The old saying that "the child is the father of the man" is true in more senses than one. The qualities a person imbibes as a child deepen as he grows and appear in several obvious and subtle ways in his conduct and character as an adult. Therefore, what affects the interest of the children affects the well-being of the entire group, of which the child is but one member. Their welfare and satisfaction depends, not only on the health and welfare of the community, but also the claim of the nation to civilisation itself.

Froebel, a well-known educationist, said that children are to be regarded as many plants in a garden. If one wants to nourish a tree, one must nourish the roots. The child is the root and his education is that basic industry, in order to have a healthy nation.

The years of early childhood are the most crucial in the lives of children and the experiences they have greatly affect their later development and behaviour. "Of all nature's gift to the human race, what is sweeter to a man than his children?" says Cicero. This century is the century of the child. Freud went so far as to say that the fundamental structure of man's personality was created in the first four or five years of his life, and that all later development was merely the filling in of details. In every child who is born, under no
matter what circumstances, and no matter what parents, the potentiality of the human race is born again (James Agee, 20th Century).

1.1 Background of the Problem

The child is a living growing organism. The child starts with a biological foundation and grows up in a social environment. He is not only a growing organism, but also a learning organism.

The first six years in the life of a person are the most important period of development and is extremely important in laying the foundation for a healthy and wholesome development of the personality. Each child is unique in terms of genetic potentials. Hence finding out this inborn potentials of the pre-school children becomes the need of the day. In the first moments, months and years of life, every touch, movement and emotion in a young child's life translates into an explosion of electrical and chemical activity in the brain, as billions of cells are organising themselves into networks, requiring trillions of synapses between them. There is a wide consensus that during early childhood the brain is taking shape with a speed that will never be again equalled. The brain's malleability also means that there are times when negative experiences or the absence of good or appropriate stimulation are more likely to have serious and sustained effects. Children's development can be enhanced with appropriate timely and quality
programme that provide positive experiences for children and support for parents. Early care and nurturing have a decisive and lasting impact on how children grow to adulthood and how they develop their ability to learn and their capacity to regulate their emotions.

Reasonable learning opportunities provided during the pre-school years are crucial for the development of intelligence. Two environmental factors have the greatest effect on the child's intellectual development. These are nutrition and stimulation. Serious and prolonged deprivation of these during early childhood years result in almost permanent damage to intellectual growth. By assessing the intellectual development one can foretell the educational outcomes and individual performance in the future.

Social development is the acquisition of the ability to behave in accordance with social expectations. The forms of social behaviour necessary for successful social adjustment appear and begin to develop at this age. The entire development of the child is very much influenced by its social contact. The nature of experiences the child gets makes the child positive or negative in his or her social behaviour. A study in the social development during pre-school years will give a glimpse of how sociable the child is and how he is likely to be in the future.

Physical development applies to all aspects of growth of human organism. Pre-school years represent a remarkable period of
physical and motor development. Physical development influences the child's behaviour directly or indirectly. Directly it determines what the child can do and indirectly it influences his attitude towards himself and others. Physical growth influences behaviour, thoughts, attitudes, ideals, emotional reactions and activities. An understanding of physical growth is essential in promoting healthy growth and good adjustment of children.

One of the objectives of ICDS is to provide environmental conditions necessary for physical, social and intellectual development of children. These aspects are studied here so that one can assess whether there is an impact of ICDS on intellectual, social and physical development.

1.2 Scope of the Study

The development programmes aimed at reducing poverty do not necessarily reach children or improve the environment in which they live and grow. The government has adopted several policies for children to provide nutrition, sanitation, education and health services and the infrastructure to deliver them. The National Policy for children adopted in 1974 has emphasised the need to accord priority to children, in the country's developmental efforts. The policy statement focuses on preventive and promotive aspects of child health and nutrition for expectant and nursing mothers. It aims to provide adequate services for children both before and after
birth and throughout the period of growth to ensure their full physical, mental and social development. The nations of the world are ranked according to their achievements in fulfilment of child rights and progress for women. A majority of children live in impoverished economic, social and environmental condition, which impede their physical and mental development. Recognising this the India government has been greatly concerned about safeguarding and enhancing the development of children particularly those from the weaker sections of society. Welfare services for the young child therefore, have become an integral part of the country's developmental plans. At the heart of these lies the Integrated Child Development Services Scheme.

Launched on 2nd October 1975 in 33 blocks, the ICDS today covers more than 75% of India's community development blocks. It reaches out to 4.83 million expectant and nursing mothers, and 22.9 million young children (under 6 years of age) in disadvantaged community groups. Of these 12.45 million young children (3-6 years of age) also participate in early joyful learning activities through the AWCS spread across the country. A vast network of community based workers and helpers have enabled ICDS to emerge as the convergent interface between disadvantaged communities and other programmes such as primary education and health care. It is indeed for our national effort to achieve universalisation of elementary education.
As on 1996, in Kerala there are 120 ICDS blocks (112 rural and 8 urban blocks). ICDS III Project, 2000, which is assisted by the World Bank will bring universalisation of the ICDS programme in Kerala, by including 80 blocks spread over 14 districts of the state (40 rural, 3 urban, 36 coastal and 1 tribal block).

There are some studies based on the impact of ICDS on nutritional status of children; The impact of an intervention programme on the language and cognitive development of tribal pre-school children by NCERT, New Delhi (1983); Influence of integrated child development services on representation of objects in symbolic play of infants by JBAS Women’s College, Tamil Nadu (1985); A study of impact of the ICDS scheme on school enrolment and dropout rate in Maharashtra by Nirmala Niketan College of Social Work, Bombay (1985); The impact of an intervention programme on the language and cognitive development of pre-school children from urban Anganwadies (Muralidharan et al., 1986); The pre-school education in the ICDS—an impact study (Khosla et al., 1986); Impact of total six years exposure to ICDS on growth and health status of target children in U.P. by Chaturvedi (1987); Impact of six years exposure to ICDS scheme on psychosocial development by Chaturvedi et al. (1987); Impact of ICDS programme (Subramaniam, 1987); National Programme on ICDS (Lal, 1988); Infant and early childhood mortality on urban slums under ICDS scheme (Choudhary and Jayaswal, 1989); Impact of ICDS on pre-school education and development of children in
Aligarh district (Adhish et al., 1990); Impact of ICDS on the psychosocial development of children in Andhra Pradesh, Karnataka and Tamil Nadu (1993); Utilisation of ICDS service by pregnant and lactating women in subcentre and non-subcentre village of Ambala, Haryana (Singh, 1993); Integrated training of health functionaries in ICDS scheme (Kapil et al., 1993); A longitudinal study to examine the influence of pre-school education on the achievement of students with and without Anganwadi background at primary level (Mangla Devi, 1995); Co-ordination between the ICDS staff and health staff at the village level on health and nutrition related activities in the ICDS scheme (Kapil et al., 1997); ICDS scheme - a programme for maternal health and child development (Kapil et al., 1997); and Women's status and child health (Shariff, 1998).

There are some studies on the impact of ICDS in Kerala. A study by the Department of Paediatrics of the Medical College, Calicut on the impact of ICDS programme on school drop outs in Calicut (1984); A comparative study of skill development status of Anganwadi pre-school children and with a private nursery school in Thiruvananthapuram district, which revealed a higher score for private nursery school are some of them.

The ICDS is a national project and many studies have been conducted to assess its impact. But no single investigation covered all the three aspects of the intellectual, social and physical development in the child; nor was any attempt was made to find out the interrelationship between them. So the present study is to find
out the impact of ICDS on child beneficiary in comparison with that of their non-ICDS peers and to identify the importance of scheme in the modern world.

1.3 Aim of the Study

The aim of the present investigation is to study the impact of ICDS on child beneficiary. The impact in the present study deals with the intellectual, social and physical development of pre-school children.

1.4 Objectives of the Study

The main objectives of the present investigation are as follows.

1) To compare the intellectual development of ICDS pre-school children in Anganwadies with that of their non-ICDS Balwadi peers in the areas of their
   • Verbal comprehension
   • Word fluency
   • Numerical ability
   • Memory
   • Space visualization
   • Perceptual speed
   • Reasoning.
2) To study the social development of ICDS pre-school children in comparison with that of their Balwadi peers in the areas of

- Competition
- Co-operation
- Sympathy
- Leadership
- Aggression
- Dependency
- Negativism
- Jealousy

3) To study the general physical development of ICDS beneficiary pre-school children in Anganwadies in comparison with that of their non-ICDS Balwadi peers in the areas of

- Height
- Weight
- Head circumference
- Chest circumference
- Mid arm circumference

4) To study the interrelationship among the study variables namely, intellectual, social and physical development

1.5 The Areas of the Study—The Concepts Defined

1.5.1 Intellectual Development

According to Thurstone (1941) mental development refers to intellectual development and its is characterised by such abilities as
verbal comprehension, word fluency, numerical ability, memory, perceptual speed, space visualization and reasoning. Seven dimensions of intellectual development identified in the above definition were considered in this investigation. They are the following.

(i) Verbal comprehension
(ii) Word fluency
(iii) Numerical ability
(iv) memory
(v) Perceptual speed
(vi) Space visualization
(vii) Reasoning

In the present study intellectual development is considered synonymous to mental development explained by Thurstone (1941).

(i) Verbal comprehension

As given in Chamber's Dictionary (Schwarz et al., 1992) verbal comprehension means understanding of words or comprehension of words. This refers to one's vocabulary or the knowledge of words and their meanings (Thurstone, 1941).

In this study verbal comprehension means the ability to define and understand words (Thurstone, 1941).

(ii) Word fluency

It is the ability to express oneself fluently (Oxford Dictionary, 1984). In this study the child's ability to think and express words rapidly and fluently as expressed by Thurstone (1941) is considered.
This is the ability to deal with relationships expressed in words; it also includes the ability in the use of words.

(iii) **Numerical ability**

As given in the Oxford Dictionary (1984), it is the capacity to utilise simple arithmetical processes. In this study the ability to do arithmetic problems is considered as numerical ability (Thurstone, 1941).

(iv) **Memory**

It is the ability to recognise and recall or associate previously learned items (Mussen *et al.*, 1979). It is the faculty of remembering (Oxford Dictionary, 1984). It is the ability to memorise verbal material as measured by the usual methods of recall and recognition (Thurstone, 1941).

(v) **Perceptual speed**

According to Thurstone (1941), it is characterised by quickness of thought and keenness of perception. It is the ability to group visual details and to see differences and similarities among objects, ability to see small details accurately and quickly or the ability to find out quickly similarities and differences in groups of designs. It is the act of perceiving, i.e., apprehends or observes through one of the senses especially sight (Oxford Dictionary, 1984).
(vi) **Space visualization (Spatial relations)**

It is the ability to visualize two and three-dimensional objects (Thurstone, 1941). Ability to visualize space and form and manipulate it mentally, ability to draw a design from memory or to visualize relationship. This deals with one's ability to find out relationships among objects in space by quickly visualizing three-dimensional factors of space.

(vii) **Reasoning**

It is the ability to find rules, principles or concepts of understanding and solving problems. It allows a child not only to solve logical problems, but to discover the principle that will solve a series of problems (Thurstone, 1941; Schwarz *et al.*, 1991). As given in Chambers it is the ability to reach conclusion by connected thought.

1.5.2 **Social Development**

Hurlock (1972) defines social development as the ability to behave in accordance with social expectations.

By considering the views (Hurlock, 1972; Thompson, 1996; Wispe, 1997) the present study considered eight aspects of social development. They are the following.

(i) Competition
(ii) Co-operation
(iii) Sympathy
(iv) Leadership
(v) Aggression
(vi) Dependency
(vii) Negativism
(viii) Jealousy

(i) Competition

Competition means that two or more individuals vying with each other for the same goal attainment (Thompson, 1996). The ability of the child to surpass other children of its category in every activity in order that it may earn the praise of others (Fowler and Fowler, 1984).

(ii) Co-operation

Co-operation can be defined as two or more individuals joining their efforts, in order to reach a mutually desirable goal (Thompson, 1996). It indicates how the child gets along with others (Thompson, 1996).

(iii) Sympathy

Sympathy is an understanding of feelings and emotions of others. It is the form of behaviour in which one is affected by the emotional stage of another (Thompson, 1996).

(iv) Leadership

It is the quality of a person to lead the group and he will be always popular and most of the members of the group recognise him (Chaube, 1996).
(v) **Dependency**

As given in the Oxford Dictionary (Fowler and Fowler, 1984) a dependent person is one who depends on another for support.

(vi) **Aggression**

According to Kaufman (1983) aggression is a reaction to frustration aggressive behaviours are actions that are intended to cause injury or anxiety to others including certain physical symptoms such as hitting, kicking, destroying property, quarrelling, attacking others verbally and resisting requests.

(vii) **Negativism**

It is the resistance to adult authority (Thompson, 1996). According to the Oxford Dictionary (Fowler and Fowler, 1983) it is rejection, refusal to accept or countenance.

(viii) **Jealousy**

It is the feeling of angry resentment directed towards other people, due to actual, supposed or threatened loss of affection or any thing (Thompson, 1996).

1.5.3 **Physical Development**

The term physical development applies to all aspects of growth of the human organism. Growth refers to the natural changes in size resulting from multiplication of cells or increase in intercellular substances. Generally it denotes height and weight
changes, changes in body proportions, bone growth, muscular development and development of the nervous system (Hurlock, 1981).

In this particular study, anthropometric measurements of children are measured in order to study the physical development. The term anthropometry refers to taking measurements of weight and height, that is overall body size and taking measurements of specific body parts such as the head, chest and arm (Jelliffe, 1966).

(i) Weight

Weight is a commonly used indicator of body size, as it reflects the level of food intake.

(ii) Height

Height is another measures of growth of a child. The height helps us to know whether the child is growing normally.

(iii) Head circumference

The measurement of head circumference is a standard procedure in paediatric practice, usually to detect pathological conditions accompanied by a large head or one of increasing size, as for example, with hydrocephalus; or too small a skull as with microcephaly. Head circumference is related mainly to the brain and to a small extent to the thickness of the scalp tissues and the skull. However, brain size and both the thickness of scalp soft tissue and the skull can vary with nutritional status.
(iv) **Chest circumference**

It is useful as a measure of growth only up to six years. For a normal child the circumference of the head and the chest are about the same at six months of age. After this, the skull grows slowly and the chest more rapidly. Therefore, between the ages of six months and five years a head/chest circumference ratio less than one may be due to failure to develop or to wasting of the muscle and fat of the chest wall and can be used as community indicator of protein calorie malnutrition of early childhood (Mudambi, 1982).

(v) **Mid-arm circumference**

Mid-arm circumference gives an idea of the size of the arm muscle and the fat layer below the skin.

1.5.4 **ICDS—Integrated Child Development Service Scheme**

Integrated child development service scheme is the India Government's most ambitious and comprehensive plan to increase the child survival rate among the poorest and to enhance the health and nutrition and learning opportunities of children and their mothers (Chowdhry, 1980).

1.5.5 **Child Beneficiary**

Pre-school child beneficiaries are studied in this investigation.

Pre-school children are children between the ages of two and six
years (Hurlock, 1981; Karmel and Karmel, 1978; Devadas and Jaya, 1984; Stewart and Friedman, 1987; Craig, 1989; Chauhan, 1996) children between the ages of three and five years (Constable, 1988) and children between the age of two and five years (Hendrick, 1990; Kuppuswamy, 1990). Pre-school children in this particular study refers to Anganwadi and Balawadi attending children at the age of four years.

1.6 Hypotheses

The hypotheses generated for the present study are as follows.

1.6.1 There is no significant difference in the intellectual development of ICDS beneficiary pre-school children with that of their non-ICDS beneficiary.

1.6.2 There is no significant difference in the social development of ICDS beneficiary children with that of their non-ICDS beneficiary peers.

1.6.3 There is no significant difference in the physical development of ICDS beneficiary children with that of their non-ICDS beneficiary peers.

1.6.4 ICDS beneficiary pre-school children are not significantly different from their non-ICDS beneficiary pre-school children in the areas of
1.6.4.1 Verbal comprehension
1.6.4.2 word fluency
1.6.4.3 numerical ability
1.6.4.4 memory
1.6.4.5 perceptual speed
1.6.4.6 space visualization
1.6.4.7 reasoning
1.6.4.8 There is no significant difference in the effect of explanatory variables on the total score of intellectual development

1.6.5 The ICDS beneficiary pre-school children are not significantly different from their non-ICDS peers in the areas of

1.6.5.1 Competition
1.6.5.2 Co-operation
1.6.5.3 Sympathy
1.6.5.4 Leadership
1.6.5.5 Dependency
1.6.5.6 Aggression
1.6.5.7 Negativism
1.6.5.8 Jealousy
1.6.5.9 There is no significant difference in the effect of explanatory variables on the total score of social development

1.6.6 The ICDS beneficiary pre-school children are not significantly different from their non-ICDS peers in the areas of

1.6.6.1 Height
1.6.6.2 Weight
1.6.6.3 Head circumference
1.6.6.4 Chest circumference
1.6.6.5 Mid-arm circumference

1.6.6.6 There is no significant difference in the effect of explanatory variables on the total score of physical development.

1.6.7 There will not be any significant relationship among the study variables (intellectual, social and physical development).

The present study thus aims to identify the intellectual, social and physical development of ICDS beneficiary pre-school children in relation to that of their non-ICDS beneficiary pre-school children. This study may reveal the impact of ICDS on pre-school child beneficiary in Kerala and may bring about useful suggestions to improve its functions.