CHAPTER II

REVIEW OF LITERATURE
II. REVIEW OF LITERATURE

The literature available related to the cream of this thesis 'Child Labour and Intelligence' is reviewed under the following headings.

A. Definition of child work/labour
B. Magnitude of child labour
C. Causes of child work/labour
D. Working conditions
E. Child work and health
F. Child work and education
G. Intelligence as related to SES and schooling
H. Law and policy

A. DEFINITION OF CHILD WORK/LABOUR

'Child labour' signifies employment of children in gainful occupation or material contribution to the income of the family according to Encyclopedia of Social Sciences. Children's work refers to any activity done by them which either contributes to production, facilitates the work of others or substitutes for the employment of others (Schildkrout, 1981).

The National Child Labour Committee of the United States (1979) defines child labour as any work done by children that interferes with their full physical growth and development, their opportunities for a desirable minimum of education.
Kulshreshta (1978) defined child labour as employment of children in gainful occupation. This includes children working in industries, all forms of non-industrial occupations which are injurious to their physical, mental, moral and social development.

The Factories Act of 1881 defines child labourer as any person between the age of 7 and 12 years. The Factories Act 1891 raised the lower age from 7 to 9 and upper age from 12 to 14. Section (2) of the Factories Act 1948 considers that the labour contributed by the person below 15 years as child labour.

B. MAGNITUDE OF CHILD LABOUR

In 1971, there were 10.71 million child workers. They constituted about five per cent of the total labour force. The bulk of the child workers was in the age group 10-14 years with nearly 30 per cent boys and 20 per cent girls. Only three per cent of five to nine years old boys and girls were child workers (UNICEF, 1981).

The Census of India (1981), indicates that 13.6 million children being involved in work. About six per cent of the total work force consists of children below 14 years. Nine per cent of female working population were children against five per cent for males among male working force. A large
percentage of child workers were engaged in agriculture, cultivation, livestock, forestry and fishing. Of the total workers participating in household and other industries five per cent were children, about eight and three per cent were female and male child workers respectively. With these, India contributes largest child work force (UNICEF, 1984 and Gangrade and Gathia, 1983) to 55 million working child population, as estimated by International Labour Office (Dogramaci, 1985).

The 1981 census data enlists that in rural areas, the percentage, of child participation rate was four for males and two for females among literate children against 13 for males and six for females among illiterate children. While in urban area, it was seven for males and three for females among illiterates and two for males and one for females among the literates.

C. CAUSES OF CHILD WORK/LABOUR

The causes of child labour are many and varied. They are mainly rooted in inequality and poverty (Marwah, 1984; The Hindu, 1986; Verma, 1979 and Gupta, 1979 and Indian Council for Child Welfare, 1977). Children from poor families and with high fertility are compelled to join the labour force by the need to supplement the family income (UNICEF, 1984).
Children are employed because they are readily available to supplement the meagre family income (Punekar, 1977; Social Welfare, 1983 and UNICEF, 1984). According to Chan (1984) the causes of child labour are large family size and inability of parents to care for all children; lack of productive employment opportunities with minimum income for the adult household member; high drop-out rate among school children of the poor households; absence of compulsory education, inequality or absence of useful re-educational and retraining programme for drop-outs.

Patil (1986) estimated that 42 per cent of the working children were in employment due to stagnation of the child in the same class; loss of child's interest in studies; illiterate parents' desire to get children employed and trained in supposedly lucrative trades and occupations; desire to wean away the children from the influence of deviant children in the neighbourhood; child being idle at home, and the fear and threat of probable unemployment during adulthood. The study also revealed that five per cent of the child workers were in employment to become like their peers and be economically independent.

Perpinan (1986) echoes certain other reasons, viz., that children are easier to manage (Modi, 1988) and are more adept at certain jobs; do not complain against authorities and are unaware of legal rights. In addition, they can be controlled easily and made to produce more (Kanta, 1984; Burra, 1986 and Akhileshwari, 1988).
Children are active, agile and quick and feel less tired in certain tasks (Balachandran, 1986). They are the cheapest, most decile labour force available (Yoon, 1985) and the demand created by mushrooming of factories and small sized illegal industries leads to cheap and easily controllable labour. The other reasons attributed were rural poverty, lack of education at an early age, inadequate or inaccessible training institutions that compel children to enter the labour market prematurely (Udornsaki, 1984).

To Kogi (1986) unemployment and underemployment, precarious income, low living standards and insufficient opportunities for education and training are the basic causes for child labour. A study of child labour in Madras indicated that three-fourth of the child workers started working to supplement the family income, 23 per cent took up job on account of the death of their father and 17 per cent because parents compelled (George, 1977).

A study on working children in Bombay done by National Institute of Public Co operation and Child Development (1978) revealed that children were employed because they were quick and efficient (21%); more amenable to discipline (13%); better suited for some type of jobs (13%) and cheap labour (9%). Khan (1980) and Chickavenkateshaih's (1982) study revealed that the percentage of children employed was directly related to family income levels, with the highest percentage in lowest income group.
D. WORKING CONDITIONS

Children employed in some of the unorganised industries work in ill-ventilated and overcrowded places under very unsanitary conditions (Giri, 1972; Sexena, 1968 and Prasad, 1982). Working place in match industry was appalling, says Kothari (1983). With cramped space, filthy floor and no ventilation (UNICEF, 1984) child workers were forced to work in unsuitable environments (Pitt, 1985) dangerous to their health, physical and mental development (Bequele, 1985). Review of studies on working environment under which children were expected to work in developing countries revealed that work place in Thailand were unhygienic, hot, stuffy, poor lighting and ventilation (Boonpala, 1986). Anti Slavery Society (1979) has reported that children in Hong Kong worked in overcrowded, under-ventilated and fire risk environment. A study in Kuala Lumpur (Chan, 1984) found children working in rooms which had poor ventilation and unsanitary environments.

Children work for almost 12 hours a day in match and fire works industries in cramped environment with hazardous chemicals and inadequate ventilation (Kothari, 1983 and Akhileshwari, 1988). In beedi industries, children of 8 to 12 years of age and sometimes even those between five and eight years put in long hours (UNICEF, 1984). Study on children of rural Karnataka exhibited the extent and nature of work done by its children. Children spent on an average...
four hours a day, whether household work or direct productive work. The contribution of work increased with age (Kanbargi and Kulkarni, 1985).

About 31 per cent of children employed as factory workers, mechanics, construction workers and weavers were putting in 10-11 hours of work per day (Anti Slavery Society, 1979). In power loom industry children worked for 16-24 hours (Barse, 1985), 12-15 hours in Aligarh Lock Industry (Burra, 1988), it was eight hours of work for children in Firozabad (The Hindu, 1987). Juyal (1987) reports that children in carpet industry worked for 9 to 12 hours a day. According to Kaur and Dillon (1987), mean hours of labour input was nine in Faridkot District. About 40 per cent of child workers studied in Bombay were putting in 12 hours per day (Mehta, 1985). Children working in Delhi spent about 10-12 hours a day (Indian Council for Child Welfare, 1977).

Studies done in developing countries also reveal similar working hours; Felsonthat (1985) reports that in Nepal children worked for 14 hours a day; in Taiwan, it was 12-14 hours (Bouhdiba, 1981), about 12-15 hours in Thailand (Child-Workers in Asia, 1987); a Bangladesh study revealed that children working in brick chip making worked for 12 hours a day (Nessa, 1987); child workers in Sri Lanka (Weeramunda, 1982) worked for 8-12 hours per day; studies in Hong Kong disclosed that 11 per cent of the work force
regularly worked for more than 75 hours a week; study on child labour in Columbia revealed that 40 per cent of children work 9 hours a day and 25 per cent - 13 hours a day (Anti Slavery Society Report, 1979).

A study done in Madras (George, 1977) revealed that 83 per cent of child workers received less than Rs. 60/- per month. Children employed as factory workers, mechanics, construction workers and weavers received wages below Rs. 15/- per week (Anti Slavery Society, 1979). According to Balamani (1981), children working on 'piece rate' in hosiery industry received an average wage of Rs. 46 per week, while 'time rate' workers received Rs. 36 per week. The earnings of child workers was Rs. 15 in Calcutta (Sinha, 1988). In Eluru, child workers with 6-12 months experience in foundaries, smithy units and automobile shops earned Rs. 1.50 - 2 per day, while an experienced child earned Rs. 5/- per day (Jayaram, 1987).

The average earning of younger child (below 10 years) was Rs. 2/-, for an older child (above 10 years) it was Rs. 6-7 per day in Sivakasi match industry, according to Kothari (1983). Children performing beaming and spindling work in Bhiwandi power loom industry earned about Rs. 75-150 per week (Barse, 1985). In Faridkot District, child workers contributed about Rs. 15-45 per week to family income (Kaur and Dillon, 1987) and about Rs. 30 by Firozabad working children (The Hindu, 1987). The results of a recent study
in lock industry of Aligarh indicated that an average wage of a child without any experience was Rs. 12 and of an experienced child was Rs. 30-40 per week (Burra, 1988).

Some of the studies done overseas indicates the wage pattern as given hereunder. In Santiago, the income earned by children varied from $1-3 per day and received not more than $7 per week (Mendelievich, 1980). Weeramunda (1982) from Sri Lanka reported that the child workers there had an average income of Rs. 15 per day. Children of South Taiwan earned about $12 per week (Bouhdiba, 1981). In Thailand, children earned about one third of an adult wage (US $1) per day (Child Workers in Asia, 1987) amounting to about US $7-15 per month (Boonpala, 1986). A Bangladesh study (Nessa, 1987) revealed that children involved in rickshaw pulling and brick chip making earned US $-1/3 per day. Felsonthat (1985) reported that the child workers in Nepal involved in construction and portering earned about Rs. 20 per day.

On the whole, child workers in India and other developing countries work under environments that can be detrimental to health, toil for long hours and earn a very low wage.

Type of work done by child workers:

In the developing countries child labour is most common in agriculture, in service and in industries. In agriculture, children either work on family plot or work for others.
They begin work with very light tasks and gradually progresses to heavier work (Castillo, 1985). In urban sector, children work in services - cleaning shoes, guarding parked vehicles, loading and unloading goods, carrying messages, selling magazines, food, lottery tickets and other goods; serve in tea/snack bars and also as domestic workers. Children are found working in cottage/small scale industries involved in packing, glueing, sorting, labelling, food industry, textile, tailor, leather, metal, pottery (Mendelievich, 1980), match works, stone breaking, brick kiln, automobiles and traditional handicraft (UNICEF, 1984), machine minding factories, rubbish collection (Shah, 1985), zari, carpet making and brass ware (NIPCCD, 1984). In small industrial enterprises in Taiwan children join up computer wires, weave sweaters, sew foot wear and implant hair on doll's head (Bouhdiba, 1981).

The activity pattern between male and female labour was broadly similar (Seal, 1980). In some sectors where the task requires skill, differences of sex have no influences on the jobs undertaken by children of both sexes employed on the sole criterion of personal ability (Gathia, 1985).

On the contrary, greater household work by girls and greater productive work by boys have been the trend in India. As for the time spent on work, girls put in longer hours than boys (Kanabargi and Kulkarni, 1985). The latter could be explained by the fact that relatively fewer girls go to
school as compared to boys. A study conducted in Nepal indicates that girls aged 5-9 do more domestic work and child care; participate in more conventional economic work in livestock and farm activities than boys; they worked for mean three hours per day and boys, two hours per day (Yoon, 1985).

Age at which children begin work:

The age at which children begin to work depends on tradition, the size of the undertaking and whether or not it is a family concern. Children may be apprenticed to a craft when they are six or seven years old. The higher the age group, the greater the proportion of children in that age group who go out to work. Thus most working children are between 13 and 15 years age group. The intensity and the duration of the work they perform increases as the years go by. In many regions a large number of children aged between 11 and 13 begin their working life (Ghai, 1985). A study on Bangalore 600 working children employed in various occupations, revealed that 65 per cent were in 10-12 years age group (Patil, 1986). A study by Chan (1984) on Kaula Lumpur child workers showed that 75 per cent of them belonged to 12-14 years age group. In Bolivia (Columbia), of all children aged 12-14 years those in full employment represented seven per cent in 1951 and 19 per cent in 1973 (Anti Slavery Society, 1979). The age of the female domestic servant hired varied between 9-10 years, 25 per cent of children began working between 6-9 years, 48 per cent between 10-12 years.
and 27 per cent between 13-15 years, as revealed in a study by Singh, et al. (1978).

E. CHILD WORK AND HEALTH

Early enrolment to work has negative effects on the health of the child workers as findings of a study quoted by Rasagam (1987) on 500 school age children who had worked in carpet weaving industry for not less than six months and school going children (control group) indicate the heights and weights of school going children were better than working children.

A longitudinal study on 738 boys and 742 girls belonging to 12-18 years from rural Hyderabad pointed out that those with severe growth deficit in height for age at five years had significantly lower work capacity and earned less than others with normal growth at the age of five (NIN, 1980) and also had lower heights and weights during the study period (Satyanarayana, 1986).

A cross sectional survey on physical, health status of 863 males and 163 females employed in unorganised sector where 500 non-working school attending children formed control revealed that, when heights for age were compared with Harward Standard, about four per cent and 37 per cent of the working children were severely and moderately malnourished respectively. The proportion of the working children in
normal category decreased with increase in age. Nutritional status of female working children was significantly different from non-working female children, in that 33 per cent of the female child workers were in severe/moderate category against 16 per cent of their counterparts (Naidu and Parasuraman, 1986).

According to Gopujkar and Dhole (1980), 86 per cent of child workers they studied did not possess good health and no difference between boys and girls with respect to their health was noted. However, more girls than boys were reported to have suffered from short duration illness. Eighty five per cent of parents perceived that their working children were healthy. Girls were perceived to be healthier than boys. No sex differences were found in the utilization of preventive measure like vaccine. Most of the parents of scrap collecting child workers complained of adverse effect of work on the health of their child, followed by those of casual and sales workers (Singh et al, 1976).

Rajmohan (1986) studied 200 children belonging to 11-18 year age group working in match industries and a control population of similar group with mean age 15 and 14 respectively. Total morbidity was 93 per cent in the experimental group and 75 per cent in the control group. Male group morbidity was 93 per cent, male control was 83 per cent, among females 93 per cent for experimental group whereas 71 per cent in controls. He concluded that total morbidity
detected among the study population was significantly higher than the control at all age groups.

Clinically, 56 and 42 per cent of school and working children respectively had no nutritional defects. The main health complaints of the working children were headache, blurring of vision, backache, abdominal pain, limb pain and respiratory tract infection as quoted by Rasagam (1987). A study done at Kenya on domestic child workers, revealed problems such as frequent headache, tiredness, frequent cries and sleep problems (Onyango, 1985).

Some of the features that lead to major health problems were excessive noise, hot, damp or dusty conditions, unhygienic conditions at work place, lack of running water, toilet facilities (Pitt, 1985) and lack of rest (Costa, 1988). Improper posture of the children while working developed deformities of the spine and pelvis (Manoharan, 1986).

As early as 1910, Mangold had observed that girls who were compelled to stand for hours at a time, besides acquiring flat-foot, placed excessive strain upon certain muscles. Constant sitting or standing or working in the same position prevented full and free development of the chest. He further stated that though at times children do not appear to be affected from factory life, they reap the results later.
F. CHILD WORK AND EDUCATION

According to recent ILO estimates, only a third of the children in 5-14 years old age group are admitted into schools. A large proportions of dropouts and irregular attendance were common feature. The general picture that emerge appears to be a very grim one for school children in the rural areas, lack of adequate facilities in schools; long distances to get to school and non availability of food. School leavers of free education are barely on the threshold of literacy, without any hope of following it up at a later stage (Ghai, 1985). NIPCCD's (1978) study of working children in Bombay listed the reasons for school drop-outs as parents inability to meet school expenses (30%); death/disease of parents (12%); pressure of household chores (7%) and lack of interest in studies/ill treatment by teachers (35%).

A nationwide study of 442 Public Schools' investigation on drop-out problem brought forth the main reasons such as parents being not able to bear education cost; requiring help in family chores; schooling not being useful; students being malnourished; migration; children having felt that they were too old; frequent non-attendance; illness and accidents (Khan and Berstecher, 1988). Several studies (Khan, 1984, Patil, 1986 and Krishnakumari, 1985) on child labour have pinpointed these reasons as factors leading to child labour. Balasuriya (1986) describes episodes of children not being able to study because the parents needed
them for work at home or elsewhere to augment the family income; parents not being able to afford lack of suitable school for the children.

It is neither the cost of education nor the conservative outlook of the parents that is the primary cause of the significantly lower percentage of female enrolment; rather, it is the family dependence on the girl's labour at home and in fields (Acharya and Bennet, 1982).

School attendance and child labour were related to each other. There was also a clear correlation between enrolment at school and decline in the volume of Child Labour (UN, 1985). It would contribute to prevent the exploitation of child labour, if educational system puts more emphasis on the development of those skills which, were likely to improve the child's future earning prospects.

Ghosh (1986) conducted a welfare programme for child workers in Calcutta. He opened 12 holiday schools and 3 part time classes that functioned only on Saturdays and Sundays. Totally 600 children were enrolled. Free books, educational aids, art lessons were given. Every child was given a glass of milk, 2 slices of bread; occasionally a fruit or sweet was given to children. Health care and medicines were provided. They were taken out on few field trips. Parent-teacher meetings were conducted. It was found that about 75 per cent were regular.
Part time classes between 7 and 10 p.m. were conducted by 201 men and 62 women teachers to 3,573 child workers in 5 project areas in Pune District for two years. The outcome showed that more girls than boys attended; pupils required an year to absorb good manners and self assurance; with 400-500 days attendance 38 per cent of the children attained highest level in languages; with 260-330 days of attendance most of the children could write simple descriptive paragraph and do oral arithmetic. In one year all children could read and write upto 100. Most children mastered additions and subtractions in about 300 learning days. Only 50 per cent managed multiplication and division with 260-330 days of attendance. About 24 per cent dropped out with reasons such as disinclination to continue, or indifference to parents, early marriage and migration of families (UNICEF, 1987).

A non-formal educational programme for children working in some Match Industries in Tamil Nadu was conducted for two hour sessions between working hours. Only 900 children were benefitted from this programme (Kothari, 1983). The instructor further reported non co-operative attitude of employers towards the programme.

G. INTELLIGENCE AS RELATED TO SES AND SCHOOLING

According to Thorndike (1913), there were three kinds of intelligence namely, the abstract, the machanical and the social. Terman (1916) defined intelligence as the ability to think in abstract terms.
In the words of Stoddard (1943), intelligence is the ability to undertake activities characterized by difficulty, complexity and abstractness and to perform these activities with economy or speed and with adaptiveness to a goal. Intelligence is the global capacity of the individual to act purposefully, to think rationally and to deal effectively with the environment (Wechesler, 1958). Cattall (1963) has suggested fluid and crystallized intelligence and capacity to perceive things and integrate them mentally and crystallized intelligence involves skills, abilities and understanding. Guilford (1967) envisioned an intellect model of 120 mental abilities made up of all combinations of operations, contents and products. It is the ability to benefit from experience, to learn new ideas or new sets of behaviour easily (Conger, 1977).

McCandless and Trotters (1977) believed that intelligence as an ability to process information efficiently, recall knowledge quickly and solve problems accurately regardless of the information or the specific problem involved.

Sternberg (1982) proposes intelligence to be viewed in terms of information processing components such as meta, performance, acquisition, retention and transfer components. He has summerised the concept of intelligence as a large part on ability to acquire and think with new conceptual systems and to solve novel kinds of tasks. To Mussen et al. (1984), intelligence is a general competence - the
ability to learn a wide variety of intellectual skills such as verbal, numerical skills, ability to remember numbers and the ability to produce many solutions to anagram problems. Intelligence is a general ability that crosses many cognitive domains. According to Bhatia (1976) concept of intelligence symbolizes the totality of the cognitive functioning of the human mind in its various aspects and at its various stages.

From these definitions, it can be said that the basis of all Intelligence and all definitions of Intelligence, - the capacity to analyse and synthesize experiences.

SES and intelligence:

The concept of social disadvantages or low Socio-Economic Status (SES) implies those socio-genic factors which obstruct or prevent the natural development of the inner potentialities of the child. Social disadvantage is a deprivation and a handicap. It maims and mutilates the child, physically as well as mentally stunts his growth, hampers his/her talents and deprives him/her of self fulfilment. Singh's (1978) study reveals that the greater the degree of social disadvantage, the lower is the intelligence and the more inferior is the academic achievement. This social advantage/disadvantage consists of four factors namely income, caste status, sex and place of residence.
Jachuk (1984) investigated the differential ability pattern of advantaged and disadvantaged children with respect to level I (cognitive) and level II (associative). Abilities of Jansen models, home environment and caste were taken as indicators of social advantage and disadvantage. The sample consisted of 60 Brahmin and Harijan primary school children from poor or enriched home background. Results indicated significant differences between socially advantaged and disadvantaged samples in level II abilities only. Both home environment and caste effects were significant.

Mohanty (1980) studied 200 socio-culturally advantaged and disadvantaged 3rd and 4th graders. The performance of socio-culturally advantaged samples on all measures of socio-culturally advantaged tested was significantly better than those of their disadvantaged counterparts and this difference increased with age. Similar results were confirmed by Sans (1982).

Walker (1985) in his study of 188, 4th grade boys, belonging to low and middle SES groups found that the latter outdid the former on all subtests given. Basavanna and Rani (1984) based on their study of differential impact of social and economic disadvantages on intellectual abilities concluded that neither social nor economic handicap has a significant impact on basic intelligence.
Jehan and Ahmed (1980) studied intelligence of advantaged and disadvantaged children and found mean IQ of advantaged group much higher than the disadvantaged group. Parental education, occupation, income and living condition played a significant role in determining intellectual development. A study of 32 male and 28 female of high and low SES attending 3rd - 5th grade were given recall test. Results showed that cultural deprivation had a direct impact on the memory process and clustering ability (Hota, 1983).

Prakash and Sen (1986) examined the relationship between intellectual ability and socio-cultural background of 100 privileged (Caste-Hindu) and 100 under-privileged (Scheduled Caste) school children aged 10-15 years. The under-privileged scored significantly higher although there was no significant difference agewise between the groups. The most consistent finding of research on group differences was a positive correlation between IQ and SES. Higher Average IQ of children in higher social class have been the rule in these studies (Aiken, 1982).

Children from large families generally perform poorly on intelligent tests than their counterparts from small families (Marjoribanks, Walberg and Bargen, 1975) and the first born siblings often have higher IQ than siblings born later (Zajonc and Markus, 1975). Several studies (Belmont and Moralla, 1973; Kallaghan and MacNemra, 1972 and Zajonc, 1972) have confirmed the older finding that mean intellectual ability declines as family size increases. They believe
that the quality of interaction among family members is one of the most important influences on children.

Family size may operate on intelligence at a biological level such as maternal health; at a cultural level - by deciding how much adult time is available for the children, what facilities and opportunities for play, recreation and stimulation are provided (Kirman, 1976; and Butcher 1968).

Munroe and Munroe (1983) studied the birth order effects on a sample of 1413 male high school students in rural Kenya. Variation from monotonicity included a reversal of the performance of ranks 1-3 over lower ranks and poor scores for those at ranks seven and lower. Family size was unrelated to test score performance. Samples in birth order 1-3 reported greater parental demands and maternal attributes to socio-cultural factors, that may have affected the quality of samples' intellectual environment.

Kirman (1976) and Butcher (1968) concluded that inverse relationship between birth order and intelligence could be due to parents spending more attention to their first child and that as the family size increases standards of living and opportunities will be reduced.

Schooling and Intelligence:

A great number of drop-outs than school-goers were Below Average in intelligence as shown by an investigation of Conger
One third of drop-outs and 10 per cent of school goers had IQ scores below 85, 15 per cent of drop-outs and 11 per cent of school-goers fell in 85-89 range. In contrast, 48 per cent of drop-outs had Average IQ (90-109) and six per cent had Above Average scores. These indicated that children with higher levels of intelligence continued schooling. However, intelligence level per se was not a decisive factor in many cases of dropping out of school. School difficulties, both academic and social, played a prominent role in the histories of most drop-outs. The typical drop-outs even though of average IQ, were two years behind in reading and arithmetic by the time they reached the seventh grade. It was found that performance grades of early drop-outs were significantly lower than later drop-outs.

Weiss (1980) studied literate and non-literate adults and their 13-16 year old sons who had 4-6 years school experience. Results showed considerable difference between non-literate elders and their sons in performance scores and the manner of executing tasks. It is suggested that a few years of schooling was sufficient to produce fundamental changes in cognitive strategies measured by the maze performances.

A study by Wu (1985) on the effect on intelligence of 42 first graders and 44 fourth graders included administration
of a series of problems as a means to arouse brain activity. These children were asked to solve one problem within 10 minutes each morning for 64 days, 43 first graders who did not participate in the event was taken as control group. Results indicated that mean IQ of the experimental first grade class increased by five points and that of the experimental fourth grade group increased by six points while the mean IQ of the control group remained the same. Thus reflecting stimulation to exercise brain activity increased the IQ.

Rutter (1985) reviewed school influences on cognitive development and concluded that what is needed for optimal cognitive development is a combination of active learning experience that promote cognitive competence together with social context in which the styles of interaction and relationships promote self confidence and an active interest in seeking to learn independently of formal instruction.

Minton and Schneider (1980) found difference between males and females on specific cognitive, perceptual and motor abilities. Females tended to be superior to males in verbal fluency, reading, comprehension, finger dexterity and clerical skills. Males tended to surpass females in mathematical reasoning, visual-spatial ability and speed and co-ordination of large body movements.
Wattanwaha and Clements (1982) studied 1201 male and 1145 female 7th - 9th graders for their spatial tasks. Analysis revealed that at each grade level, males significantly outnumbered females on 25 of 72 occasions and on no occasions did females significantly outperformed males. Sandu (1984) studied 505 male and 481 female children in the age level 12-15 years. The results indicated that boys performed better than the girls and all performances improved at each successive age level except 15 years. A study of differential intellectual functioning of 491 male and 508 female 7-18 year olds revealed that in terms of the coefficients of congruence of the principal axes, no dependence on sex was found (Lugomer and Zarevski, 1985).

H. LAW AND POLICY

There are several constitutional and statutory commitments to the abolition of child labour. The Indian Constitution incorporates several features in its provision for labour legislation. Article 24 of the Constitution stated that "No child shall be employed to work in any factory or mine or engaged in any other hazardous occupation". And article 15 also allows the Government to make special provisions to protect women and children.

The Directive Principles for State Policy Article 39 states that - 'the tender age of children should not be abused and citizens should not be forced by economic necessity to enter avocations unsuited to their age and strength. The policy
also directs that children be given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth be protected against exploitation, moral and material abandonment'. While Article 45 directs the state to ensure compulsory education for children below 14 years of age, Article 47 requires the state to raise the level of nutrition and standard of living of the people.

There are several Acts passed to curtail child labour. The five Acts concerning child labour in industries are the Children (Pledging of Labour) Act, 1933; The Employment of Children Act, 1938; The Apprentices Act, 1961; The Factories Act, 1948 and The Minimum Wages Act, 1948.

The Children (Pledging of Labour) Act, 1933 prohibits making agreements to pledge the labour of children below 15 years of age and the employment of children whose labour has been pledged under such an agreement. Such employment carries penalty of maximum fine of Rs. 200/-.

The Employment of Children Act, 1938 regulates the employment of children in certain industrial jobs. For contravention of provisions of this Act, punishment prescribed is simple imprisonment extendable to one month or fine upto Rs. 500/- or both.

The Minimum Wages Act, 1948 provides for the fixation of minimum wage rates for specific age groups and apprentices. It prohibits employment of children in Mines.
The Factories Act, 1948 which applies to establishment, with more than ten workers with power, or twenty or more workers without power. It specifies need for fitness certificate and that working hours should be 5 hours within a shift, with half an hour rest interval for children below 14 years. It stresses that no overtime and night work to be assigned to them. The Act lays down penalty for using false certificate of fitness or a certificate granted to another person and imposes a penalty of fine upto Rs. 50/- on a parent or guardian for permitting double employment of a child.

The Apprentices Act, 1961 provides for the regulation and control of training of apprentice in trades and for matters connected therewith. It restricts engaging persons below 14 years as an apprentice or to undergo apprenticeship training in any designated trade. In spite of these legal and constitutional provisions, child labour is widely prevalent in many industries.

Keeping in view the fact that immediate ban on child labour is not feasible, Government of India adopted The Child Labour (Prohibition and Regulation) Act, 1986. This prohibits employment of children in railway premises and port limits. The Act prohibits child's employment in Beedi making, carpet weaving, cement manufacturing, cloth printing, dyeing and weaving, manufacturing of matches, explosives and fire works, mica cutting and splitting, shellac and soap manufacture, tanning,
wool cleaning and building construction. However, it does not apply to a workshop wherein any process mentioned above is carried on by the occupier with the aid of his family. In order to safeguard children against exploitation, the Act specifies hours and periods of work, maintenance of record/register by the employer. On violation of the Act, individual shall be punishable with imprisonment for not less than three months, which may be extended to one year or fine which shall not be less than Rs. 10,000 which may extend to Rs. 20,000 or both.

As for the efforts made by the government of India towards the welfare of child workers much could be said. In 1983/84 the Ministry of Labour in collaboration with the ILO and UNICEF set up various projects in Sivakasi such as midday meals and pump sets for water. Central team from the Labour Ministry, Delhi visited Sivakasi in 1985, they found the projects not successful as there was no legal provision to force the employer to co-operate with these schemes and enable the children to benefit from them. Any pressure on the employer resulted in the child losing his job (Reddy, 1986).

The Ministry of Labour launched Rs. 13.89 crore National Child Labour Project with objective to raise the level of family income; give non-formal education; provide better health care to child workers; improve condition of work and provide one meal a day (The Hindu, 1986).
The Government of India (1987) announced three point national policy on child labour to prevent exploitation of children and rehabilitate them after withdrawal from prohibited employment. The three points are - legal action plan, focussing of general welfare and development programme on child labour and their families.

A National Child Labour Programme (NCLP) was proposed to be launched in ten selected areas they are Match Industries in Sivakasi, Tamil Nadu; Carpet industry in Mirzaput-Bhadohi, U.P. and Jammu & Kashmir; Slate industry in Markapur, A.P. and Mandsaur in M.P.; Glass industry in Ferozabad, U.P.; Brass ware industry in Moradabad, U.P.; Diamond polishing industry in Surat, Gujarat and precious stone polishing industry in Jaipur, Rajasthan (Indian Express, 1987). Out of these ten areas, the first project has been taken up in Sivakasi for which the Government has released about Rs. 5.98 lakhs grant-in-aid. Long term objectives of this project are to eliminate child labour from match industries and protect children from exploitation. Short term objectives are to raise the family income level of the child workers by covering the families under poverty eradication programme; provide nonformal education; provide better health care to the child workers; improve the nutritional level by providing one meal a day and raising the general awareness and social consciousness of the people of that area (The Hindu, 1988).
A 50 per cent surcharge on match industry to raise funds for an integrated welfare programme for child labour has been mooted. The amount would be half a paisa more per box. But the revenue thus raked in would be huge and would be exclusively used for programmes meant for the removal of poverty of child labour (Indian Express, 1986).