.21 FACTORS AFFECTING NUTRITIONAL STATUS OF CHILDREN

Growth is influenced by nutrition. Frequent attacks of infectious diseases affect their growth and increase the requirements of various nutrients. Incidence of Protein Energy Malnutrition (PEM) and vitamin A deficiency are high among this age group.

Repeated illnesses- especially the common illnesses such as diarrhoea, measles, whooping cough and other respiratory infections- are the principal underlying causes of malnutrition. They take away appetite and so reduce food intake often for many days each month, they inhibit the absorption of the food that is eaten, they drain the body of nutrients through diarrhoea and vomiting, they burn up calories in fever. The result is frequent weight loss.
Overall need for nutrients increases throughout the growth period but there will be periods when growth is slow and the need for certain nutrients will be reduced proportionately. Children reflect these changes in need, by fluctuations in appetite. This may cause anxiety to parents. Unless such a period is prolonged or is accompanied by signs of undernutrition such as lethargy, fatigue and increased susceptibility to infection, it should not cause concern.

1.22 FACTORS TO BE CONSIDERED WHILE PLANNING A DIET FOR A PRE-SCHOOL CHILD

✓ The diet should be adequate in quantity and quality of different nutrients. In addition to the amount of milk recommended, the pre-school child should have two small servings of protein rich foods.

✓ Proper elimination is usually maintained by a daily diet of fruits, vegetables and whole grain products.

✓ The diet should include a variety of foods. The child who is taught to eat everything on his/her plate is much more likely to enjoy optimal health than is the one who picks and chooses.

✓ Their food intake will improve if the food is interesting and attractive eg. chapathis, puris can be made into shapes or can be served in attractive plates. Flavour or colour of the milk can be changed to encourage the child to drink more milk.

✓ Foods should be slightly seasoned so that they taste better and the child takes it well.

✓ Child should never be forced to eat more than he/she can take.

✓ The person feeding the child with the food should not show any dislike of that food in front of the child. This may lead to the rejection of food by the child.

✓ Children are sensitive to flavours, any change in flavour of daily food may lead to its rejection.

✓ Food preferences of the child should be taken into consideration.
✓ Regularity of meal times is essential.
✓ Different cooking methods and new attractive combinations encourage the child to eat more.
✓ The child should never be hurried while taking the food. The atmosphere should be pleasant, peaceful and lacking distraction.
✓ Foods like tea and coffee should be restricted as they over stimulate the system.
✓ Fried foods and concentrated foods are to be avoided as they are difficult to digest.
✓ Unripe bananas and apples should not be given as they are difficult to chew and may choke the child.
✓ Bottle feeding rather than breast feeding.
✓ Introducing solid foods either too early or too late.
✓ Feeding a young child with bulky staple foods which fill the child’s stomach and assuage its hunger without meeting its energy needs.
✓ Withholding food and fluids in the belief that this is the right thing to do when a child has diarrhoea and a poor appetite.
✓ Not knowing that it is important to pay special attention to feeding during and after an illness in order to ensure that a child catches up on the weight that has been lost.
✓ Feeding a child’s small stomach infrequently (only twice instead of four times).

1.23 NATIONAL RURAL HEALTH MISSION (2005-2012)

1.23.1 Preamble

Recognizing the importance of health in the process of economic and social development and improving the quality of life of our citizens, the Government of India has resolved to launch the National Rural Health Mission to carry out necessary architectural correction in the basic health care delivery system. The Mission adopts a
synergistic approach by relating health to determinants of good health viz. segments of nutrition, sanitation, hygiene and safe drinking water. It also aims at mainstreaming the Indian systems of medicine to facilitate health care. The Plan of Action includes increasing public expenditure on health, reducing regional imbalance in health infrastructure, pooling resources, integration of organizational structures, optimization of health manpower, decentralization and district management of health programmes, community participation and ownership of assets, induction of management and financial personnel into district health system, and operationalizing community health centres into functional hospitals meeting Indian Public Health Standards in each block of the Country. The Goal of the Mission is to improve the availability of and access to quality health care by people, especially for those residing in rural areas, the poor, women and children.

1.23.2 State of Public Health
- Public health expenditure in India has declined from 1.3% of GDP in 1990 to 0.9% of GDP in 1999. The Union Budgetary allocation for health is 1.3% while the State’s Budgetary allocation is 5.5%.
- Union Government contribution to public health expenditure is 15% while States contribution about 85%.
- Vertical Health and Family Welfare Programmes have limited synergisation at operational levels.
- Lack of community ownership of public health programmes impacts levels of efficiency, accountability and effectiveness.
- Lack of integration of sanitation, hygiene, nutrition and drinking water issues.
- There are striking regional inequalities.

1.23.3 National Rural Health Mission

1.23.3.1 The Vision
✓ The National Rural Health Mission (2005-12) seeks to provide effective healthcare to rural population throughout the country with special focus on 18 states, which have weak public health indicators and/or weak infrastructure.
✓ The Mission is an articulation of the commitment of the Government to raise public spending on Health from 0.9% of GDP to 2-3% of GDP.
It aims to undertake architectural correction of the health system to enable it to effectively handle increased allocations as promised under the National Common Minimum Programme and promote policies that strengthen public health management and service delivery in the country.

It has as its key components the provision of a female health activist in each village; a village health plan prepared through a local team headed by the Health & Sanitation Committee of the Panchayat; strengthening of the rural hospital for effective curative care and made measurable and accountable to the community through Indian Public Health Standards (IPHS); and integration of vertical Health & Family Welfare Programmes and Funds for optimal utilization of funds and infrastructure and strengthening delivery of primary healthcare.

It seeks to revitalize local health traditions and mainstream AYUSH into the public health system.

It aims at effective integration of health concerns with determinants of health like sanitation & hygiene, nutrition, and safe drinking water through a District Plan for Health.

It seeks decentralization of programmes for district management of health.

It seeks to address the inter-state and inter-district disparities, especially among the 18 high focus states, including unmet needs for public health infrastructure.

It defines time-bound goals and reports publicly on their progress.

It seeks to improve access of rural people, especially poor women and children, to equitable, affordable, accountable and effective primary healthcare.

1.23.3.2 Goals

- Reduction in Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR).
- Universal access to public health services such as women’s health, child health, water, sanitation & hygiene, immunization, and nutrition.
- Prevention and control of communicable and non-communicable diseases, including locally endemic diseases.
- Access to integrated comprehensive primary healthcare.
- Population stabilization, gender and demographic balance.
- Revitalize local health traditions and mainstream AYUSH.
- Promotion of healthy life styles.
1.23.3.3 Strategies

(a) Core Strategies:

✓ Train and enhance capacity of Panchayati Raj Institutions (PRIs) to own, control and manage public health services.

✓ Promote access to improved healthcare at household level through the female health activist (ASHA).

✓ Health Plan for each village through Village Health Committee of the Panchayat.

✓ Strengthening sub-centre through an untied fund to enable local planning and action and more Multi Purpose Workers (MPWs).

✓ Strengthening existing PHCs and CHCs, and provision of 30-50 bedded CHC per lakh population for improved curative care to a normative standard (Indian Public Health Standards defining personnel, equipment and management standards).

✓ Preparation and Implementation of an inter-sectoral District Health Plan prepared by the District Health Mission, including drinking water, sanitation & hygiene and nutrition.

✓ Integrating vertical Health and Family Welfare programmes at National, State, Block, and District levels.

✓ Technical Support to National, State and District Health Missions, for Public Health Management.

✓ Strengthening capacities for data collection, assessment and review for evidence based planning, monitoring and supervision.

✓ Formulation of transparent policies for deployment and career development of Human Resources for health.

✓ Developing capacities for preventive health care at all levels for promoting healthy life styles, reduction in consumption of tobacco and alcohol etc.

✓ Promoting non-profit sector particularly in under served areas.

(b) Supplementary Strategies:

✓ Regulation of Private Sector including the informal rural practitioners to ensure availability of quality service to citizens at reasonable cost.
Promotion of Public Private Partnerships for achieving public health goals.

Mainstreaming AYUSH – revitalizing local health traditions.

Re-orienting medical education to support rural health issues including regulation of Medical Care and Medical Ethics.

Effective and viable risk pooling and social health insurance to provide health security to the poor by ensuring accessible, affordable, accountable and good quality hospital care.

1.24 NUTRITION, HEALTH AND ECONOMIC GROWTH

Nutrition, Health and Economic Growth of any Country is presented in Diagram-1.5.

Diagram-1.5

NUTRITION, HEALTH AND ECONOMIC GROWTH

Increased Productivity

Poverty Reduction

Economic Growth

Improved Nutrition Growth Development

Social Sector Investments Nutrition Health Education

Enhanced Human Capital

1.25 NATIONAL NUTRITION GOALS FOR THE XI FIVE YEAR PLAN (2007-12)

India is proud to have adopted the National Nutrition Policy as early as in 1993 while the World Health Organisation and Food and Agriculture Organisation of the United Nations had just given a call at the International Conference on Nutrition held in December, 1992 at Rome, that all countries prepare the National Nutrition Policy and a National Plan of Action on Nutrition. The efforts for formulation of a Nutrition Policy in India had started in early 80s when the Planning Commission had set up a task force on nutrition policies and programmes. This task force recommended the formulation of a National Nutrition Policy.

The National Nutrition Policy is the most comprehensive document which covers almost every area that affects nutrition of the people. Even in the early 90s it documented a close linkage between the nutritional status of the population and the development and well being of a nation, the concept which is now being documented by various other countries. It is very clearly established that mere economic development or even the adequacy of food at household level is no guarantee for a stable and satisfactory nutritional status. Therefore, the task is not merely in terms of formulating a nutrition policy but also in terms of locating it and grounding it in the overall development strategy of the country.

The adoption of the National Nutrition Policy in 1993 under the aegis of Department of Women and Child Development made it a nodal department for nutrition. The Food and Nutrition Board of the Ministry of Food was transferred to DWCD w.e.f 1st April, 1993 in pursuance of the National Nutrition Policy with the orders of the Hon'ble Prime Minster. A number of initiatives had been undertaken by FNB, DWCD on different instruments of the National Nutrition Policy. To quote a few, Nutrition Advocacy and Awareness Generation on National Nutrition Policy, Micronutrient Malnutrition Control, Disaggregated Data in the form of District Nutrition Profiles and Establishing Nutrition Monitoring, Mapping and Surveillance based on Triple AAA Approach, Promoting a Comprehensive Approach for Micronutrient Malnutrition Control and Intensifying IEC Activities on Nutrition, have been undertaken by FNB of Ministry of WCD.
Some of the constraints in institutionalizing the instruments of the National Nutrition Policy have been as under:

- Malnutrition is still to be focused as a national problem.
- Nutrition does not have the status of a separate ministry nor even a department, and all existing departments have their own mandates.
- Nutrition is not seen as an explicit goal by the concerned sectors.
- Nutrition is invariably seen as synonymous with feeding.
- State level actions on Nutrition Policy instruments depend on directions supported by resource allocation.

The vision of the National Nutrition Policy of achieving optimum nutrition for all, although is the ultimate goal to be achieved, all efforts need to be directed towards this aim if the country wants to accelerate its economic growth and development. “Malnutrition Free India” is the goal whose time has come and is the vision for National Nutrition Policy for the next decade. India’s strong institutional and human resource base is capable of bringing about a transformation. The success will depend on the full involvement of all concerned sectors from Centre and State Governments, national institutions, community and social organisations, and women’s groups in implementing the mandate of the National Nutrition Policy.

With the constitution of the National Nutrition Mission under the chairmanship of the Hon’ble Prime Minister, there is an uncommon opportunity of mobilising all stakeholders towards achieving the goal of malnutrition free India. The country has nation-wide Integrated Child Development Services Scheme, Reproductive and Child Health Programme and Universalisation of Primary Education. All these development infrastructure need to be utilised to carry forward the task of meeting the goal of the National Nutrition Policy in the next decade.

Good nutrition is the material basis for human resource development of a country or a community; nutrition is an issue of survival, health and development for current and succeeding generations. Children born under-weight have impaired immune function and increased risk of diseases such as diabetes and heart disease in their later life. Malnourished children tend to have lower I.Q. and impaired cognitive ability thus affecting their school performance and then the productivity in their later life. Such a
vicious cycle of nutrition and development is not widely acknowledged and has very weak influence in policy making. It has to be realised that the nutritional health in all age groups represents a national economic asset.

Malnutrition is not to be viewed merely as an offshoot of poverty having adverse effect on the health and development of individuals but as a national problem that results in loss of productivity and economic backwardness. Time has come to create a movement so as to achieve the nutrition goals. A series of actions in different spheres are required to be undertaken in a mission mode approach to address this gigantic problem of malnutrition, some of which are listed here:

- Malnutrition to be viewed as impediment to national development at highest level.
- Silent emergency of malnutrition to be fought on war footing.
- Sustained political commitment needed.
- A high level standing interagency coordination mechanism must be created at centre and state levels to direct macro and micro level strategies.
- Social sector - Nutrition, Health, Education and Women and Child Development must receive higher budgetary allocations.
- The problem of malnutrition must be made visible at different levels.
- There must be concentrated nutrition awareness, advocacy, communication and capacity building in respect of both the community and functionaries at various levels.
- The Health sector should include nutrition in all spheres of its activity viz, medical education, training, primary health care, surveillance etc.
- Rural Development and Public Distribution System should state explicit nutrition goals.
- Panchayati Raj Institutions to be empowered to serve as focal point for all developmental schemes.
- Families and communities to be sensitised towards prevention of malnutrition among infants between the age of 0-2 years, adolescent girls, pregnant and lactating women, delaying the age of marriage, education of girl child, hygiene and sanitation and utilising timely medical care.
The Education sector to include nutrition in all its formal and non-formal activities.

The nutritional requirements of the country should be met before decisions to export any commodities are taken, e.g., sugar, oil, pulses etc.

For the first time the X Five Year Plan had set goals for infant and young child feeding indicators and reduction of under nutrition in children including micronutrient malnutrition. Many of the X Five Year Plan Goals are yet to be realized. Keeping in view the mandate of the Millennium Development Goals and the unmet goals of X Five Year Plan, the following National Nutrition Goals are recommended for the XI Five Year Plan to be met by 2012. The State specific goals would need to be identified accordingly.

- Reduce the prevalence of underweight in children under 5 years to 20%.
- Eradicate the prevalence of severe undernutrition in children under five years.
- First hour breastfeeding rates to increase to 80%.
- Exclusive breastfeeding rates to increase to 90%.
- Complementary feeding rate at six months to increase to 90%.
- Reduce prevalence of anemia high risk groups (infants, pre-school children, adolescent girls, pregnant and lactating women) to 25%.
- Vitamin A deficiency children under 5 years as a public health problem and reduce sub-clinical deficiency of vitamin A in children by 50%.
- Reduce prevalence of Iodine Deficiency Disorders to less than 5%.

The achievement of the National Nutrition Goals for the XI Five Year Plan would require a multi-pronged action on various issues. A number of policy decisions at the macro and micro level would be required at centre and state levels to achieve the goals.

1.25.1 Enhancing Investment in Nutrition and Health

An analysis of the expenditure at different stages of the life cycle in the country reveals that there is a mismatch between the allocation and the requirement. Infants and
pre-school children who are most vulnerable and where maximum physical and brain development takes place have the least budgetary provision.

The National Common Minimum Programme mandates health care as one of the seven thrust areas wherein it is proposed to increase the expenditure in health sector as proportion of GDP from 0.9% to 2% to 3% over the next five years. The percentage expenditure on nutrition is still lower. As per the calculations of the Planning Commission, the expenditure on SNP component of ICDS accounts for only 0.05% of the GDP during the years 2002-05. The budgetary requirements for the Nutrition Schemes proposed to be taken up by the FNB of MWCD during the XI Five Year Plan would be Rs. 370.00 crores.

1.26 HEALTH AND NUTRITION AND ADULT EDUCATION

Adult Education is a systematic and organized activity which brings about modifications in one’s way of life, attitudes, level of skills, provides new information, knowledge, understanding concerning his/her own professions and finally improves his/her social, cultural and economic life. The major need of adult education are as follows:

✓ Education of adults is needed for enabling each and every citizen of the country to develop his/her potentialities and abilities to the maximum extent possible.

✓ The store of knowledge in the world is increasing very fast and the socio-economic and political change is taking place to such a great extent that it requires well informed citizens and active responding on their part towards these changes. Moreover, in case of illiterates of our country, the age group 15-35 years has been considered as an important one in the National Literacy Mission which was created on May 5, 1988 and the need to educate this age group, in particular, through adult education programme may be justified on the following grounds:

   - This age group is the reproductive age group with high fertility rate and therefore, there is a need to educate them on various aspects such as age at marriage, family planning, health, equality of sex, child rearing practices, nutrition and diet, immunization of children, etc.

   - Our national goals and objectives of different welfare programmes may not be achieved if people remain illiterate. Programmes such as family
planning, universalization of elementary education, health, preservation of environment, energy resources, women and child welfare, poverty alleviation, upliftment of weaker sections, national integration and so on may not be implemented successfully and common man may not be benefited by these programmes if he/she remains illiterate and ignorant. This age group normally has children of school going age and, therefore, the future of universalisation of primary education depends upon them. It is also evident through research studies that parental level of education is directly related to the education of their children.

1.26.1 Aims of Adult Education

The aims and objectives of adult education in India can be explained from two points of view of the society.

From the individual point of view, it fulfils the following purpose:

- **Remedial** — It is meant to make good the lack of formal schooling.
- **Vocational** — It provides elementary commercial or vocational education in urban areas and education in agricultural and cottage industries in rural areas.
- **Health** — It implies education pertaining to the principles of health and hygiene and helps in prevention and eradication of diseases.
- **Recreational** — It implies knowledge of various ways of recreation for the best use of leisure and preservation of mental health.
- **Cultural** — It implies cultural achievement and building up a philosophy of life.

From the societal point of view, it serves the following purposes:

- Promoting Social Cohesion.
- Conservation and improvement of natural resources.
- Inculcating a social ideology.
- Building co-operative groups and institutions.
To conclude, the adult education aims at improving the quality of life of learners and therefore, the content of adult education curriculum may consist of:

- Health Education
- Vocational or improvement of ergological work skills
- Environment (Physical and Social) Protection
- Social Awareness
- Literacy
- Numeracy

The National Policy on Education recommended that there should be an integration of Adult Education with measures for promoting health, nutrition, housing and employment, and awareness should be created first after which the adult learner should ask for literacy as a felt need.

It can be stated that adult education programme under NLM is being implemented in close linkage with measures for promoting individual's development such as health, nutrition and immunization. These are reflected both in the content and process of adult education.

1.27 HEALTH AND NUTRITION WITH CONTINUING EDUCATION

The NPERC appears to have an ambivalent attitude to adult education. In its perspective it acknowledged that "it would be plainly unjust if almost 250 million people in the plus 15 years age groups are left to spend their entire productive life without literacy, a powerful tool for acquiring knowledge and enabling effective participation in democratic polity of India. Clearly, like UEE, adult education with a strong literary component has to be one of the central items on the national agenda". However, in specific operational terms, the NPERC drew a distinction between UEE and adult education and recommended top priority being given to UEE in educational planning and resource allocation.

The NPERC is indeed right in holding that adult literacy is a sub-set of adult education; however, it is rather doctrinaire in rigidly separating adult literacy from adult education and belittling the intrinsic merit of adult literacy. Sequencing of when
adult literacy should come in is rather artificial. Literacy provides a minimal entry point to education and thereby access to the world of information, communication and modernization. Eventually, acquisition of literacy skills would help in raising the level of human awareness and in continuously upgrading survival and life skills. Empirical evidence has established that after attainment of a certain level of literacy, it is possible to move on to functional developmental issues. Adult education programme under NLM, and more particularly the TLCs, is being implemented in close link with developmental activities like immunisation, nutrition and health. The new pedagogy of adult education pays particular attention to these linkages. The basic thrust in TLCs is demand-generation making adult literacy a felt need. In the campaign cycle, the environment building phase is followed by the instructional phase and eventually by the continuing education and post-literacy phase.

In the developing countries where illiteracy continues to be a cause of concern, continuing education is first and foremost a 'second opportunity' for education. It is an alternative to formal elementary to higher education for those people who may have failed to access education for socio-economic or cultural reasons. It almost always includes literacy education for both, the illiterate and the semi-literate. It also includes imparting skills essential to everyday life in a fast changing world. These skills relate to areas such as health and nutrition, mother and child-care, family planning, and vocational occupations and are essential pre-requisites to personal as well as community development. Apart from skill training, continuing education in the developing countries includes inculcation of awareness that covers health and nutrition, family planning, civics and other topics considered essential for development especially where the majority of the population lives in rural communities. In developing countries, since a very percentage of population lives in the rural areas continuing education is mostly provided for the rural population. Since a large proportion of the rural illiterate population is women, they form a bulk of the beneficiaries of continuing education in the developing countries.

1.28 REASONS FOR STUDYING HEALTH PRACTICES

The study of health practices or health behaviour is very useful to know how and why people act or behave in a particular way in the field of health and medicine. It has been observed that individuals behave differently in different situations of health
and diseases and there are also group practices that can be changed in each situation. A
variety of factors from inside or within the individual as well as from the external world
have found to be responsible for pattern of practices or behaviour in individuals and
groups. Such influence can occur in various permutations and combinations. Health
practices of the villages can be classified into two:

- Secular-rational health practices, and
- Non-secular non-rational health practices

Secular-rational health practices include dietary practices, viz., avoiding
addictions, exercises, fresh air, sunlight, use of clean water, taboo on excessive sex,
consultation with vaidya, doctor, traditional birth attendant, home remedy, and so on.
Non-secular non-rational health practices include magico-religious practices, charms
and amulets, traditional and rituals ceremonies, visit to faith healers, and so on.

1.29 STATEMENT OF THE PROBLEM

Children and their well being are basic concerns of every nation. Their health is
not only an indicator to the socio-economic status and standard of living of the country
but also reflects the values and beliefs of society. “A healthy good child is happiness to
the parent, eternal joy to the mother, apple of eye of the family, leader of the
community, thrill of the society and hope of the nation”, (Suman Prasad Maurya &
Jaya, N., 1997).

In India, religious and caste considerations are more than socio-economic
reasons that guide the regional and seasonal variations in food habits. Today’s child is
the nation’s future economic asset. The quality of our future human resource is going
to be determined largely by the investment made now for the sound development of the
child population. The child health reflects and determines the human condition. It
results from and contributes to social development. The growth of societies depends on
the capabilities of their people, and these, in turn, depend on health and education.
Malnutrition is largely a silent and invisible emergency, exacting a terrible toll on
children and their families. The result of multiple causes, including a lack of food,
common and preventable infections, inadequate care and unsafe water, plays a role in
more than half of the nearly 11 million deaths each year, of children under five in developing countries, (Salil Basu, 1994).

A large number of children live in poor economic and social environmental conditions like poverty, poor environmental sanitation, disease, infection, inadequate access to medical facilities, in appropriated child caring and feeding practices etc., which hampers the child’s physical and mental development.

The growth and development of a pre-school child is entirely dependent on its diet. Infections and infestations attack immediately when the diet is poor in quality. Thus, most of the children are malnourished and this problem has become chronic. Moreover such problem is prevalent among the poorest sections of the society due to restriction of diet imposed upon them not only by poverty but also by some other associated factors like birth order and family size, disparity in intra familial distribution of food, sex bias in family allocation of food, wrong weaning practices, food taboos etc., They are responsible for causing poor mental and physical development of the preschool children. Although studies have been made to investigate the nutritional practices of pre-school children, little attention has been paid towards the children of scheduled caste families in general. Considering all the above said aspects the present study is made in order to elicit information on the health and nutritional practices of scheduled caste mothers towards their pre-school children will prove to be a significant one in improving the living conditions of the community which in turns leads to societal and national development.

Keeping this entire context in mind, the researcher made an attempt to study the health and nutritional practices among selected scheduled caste mothers towards their pre-school children in Tiruchirappalli District, Tamil Nadu.

1.30 NEED OF THE STUDY

“Sound Nutrition can change children’s lives, improve their physical and mental development, protect their health and lay a firm foundation for their future productivity”, (Kofi Annan, UN Secretary General). From this saying it can be known that how nutrition is very important for all round development of the children. Thus keeping this main concept in mind, the main need of the study is to assess the
level of practices of health and nutrition towards pre-school children among scheduled caste mothers depending upon the entire socio-economic, environmental characteristic of the study area. Moreover, our president Dr. A.P.J. Abdul Kalam, (2004), noted that it is a matter of concern that even today over a third of babies born in India are underweight reflecting acute malnourishment, particularly of the girl child. Nutritional programmes, will be expanded on a significant scale with special focus on the girl-child. Thus the need of the present study concentrates on the above said issues.

1.31 OBJECTIVES OF THE STUDY

- To find out the personal profile of the selected SC Adults (women) in the study area.
- To find out the health and nutritional practices of SC Adults (women) towards their pre-school children in the study area.
- To explore the availability of health facilities in the study area.
- To find out the hygienic habits and occurrence of child mortality and their relationship with health and nutritional practices among the selected respondents in the study area.

1.32 ORGANISATION OF THE THESIS

The chapterisation of the present study is done in the following ways:

Chapter I deals with the introduction of the child health and nutritional practices, statement of the problem, need of the study and objectives of the study.

Chapter II describes about the review of related literature of the present study in two different categories viz., foreign studies and Indian studies.

Chapter III includes methodology, profile of the study area, variables of the study, data collection and data analysis used for the present study.

Chapter IV deals with the analysis and interpretation of the present study.

Chapter V furnish details about the findings, conclusion and suggestion for future studies of the research.
1.33 SUMMARY OF THE CHAPTER

This chapter provides a detailed sketch of the problem arrived for the present study. It states about the health and nutrition in general and in particular reference to child health, meaning of health and nutritional practices, education and health and nutrition, child health scenario in India and Tamil Nadu, child malnutrition and its causes, food requirements of pre-school children, health and nutrition programmes, health and nutrition in XI plan period, health and nutrition in adult education and continuing education, statement of the problem, need of the study, objectives of the study and chapterisation of the thesis.