CHAPTER - II

PARAMETERS OF THE STUDY
2.1. NEED OF THE STUDY:

According to the Ministry of Social Welfare, Government of India (1980) the child population of India comprises about 14 percent of the total children population of the World. Now about 50 percent of Indian children live in the deprived condition. A half to two thirds of the children from economically disadvantaged sections of the society are malnourished (Introduction, p. vii). According to the statement of the erstwhile Planning Minister of India in Lok Sabha on the 26th February, 1981, 99 million children in the rural area and 19 million children in urban areas live below the poverty line. According to Planning Commission of India, the population below the poverty line in Indian States varies from 4.11 (Nagaland) upto 66.40 million (Orissa) (Saxena and Bagchi, eds., 1986, p.70).

A report sponsored by the World Bank has stated that the frequency and severity of malnutrition in the developing world are increasing more rapidly in urban than in rural areas (Austin, 1980).

Sourander et.al., (1974) have accepted the widely held opinion that at early age Protein Energy Malnutrition (PEM) is the principal cause of permanent retardation of mental development in children living in underprivileged parts of the world. The food deprivation in early life may cause irreversible effect on physical growth and maturation of brain.

Children are like barometers, which reflect the nutritional status of community. Any shortage in food supply is dramatically reflected in their body size and health as their needs are more in comparison to the adults. It is very imperative that improvement of quality of child life is clearly a function of social and economic development of the country.
The scientific evidences have shown that malnutrition in infant and children is a risk factor in the formal educational system and it is very important to include nutrition as a determinant of school performance and achievement. Early malnutrition or poor nutritional status of school children has significant adverse effects on their educational progress. There is a direct relationship between the prevalence of malnutrition to educational wastage and stagnation. The undernourished children whose learning is slow have difficulties in mastering the school curriculum, as such have high chances of repeating grades and dropping out from school early.

Baig (1980) has pointed out that there has been low priority to child welfare followed by low financial allocations while she felt that particular attention ought to be drawn for health education, welfare and legislation etc. of the children (pp.10-14). Rajendran (1980) had observed that even though the provisions of the National Policy for children adopted in 1974 was comprehensive, the non-availability of adequate resources is a major constraints in achieving the goals in India (p.20).

It has been said by secretary to the Government of India. "Since India has the ultimate goal of socialist society, the ultimate aim of economic development is the welfare of the family. And, in the family, the most precious asset is the child. Therefore, in the strategy of planned national development, India focused its foremost interest in the young child" (Luthra, 1975, p.30).

Srikantia and Sastry (1972, pp.584-591) observed a great majority of young children who belong to the poor income groups in developing countries are malnourished; the basic and constant feature is inadequate dietary intake. The reasons are many. Besides the economic cause, suitable food in many instances is not always available, and even when
such food is available, these resources are not fully utilised which might be due to lack of knowledge of food which the children can and should eat. Improper distribution of food within the family also contribute to it. Another reason for not utilising the available food might be the mother-child relationship. In poor countries the mothers go out to work and as such cannot give proper attention to their children. Thus both malnutrition and illiteracy are the effect as well as the cause of poverty and therefore the elimination of poverty will also result in the removal of both these factors.

Sen (1976, p.33-43) very well remarked "the battle against malnutrition in our country is, therefore, a battle against poverty, especially acute poverty of the type we have in rural areas".

Poor socio-economic status of the family contributes a lot to the development of malnutrition in the developing regions. Many deep rooted beliefs, customs, practices, superstitions, food taboos and ignorance join hands to cause malnutrition (Gupta, ed, 1981; Ghosh, 1977 and Gupta, 1978, p.1). All these factors which contribute to the nutritional deprivation ultimately influence the school performance.

In the context of the above, in August, 1974, the Government of India adopted a resolution as national policy for children and this resolution recognised children as a supremely important asset to the nation and declared that the Government should take over the responsibility for their nurture with solicitude. The national policy lays down that the state shall provide adequate service to children both before and after birth and through the period of growth to ensure their full physical, mental and social development.
It is the prime objective of this research study to provide a framework for the advocacy on behalf of the children and for enhancing the awareness of the special needs of the children on the part of the decision-makers and the public. The present research denotes an effort to continue the review and action in the sphere of child development as has been initiated by the International Year of the Child, 1979.

The present research study presents a substantive review on the effects of nutritional status on physical development and educational achievement of children who start their education in primary school which covers children in the age group of 6 years to 9 years. The researcher also felt it is necessary to know the effects of early undernutrition on intellectual function and school progress.

2.2. OBJECTIVES OF THE STUDY:

Now nutritional deprivation is the most widespread problem among the children in all the developing countries of the world. The Joint F.A.O./W.H.O. Expert Committee on Nutrition described the interaction of various dietary factors in the etiology of protein-calorie-malnutrition in its Eighth Report (1971).

The basic feature of the present situation in all the developing countries is the extreme inequality in the distribution of food among different socio-economic strata. Inadequate diet results from low purchasing power which is a common problem of poor sections in the slum areas of major cities. Not only in slum but also in rural areas this problem exists where there are small farmers, tenants, landless labourers.
India is one of the developing countries which is essentially a land of children and only healthy children can make contribution towards national development. So they are in great need of food for their proper growth and development. So inadequate food supply is dramatically reflected in not only their physical growth but also brain development which ultimately leads to low academic achievement that has great role in the formation of a nation. There is an old Japanese saying "if you are poor you will be stupid".

The objectives of the study were:

1. To ascertain the nutritional status of the children.
2. To find out the factors responsible for nutritional deprivation.
3. To see the effects of nutritional status on physical development.
4. To ascertain the effects of malnutrition on educational achievement.
5. To assess the environmental factors responsible for the physical development of the children.
6. To find out the causes for poor educational performance of students.
7. To suggest measures for amelioration of this situation and improvement of the health as well as education of children.

2.3. SCOPE OF THE STUDY:

Most of the people of the world are engaged in struggle for food today. From the foregoing review of research it appears that malnourishment is an important problem in the world especially in the developing
countries. Nutritional deficiencies constitute a major public health problem in India and other countries of the Third World today (Gupte, 1983, p.1). Even this problem has attracted the attention of WHO and various other voluntary and Government organisations in the world especially in the western countries. Malnutrition undoubtedly is one of the several factors inherent in the culture of poverty which interacts in causing mental retardation and poor physical development. Majority of people of the world today are in the grip of ignorance, superstition, poverty, malnutrition, disease and early death. Reliable statistics in respect of either morbidity or mortality from malnutrition in the world is not convincingly available. From the available sources it has been noted that world population increases by about 180 to 200 thousand persons each day (Robinson, 1978, p.11). C. Gopalan, the noted nutrition expert has pointed out that out of 23 million babies born in India in a year only 3 million become healthy adults to lead normal life, the rest either die or become stunted adults due to serious nutritional deprivation and nutritionally related diseases (Mohanty, ed, 1985, Introduction, p.vii). So it is very essential to increase the food production to keep pace with the population growth in the world. Unfortunately the increase of food production is only seen in developed countries whereas it is quite meagre in developing countries for which undernourishment is markedly met with in such countries as a result of this, number of malnutrition cases is very high for these countries. There has been various attempts to understand and assess the ill-effects of malnourishment using different techniques. Among the available indicators of malnourishment the biochemical and clinical features resulting from nutritional deficiency indices are quite accurate but it is
difficult to determine this method of assessment on a large scale. Customarily the height of the children has been conventionally used as an indicator of malnourished growth. Cravioto and Delicardie (1972), Das and his associates (1976) have revealed that malnourishment can be ascertained from the height of the children although social environment is related to malnutrition and mental development. There is evidence to this effect in the research of Christiansen et. al., (1974). Some researchers had pointed out that height may not be the only index of nutritional deprivation but other factors like size of the family, ordinal position of the family, parental expectancy and age and average height of parents should be taken as index of malnourishment. Besides these, researchers have selected anthropometric measurements like head circumference, mid-upper arm circumference, weight to height and height to age as indices of malnutrition.

In India, gross malnutrition is said to claim around 5,00,000 deaths among our infants and children every year. This is quite understandable in view of the fact that around three-fourth of our paediatrics population is suffering from one or another nutritional deficiency. (Smith et.al, 1971, p.8).

It is very difficult to study the status of children in a country like India where people with diverse socio-cultural and socio-economic status are living in their own pattern and child rearing practices. It is obvious that children living in urban setting are provided with all modern amenities and facilities and parents of these children are mostly educated for which they become more conscious about the educational development of their
children. They are also provided with all types of stimulation for their physical as well as educational development. But children living in slum areas are of low socio-economic status. So even if these facilities are within their reach still then they can not take advantage of these which affect their allround development. And children of rural areas enjoy less educational and environmental facilities, because their parents are not so educated to make their children conscious about their development in both respect, that is, physical and educational. So the children are also considered as deprived children.

The scope of the present research was confined to the nutritional status of children which affected their physical development and educational achievements. This is one of the most important problems in India and till now no study has been done extensively in this regard. The target group was the children from 6+ to 9+. This age group was selected for the study because this age group forms the formative years for allround development of the children. Primary school children, the important child population segment, form the first institutionalised group can be approached for health, nutritional and educational interventions with ease. This consecutive age-groups were selected so that it would be easier to know the effect of nutritional deprivation on their related physical development and educational achievements. And the subjects were randomly selected from three different areas. The circles included in the study were from Puri district of Orissa, India.

Bhubaneswar as the capital of Orissa is a fast growing city from where urban samples were selected from Government and Municipality
managed schools. Samples for slum area were selected from the schools of slum areas of Bhubaneswar Municipality. And samples selected for rural schools were from the Block Nimapara which is about 44 kms. from Bhubaneswar.

2.4. LIMITATIONS OF THE STUDY:

Researcher in the past have opined that protein energy malnutrition (PEM) was solely responsible for malnourishment since it hampers the development of nervous system which is ultimately responsible for intellectual dysfunction. Winick and Noble (1966, pp.300-306) and Dobbing (1968) have stated that protein energy malnutrition during the period of brain growth might lead to permanent reduction in brain weight and in number of brain cells and to a permanent deficit in the degree of myelination. Brain being the seat of all higher mental activities has control over all sorts of cognitive functioning. Therefore, disturbance in growth of brain might lead to cognitive incompetence, thus, school performance. In this biological approach one limitation was that PEM hampers brain development which was mainly based either on animal experiments or on autopsied reports of brain development of children died of severe malnutrition.

Secondly, this type of experiment of malnutrition was only possible on animals in laboratory conditions where malnutrition was produced under controlled condition and their effects were studied. Such study was inconceivable because of the risk of retardation of physical and mental growth of experimental child as it was ethically and methodologically unsound.

Thirdly, with respect to its methodology, this method of survey was limited. The survey would be more accurate and precise if the observers
observed the sample throughout the day to deal both regular and irregular mealtimes which was impossible because the team could have covered one family at a time which would be a lengthy process.

Fourthly, observation for three consecutive days or a week could not represent the whole year because of seasonal, cultural and other variations in nutritient intake patterns. Hence the sample taken was bound to be qualitatively limited.

Fifthly, this method would be more authentic if the replicate diets could have been collected from the families but it was quite impossible, especially in low income groups where they spend 80 percent of their income on food.