Chapter 1

INTRODUCTION
Today we search for your unwritten name,
You seem to be just off the stage,
Like an imminent star of the morning
Infants bring again and again
A message of reassurance-
They seem to promise deliverance, light, dawn.

- 'R.N. Tagore'
Children are our most valuable, rather ultimate resource of the mankind. The future of our country depends upon the investments we make for their holistic development. Children constitute 40 per cent of the population and deserve their rightful share in development investments. Their nurture and solicitude are our responsibility ...

Our children should grow and develop to become robust citizens, physically fit, mentally alert and morally healthy, endowed with skills and motivations, needed by the society.

India along with many other developing countries has a comparatively young population in the age group 0 - 4 years. The problems of infection and nutrition greatly affect this group, particularly under five, who are at a stage when they experience rapid growth and are therefore, more vulnerable. Both mortality and birth rates are high. There is a rapid turn over, with a new child quickly replacing another, and a doubling of the population every one to two generations, (Ghosh 1992). The infant mortality rate has been reported to be 72 per 1000 live births in 1996.* Sharma and Kalia (1990) have reported 45 per cent mortality for children below five years in India as compared to seven per cent in the most developed countries. Beneath the mortality trend is a complex of allied factors viz., maternal mal-nutrition, inadequate fetal growth (Intrauterine) fetal under-development, inadequate care during child birth, too early, too many and too close births, inadequate feeding, delayed (weaning) supplementation to breast-milk,

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faulty food habits leading to deficiencies of micro-nutrients like iron, vitamin A etc. Super-added to the foregoing is high over-all illiteracy rate of 47.79 per cent, female illiteracy rate being 60.71 per cent and poverty with 35.97 per cent being below poverty line in 1993-94. While major epidemic diseases have been, by and large, eliminated as significant causes of death and ill-health among children, malnutrition lingers on as a silent killer behind-the-scene as a cause of death and disability. Malnutrition reduces the resistance of child. This makes the child prone to common childhood ailments especially diarrhoeas, respiratory tract infections. Diseases in childhood, in turn, precipitates malnutrition. Protein energy malnutrition is widely prevalent among younger children, the earliest manifestation of which is growth retardation signified by low weight for age. National Nutrition Monitoring Bureau (1981) reported that 85 per cent of the children have body weight below the normal standards. Of these, five per cent suffered from severe malnutrition.

The growth of a child is the outward expression of the inter-action between its genetic potential and environment. The various stages of the growth process, i.e. embryonic, fetal, neonatal, infancy, childhood and the adolescence merge smoothly with one another to provide, under normal conditions, a smooth continuum from conception to adulthood. Although physical growth progresses in a smooth and harmonious fashion, it is not harmonious across the various stages. Fastest growth occurs during infancy. The most rapid increase in growth occurs during the first six months. Towards the end of the second year, growth slows down and children usually look leaner (Reddy and Vazir 1998). Growth studies of infants in India indicate that during the first six months of life, the actual heights and weights of these infants are lower. However, their growth rates are not significantly different from developed countries (Gopalen, 1967).
Development is not limited to growing big, instead it consists of a progressive series of changes of an orderly, coherent type towards the goal of maturity. The term 'progressive' signifies that the change are directional, leading forward rather than backward. The term 'orderly and coherent' suggests that development is not of a haphazard and casual type. there is a definite relationship between each stage in the development sequence. Each change is dependent upon what proceeded it, and in turn affects, what will come after (Sharma 1995).

The development of a child is an individual process, with each child developing in his or her own way. All development necessarily involves some kind of change, but the reverse may not be true. To develop means to grow out of, and to evolve from. In the most literal sense of the word, 'to develop is to unwrap’. In child development, successive stages and patterns do not merely follow one another, but emerge directly from that which preceded it (Srivastava 1988).

Aslin and Dumais (1980) have illustrated the course of development in an interesting manner. A particular capacity may be undeveloped, partially developed or fully developed during the pre-natal period. The undeveloped capacity may remain undeveloped after birth or there may be an induction in it. The partially developed capacity may even deteriorate further, or continue to maintain its level of development, or it may develop to its full form during the post-natal period. The capacity fully developed during pre-natal period may maintain its level of development or it may deteriorate after birth.

All growth and development are inter-related, whether they be the inter-action of the organism with its environment, the effect of intellectual factors upon emotional development, or the influence of social factors in motivating the child. Growth as a part of a pattern proves to be effective in understanding the individual. Many facets of growth and development are confusing when viewed in isolation, but they take on
meaning when related to the total pattern of physical and psychological growth (Dinkmeyer 1967). Different ‘threads’ of growth and development form a complex weave. All aspects inter-act with one another in complex ways. For instance, as children’s bodies grow and mature, their motor skills become better. These motor skills, in turn, aid social skills (e.g., becoming physically fit to ride bicycles brings hours of fun with friends). As social skills improve, children talk to more people and learn about new ideas. This improves mental skills. And as mental skills improve, children can play in more complex sports, thus improving motor skills. So we see how different parts of growth and development affect one another, (Decker 1988).

Children differ in the rate of growth and development as a whole and in the rate and pattern of growth and development within each field. They differ at birth as a consequence of genetic and pre-natal factors and thus differentially susceptible to environmental influence.

The pattern of growth and development can be interfered with either temporarily or permanently, by environment or physical conditions. The pattern of physical development may be altered permanently by unfavorable environmental conditions before or after birth (Hurlock 1978).

As the infant grows older, the environment, particularly the family, plays an important role in ensuring their proper growth and development. The physical development is dependent upon the availability of nutritious food. It is, however, to be noted that 41 per cent children in India are suffering from mild-moderate and 6 per cent from severe malnutrition. The other aspects of development (e.g., motor, cognitive, social and personality), in addition to nutrition, are, to a large extent, dependent upon the characteristics of the home environment (Srivastava 1998).

The studies reveal that home stimulation makes a significant difference in the activity level, and in the social, language, emotional and intellectual growth of children
Studies of Indian children have demonstrated the importance of environment in fastening or marring growth and development (WHO-ICMR Study, 1991).

A child’s environment encompasses all that is around him. In fact, any single bit of behaviour is likely to be dependent on multiple influences which may interact in complex ways. It is likely that growth and development is governed more by pattern of factors rather than one.

The environmental factors include climate, health, nutrition, stress and socioeconomic condition. In the final analysis, the environment seems to produce its effect mainly by the presence (or absence) of infective illness and the plane of nutrition. Recent findings also indicate the important role played by psychological factors in affecting health and consequently growth and even survival (Frank & Zeisal 1988 and WHO 1988). However, of the environmental influences, nutrition has been found to have a greater impact on growth (Jelliffe 1966) and is more critical during the periods of rapid child development.

The faculties of child’s physical, mental, emotional and social development are all at their peak growing curve in the first three years of his or her life. This period is the formative stage of an individual and, therefore, also the most important span to inculcate the desirable traits for the child’s balanced over-all development (Punhani et al 1989).

Happenings and influences during this period have a bearing on both the growth and development. It would seem reasonable to suppose that if careful detailed observation were made of the course of growth and development of babies during this period it should be possible to establish some relationship between records so obtained and their subsequent progress through childhood. Though it is impossible to say what is ‘normal’, there is no difficulty in defining the ‘average’ and it should be easy to
determine the sequence and rate of growth and development of the average child and to note the frequency with which deviations from the usual growth and developmental pattern occur as a result of known or unknown factors (Agarwal et al. 1991).

Growth and physique during infancy are influenced not only by birth weight and nutrition but also by socioeconomic status and by morbidity induced through infections of bacterial, viral or parasitic origin. Low socioeconomic level and its co-relates characterized by low income, low education, illiteracy, repeated episodes of infections, over-crowding and unsanitary conditions contribute to further deterioration of growth and development of children. Other factors, such as psychological stress, can also influence growth and development of children. (Reddy & Vazir 1998).

Gender bias in parents may be a fact which may affect growth and development of a child. If the child is of desired sex, over-protection and favoritism may occur, if not there may be rejection.

Malnutrition, as discussed earlier, in infancy has a harmful effect on subsequent mental development, if it is not corrected in the early weeks of infancy. Emotional deprivation retards children physically and mentally. Children need love throughout their childhood and subsequently, but deprivation of love in their first three years may have a profound effect. It retards them in their development and in their physical growth and may cause dwarfism (Illingworth 1987).

Growth faltering is clearly a phenomenon intimately associated with perils of weaning. The evidence from numerous studies unequivocally indicates that immediate causes of growth faltering are poor diets and infection and that these are interactive (Chen 1986 and N.A.S. 1989). Recent information from studies indicates that dietary factors constraining growth include energy as well as micro-nutrients (Calloway et al. 1992). Other factors which may influence growth are socioeconomic status of a family, family size, maternal and paternal education, sex of the baby etc. Stimulation of
physical and mental development affects the predictable pattern of development by accelerating it. Good health, encouragement and opportunities to learn, plus a strong motivation on the child’s part, will speed up development in all areas.

If the children are not given opportunity to walk, sit or attain other skills at proper stage, they get retarded in these skills (Illingworth 1991). If parents do not give sufficient time to the child towards the end of the first year, his development of speech is delayed. Besides this, there is also retardation in social and intellectual development. It may also cause growth retardation.

The presence of a love relationship between parent and child is an important force in socialization, because children are reluctant to threaten the bond of attachment and love to the parents (Henry 1987).

Attachment is viewed as an important foundation for healthy social and emotional development by making children receptive to acquiring the standards and values of their care giver typically by their parents (Grover 1985).

The importance of studying the growth and development of children hardly needs emphasis. It is a subject which concerns large number with a rising number of under weight children below five years. The immediate causes of growth faltering among pre-school children are insufficient intake of energy, nutrients or both and prevalence of infectious diseases. They are outcome of a complex web of biological, social and economic factors and relationship, which are location specific. Growth faltering is often associated with weaning and usually occurs before children are 3 year old. Poverty and hunger work hand in hand against the children of developing world. Even those who escape serious disease are likely to be significantly under weight, a condition that spirals back on itself to retard growth and subsequent development in other areas.
The end result of poor growth and development in early childhood has functional consequences. There is a need for adequate growth in children on the premise that if adequate growth is achieved, the probability is high that children will be healthy, well-nourished and developed. The effects of malnutrition upon growth and development have been investigated by many researchers. Compared to children from nutritionally sound environments, children from developing country environments associated with chronic under-nutrition display impaired growth and development (Jenkins 1981 and Scholl et al, 1979) and body composition (Bogin and Macvcan 1978), as well as the inter-relationships between variables (Garn et al 1983).

Knowledge of child development can help parents to nurture and promote the all-round growth and development of children and bring about desirable social changes and social equality through children (Gover 1987). A careful study of patterns of individual growth enables us to understand the likeness and differences that exist among the various general and specific pattern of growth and development (Joshi and Mohan 1984). Study of development reveals certain fundamental and predictable facts that will help us to understand the patterns of development that are worthy of serious attention. It is important to study the infants in early years so that better methods of infant caring and rearing may be developed. The findings of the research on child development have a great potential for making improvement in management skills, policy formation, educational programs and bringing of over-all social change.

Despite the awareness among scholars that the trend in growth and development, individual difference in patterns of development and definitive, antecedent consequent relationships can be best studied through the use of longitudinal designs; not many studies of this nature have been undertaken, mostly because of lack of long-term commitments by the researchers, lack of political will and lack of awareness on the part
of institutions of the utility of such researches. More studies of this type need to be undertaken.

Very few studies have been conducted on the patterns of growth and development during infancy. Studies conducted have been primarily of cross-sectional nature and mostly directed towards nutritional status only. However, due to the close association between growth and development, they need to be studied together.

By making observations at different intervals to assess rate of growth and development and by taking into account all possible factors in the child and his environment which might affect the future course of growth and development, one can make a reasonable prediction of his future progress.

The observed differences from these studies are more a reflection of the environment which fosters particular kinds of skills within each areas of development, depending upon the needs and demand of competence within that environment. Because of this, there is a need for separate norms for rural and urban children. In the background of what has been stated while introducing the subject, there seems to be scope and need for conducting further studies to analyze some aspects of growth and development of children during the first years of infancy. The present study has been undertaken amongst Kashmiri urban children in the first two years of life.

The main objectives of the study are detailed as under:

- Assess the growth in children.
- Assess some aspects of development in children.
- Determine average ages of attaining different developmental mile-stones.
- Identify factors influencing growth and development.