LEARNING DISABILITY IN BOYS OF 10-12 YEARS AGE GROUP

By

Nigam Rani

2008HS82M

Thesis submitted to CCS Haryana Agricultural University in partial fulfillment of the requirements for the degree of:

MASTER OF SCIENCE

IN

HUMAN DEVELOPMENT & FAMILY STUDIES

Department of Human Development & Family Studies
I.C. College of Home Science
CCS Haryana Agricultural University
Hisar – 125004

2011

CERTIFICATE – I

This is to certify that this thesis entitled, **"Learning Disability in Boys of 10-12 Years age group",** submitted for the degree of **Master of Science,** in the subject of **Human Development and Family Studies** to the CCS Haryana Agricultural University, is a bonafide research work carried out by **Ms. Nigam Rani** under my supervision and that no part of this dissertation has been submitted for any other degree.

The assistance and help received during the course of investigation have been fully acknowledged.

Dr. (Mrs.) Sudha Chhikara
Major Advisor
Professor
Deptt. of Human Development & Family Studies
CCS HAU, Hisar - 125004

CERTIFICATE – II

This is to certify that this thesis entitled**, ñLearning Disability in Boys of 10-12 Years age group"**, submitted by **Ms. Nigam Rani** to the CCS Haryana Agricultural University in partial fulfillment of the requirements for the degree of **Master of Science,** in the subject of **Human Development and Family Studies,** has been approved by the Studentôs Advisory Committee after an oral examination on the same.

MAJOR ADVISOR **HEAD OF THE DEPARTMENT**

DEAN, POSTGRADUATE STUDIES

CERTIFICATE – III

FORMATE FOR P.G. THESIS

ñIt is certified that the thesis submitted by Ms. Nigam Rani Adm. No. 2008HS82M, M.Sc. student of this department has been checked and found as per specification of the format circulated by the Dean PGS vide his Memo No. PGS/A-1/09/6926 dated 26.8.09.

MAJOR ADVISOR

PROFESSOR AND HEAD

UNDERTAKING OF THE COPY RIGHT

ñI **Nigam Rani,** Adm. No. **2008HS82M** undertake that I give copy right to the CCS HAU, Hisar of my thesis entitled **"Learning Disability in Boys of 10-12 years age group".**

I also undertake that, patent, if any, arising out of the research work conducted during the program shall be filed by me only with due permission of the competent authority of CCSHAU, Hisar.

Signature of student

(Nigam Rani)

ACKNOWLEDGEMENT

Gratitude cannot be seen or expressed; it can be only be felt in heart and is beyond description. Although thanks are poor expression of deep debt of gratitude one feels, yet there is no better way to express it. I am whole heartedly indebt to my esteemed guide, Dr. Sudha Chhikara professor, department of Human Development and Family Studies and, who went out the way to act as catalyst for preparation of this manuscript. It was her kind cooperation, constructive and pertinent suggestions and friendly behaviour which acted as motivation during the entire work. I found myself in the position to complete my heartily deserved dissertation work.

No less important were the suggestions and efforts of members of my advisory committee, Dr. Sheela Sangwan, professor, department of Human Development and Family Studies; Dr.Nishi Sethi, professor, department Home Science Extension Education; Dr. M. S.Yadav, prof., department of LPM and Dr. Veena Manocha, Associate prof., department of Mathematics and Statistics. I am thankful of teaching and non teaching staff of the Human Development and Families Studies for their cooperation and help rendered throughout the study.I am also indebted the principals of the schools and teachers especially Mrs. Urmila Sharma and Mrs. Poonam Ahlowalia for their cooperation and constant help. Good friends are treasure of life. I would never be able to repay the kind consideration, support, affectionate help and prompt criticism from my friends Savita Rathour, Savita Singh, Ripcinder, Paramjeet, Neha and other friends.

Word can never express my gratitude for my parents (Mr.Ajay Pal Singh, Mrs.Kamlesh) and family members. It's my pleasure to thanks their tireless efforts to provide me the best in world. I fumble for words to express my appreciation of unaccountable help, in finite good swishes and affection received from my late. Grandparents Mr.Nirmal Singh and Mrs.Kamla Devi and my sweet sister Mrs.Neetu Singh. I special bit of praise is reserved for my brothers (Rahul,Mithun,Nikul,Abhishek,Shudhanshu,Amit) for their constant love, affection, co- operation and moral support throughout study. Indeed more than just the deepest essence of word to acknowledge my indebt ness to my best friend Reena Singh and her parents Mr. Vijay Pal Singh and Mrs.Urmila Singh, and her uncle Mr. Hukum Singh, for their invaluable contributions on all occasions when they were most needed.

I also express my thanks to CCS HAU, Hisar for providing me fellowship and all facilities during the study. Last, but not least, I record my sincere thanks to all those who helped me out directly and indirectly during my course of study.

Place: Hisar

Dated: December, 2011 **(Nigam Rani)**

CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER -1

INTRODUCTION

Learning disability has been by far the fastest growing, the most controversial, and often the most confusing area within special education, learning disability is real and a stumbling block for a nationôs development process. Perhaps now it is clear why learning disabilities are the most confusing area in special education. Children with learning disabilities all have uneven development of skills, but what they learn, how they learn, the people they are, and the way the learning disability affects non-academic areas of life such as friendships, job and success can be very different.

Learning disability describes specific kinds of learning problems. Learning disability can cause a person to have trouble learning and using certain skills. The skills most often affected are reading, writing, listening, speaking, reasoning, and doing math. Learning disabilities vary from person to person. One person with Learning disability may not have the same kind of learning problems as another person with Learning disability. One person may have trouble with reading and writing. Another person with Learning disability may have problems in understanding math. Still another person may have trouble in each of these areas, as well as with understanding what people are saying (National Dissemination Center for Children and Youth with Disabilities [NICHCY], 2004).

Children with special learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language. These may be manifested in disorders of listening, thinking, talking, reading, reading, writing, spelling, or arithmetic.

A learning disability refers to retardation, disorder or delayed development in one or more of the processes of speech, language, reading, spelling, writing or arithmetic resulting from a possible cerebral dysfunction and/or emotional or behavioral disturbance and not from mental retardation, sensory deprivation, or cultural or instructional factors. The term ñspecific learning disabilityò means a disorder in one or more of the basic psychological processes involved in understanding and using language, spoken and written, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have Learning Disabilities that are primarily the result of visual, hearing, of motor handicaps, or mental retardations, or emotional disturbance, or of environmental, cultural or economic disadvantage. Individuals with Disabilities Educations ACT (IDEA) (1990).

Learning disability is a generic term that refers to a heterogeneous group of disorders, manifested by significant difficulties in the acquisition and use of listening, speaking, reading,

writing, reasoning or numerical ability. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction and may occur concomitantly with other handicapping conditions (eg. sensory impairment, mental retardation, serious emotional disturbances) or with extrinsic influences (eg. Cultural differences and insufficient or inappropriate instruction etc.) but they are not result of these conditions or influences. Although there is no universally accepted definition of learning disability but its most common characteristics is specific and significant discrepancy between ability and achievement in at least one area of academic functioning. This disability is due to the deficit in information processing.

Learning disabilities remains ñone of the least understood and most debated disabling conditions that affect children.ò (Lyon, 1996). Learning disabilities is an unusual discipline as it contains two contrasting aspects: one, intellectual and other practical (Wong 1991).

ñThe term ólearning disabilityô is used to describe a specific group of children, adolescents and adults who have problems in leaning in the academic side. These problems are generally in the areas of reading, writing, spellings and mathematicsò. Parents and teachers usually discover the problem when the child fails to cope with school work (Nakara, 1997).

The term learning disability which is the concept that all individuals have variations in learning abilities in various areas was proposed by Levine (2003) to describe a broad group of children who are struggling to learn and failing in school. Arguing against the use of labels, Levine contends that we should focus on determining where the student is experiencing a breakdown in learning. He believes that these children have different kinds of mind and that educator and parents must understand the individual differences and needs of these children.

The National policy on Education (NPE,1986) has recommended education for children with disability as far as possible, together with others in general schools. The implication is that more and more children with disability will join general schools. The fact is that a large number of children with mild disabilities do enter the school system, but many drop out due to the lack of sensitivity to their educational needs in the system. To achieve the goal of ñeducation for allô, the school system needs to be adequately prepared and identification, diagnosis and assessment of the learning disabilities are necessary for their proper development.

Learning disabilities, in education of children with special needs may have a verity of meanings and labels depending on experience, perspective, and information about the child in question, family background and socio-economic status. This enigma remains as children exhibiting learning disabilities may manifest a wide variety of social and educational problems. Children who have difficulties in school are neglected and ignored in the current school system. When the problem becomes so acute as to interfere with the learning process

and affects the child performance in reading, writing, arithmetic and other areas, it is called a learning disability. There are many types of learning disability and there is a great deal of variation with in individuals. Symptoms and behaviors vary a great deal and this further complicates this issue. A child can be excellent in mathematics and yet may do very poorly in reading and writing. Another child may find it very difficult to write sentences in English but have good verbal skills. Even within subject areas, there may be a great deal of variation. Johnson and Myklebust (1967) suggest that one or two years below the level of achievement has been the most common criterion for evaluating the discrepancy. At the same time, they warn that when the discrepancy occurs at the age of three or four, it is more serious than when it occurs at sixteen years of age.

The term learning disability is used to describe the seeming unexplained difficulty a person of at least average intelligence has in acquiring basic academic skillsò. These skills are essential for success at school and at workplace, and for coping with life in general. Learning disability is not a single disorder. It is a term that refers to a group of disorders in listening, speaking, reading, writing, and mathematics. The other features of learning disability are: (a) a distinct gap between the level of achievement that is expected and what is actually being achieved (b) difficulties that can become apparent in different ways with different people (c) difficulties with socio-emotional skills and behavior.

The term learning disabilities refers to a neurobiological disorder in one or more of the basic processes involved in understanding spoken or written language. This brain variance may influence an individualôs ability to speak, listen, read, write, spell, reason, organize information, or do mathematical calculations. If provided with the right support and intervention, a child with learning disabilities can help the child achieve succeed in school and teachers can help the child achieve success by both fostering the childôs strengths and knowing the childôs weakness. Learning Disabilities are no longer thought to be school specific or to be the exclusive province of elementary school children.(Katz et al.,2001)

Learning disabilities can affect a person's ability in the areas of listening, speaking, reading writing and mathematics and is often first suspected when there is a clear and unexplained gap between an individual's level of expected and actual levels of achievement. Learning disabilities also can encompass problems in the area of social-emotional skills and behaviour, and some individuals with learning disabilities struggle with peer relationships and social interactions in addition to academic challenges.

Environmental factors are conditions in the home, community and school that adversely affect the child's normal development socially, psychologically, and academically. These include traumatic experiences, family pressures, instructional inadequacies, and lack of school experiences. Although these conditions affect academic progress, a child is not considered learning disabled unless the environmental conditions have contributed to deficits

in attention, memory and other psychological prose.

Significance of the study: This study will be useful for parents and teachers of learning disabled boys in early identification and in behaviour modification of their boys. Ultimately this may lead in enhancing self- esteem, adjustment in the family and society. This study will be of most importance in future researches.

Study objectives are discussed in terms of their implications for learning disabled boys. Keeping in view the importance of all these aspects and significance of the study, the present study was undertaken with the following specific objectives:

1. To assess rural and urban boys with learning disabilities.
2. To delineate the human ecological factors related to learning disabilities.
3. To provide coping suggestions to the parents and boys with learning disabilities.

CHAPTER-II

REVIEW OF LITERATURE

A comprehensive review of past studies is necessary in any research endeavor. Literature of review is helpful because not only it help researcher to glean the ideas of otherôs interest in a particular research question, but also help them to see the results of other studies of the question have been. A review of related studies implies locating, reading and evaluating reports of research as well as reports of observation and opinion that are related to the individualôs planned research project.

An attempt has been made here to present a brief resume of the available literature on the issue relevant to the present study under the following sub heads:

2.1 Learning disability among children

2.2 Human ecological factors related to learning disabilities

2.3 Coping suggestions

2.1 Learning disability among children

Vogel (1990) gender research reported that there are as many girls with learning disabilities as boys, but they are not being identified. Boys tend to exhibit more physical aggression and loss of control; however they also exhibit visual-motor abilities, spelling ability, and written language mechanical aptitude. Girls with learning disabilities tend to have more cognitive, language, and social problem and to have severe academic achievement deficits in reading and math. Girls tend to be more verbal and display less physical aggression.

Roberta *et al.* (1999) the research predict success in individual with learning disabilities. Data were gathered through case records, public records, current testing in depth interviews. Changes in independent variables and dependent variables across data points are described. The composite score on the six success attributes best predicted success at year 20, Explaining 49% to 75% of variance, with either IQ or achievement making a minor contribution (0-5%), depending on the outcome measure employed. This research focuses on the quantitative results of the study.

Balasubrahmanyam (2001) has speculated that the incidence of language disability would be less in India as those literate in the major Indian scripts received intensive phonic training and the Indian methods of writing (orthographies) were transparent.

Kenneth *et al.* (2002) reveals that children with learning disabilities grow up, and although some find the road to successful, satisfying and rewarding lives, others continue to struggle and ñfailò into and through adulthood. Research has indicated that successful individuals with learning disability possess a set of ñsuccess attributes (personal characteristics, behaviors attitudes and conditions that lead them to positive like outcomes).

This study presents a conceptual framework for fostering success attributes in students with learning disabilities and provides suggestions for classroom activities.

Late childhood tend to be overly sensitive, some emotional, social and self-concept problems often accompany a learning disability at this age. Most secondary schools have programs for this age group with learning disabilities. About 60% of all children with learning disabilities are in the 12-17 years of age group (U.S. Department of education, 2002).

Garderen and Montague (2002) investigated studentsô use of visual imagery while solving mathematical problems. Students with learning disabilities (LD), average achievers, and gifted students in sixth grade (N=65) participated in this study. Students were assessed on measures of mathematical problem solving and visual spatial representation. Results indicated that gifted students used significantly more visual spatial representations than the other two groups. Students with LD used significantly more pictorial representations than their peers. Successful mathematical problem solving was positively correlated with use of schematic representations; converselyô negatively correlated with use of pictorial representations.

Sheri *et al.* (2004) studied that increasingly, students with learning disabilities are being educated in the general education setting by general education teachers. This trend requires general education teachers to use instructional practices that benefit all students. Developmental learning disabilities are deviations from the normal development of psychological or linguistic functions. These disabilities often, but not always, are associated with problems in academic achievement. Some children with perceptual motor deficits cannot read; others with the same perceptual-motor difficulties do read. In some instances the association between developmental and academic difficulties reflects a lack of pre-requisite skills. For example, before children can learn to write they must develop certain skills -eye hand coordination, memo- and sequencing abilities. To learn to read, children need visual and auditory discrimination ability and memory, the ability to see relationships and to learn from the repetition, and the ability to concentrate their attention.

Zhaoping and Guoliang (2005) studied that more attentions have been paid to the issue of learning disabilities. There has been a great deal of the research findings of NLD in the concept of nonverbal learning disabilities (NLD), the diagnosis standards and screening, neuropsychology, cognition, sociality and instructional intervention. It is of great significance to note there are some existing problems to cope with, such as inconsistency of NLD definition; lack of the systemic researches on NLD; lack of effective intervention models and experimental researches.

Gretchell *et al.* (2007) conducted a study that compared the difference of children with dyslexia and without. Twenty six individuals were dyslexic and 23 individuals were not. Individuals were tested with the Test of Gross Motor Development and Movement Assessment Battery for Children. Individuals with dyslexia performed significantly lower

than the control group (individuals who arenôt dyslexic). Thus, proving the similarities of how it will be hard for someone who has LD to complete the education system.

Geary *et al.* (2007) using strict and lenient mathematics achievement cutoff scores to define a learning disability, respective groups of children who are math disabled and low achieving were identified. These groups and a group of typically achieving children were administered a battery of mathematical cognition, working memory, and speed of processing measures. The children disabled in math showed deficits across all math cognition tasks, many of which were partially or fully mediated by working memory or speed of processing. Compared with the typically achieved group, the low achieving children were less fluent in processing numerical information and knew fewer addition facts.

Ashok (2008) found that that there is no significant difference between parent child interaction and academic achievement in boys but it is significant in girls. The cause that boys are more independent compared to the girls in most of the societies. The more dependency of the girls due to social stigma and week physical condition.

2.2 Human ecological factors related to learning disabilities

An ecological perspective (Garbarino, 1990) constantly reminds us that child development results from the interplay of biology and society, from the characteristics children bring with them into the world, and the way the world treat with them, from nature and nurture. It is important to recognize that the habitat of the child at risk includes family, friends, neighborhood and schools as well as immediate forces that constitute the social geography and climate (for example laws, institutions and values),and the physical environment. The interplay of these social forces and physical settings with the individual child defines the range of issues in the forefront of an ecological perspective.

Peer tutoring also has been shown to benefit friendships, social skills, academic class work, and positive attitudes and interaction between children with disabilities and their typical peers (Warger, 1991).

Studies by Panda (1995) have shown that academic and scholastic achievements are negatively affected by social disadvantages. Scholastic achievement of disadvantaged children is lower than that of advantaged children. Study further showed that deprivation had a deleterious effect on cognitive functioning, motivational patterns, aspiration levels, and academic achievement. As far as achievement is concerned, children from socially disadvantaged backgrounds are victims of unfavorable teacher expectations.

Nitasha *et al.* (1999) conducted study on sixty children selected from five schools from Hisar city. A list of children in the age group of 6 to 8 years from three classes was obtained from the class teacher and 20 children with poor performance in each class were selected. Parents of these children were interviewed to explore the factors associated with learning disabilities. Different areas of learning disabilities; memory, perception, attention

and reading were measured with McCarthey Scales of childrenôs abilities and VMI. (Visual Motor Integration). Results revealed that majority of children had poor VMI followed by memory, reading disabilities, perceptual disabilities and short attention span. Socio economic status of the family may be associated with learning disabilities.

Sternberg (1999) has argued that early remediation can greatly reduce the number of children meeting diagnostic criteria for learning disabilities. He has also suggested that the focus on learning disabilities and the provision of accommodations in school fails to acknowledge that people have a range of strengths and weaknesses, and places undue emphasis on academic success by insisting that people should receive additional support in this arena but not in music or sports.

Although, in contrast to the statement above if learning disabled students are identified by research criteria as opposed to teachers, the ratio of boys to girls (having a learning disability) is equal. In dealing with learning disabilities no significant gender differences were found in a study of more than 400 children. Bandian found that if identified by research criteria there were no differences in gender, but if learning disabilities were identified by general education teachers and/or special education teachers, there was twice as many boys identified compared to girls. Alongside that, there was another statement said by Bandian (1999) that supported the claim stated above ñboys were twice as like[ly] to be identified by teachers as in need of a learning disability programs [sic] [compared to girls].ò

Hoen and Lundberg (2000) found that cultural, social, and educational factors are having critical importance when trying to understand why some individuals have an unsuccessful relationship with the written language. They indicate that individual biologically determined factors are also important.

Garbarino (2002) has pointed out risks to development can come both from direct threats and from the absence of normal, expectable opportunities. Besides such obvious biological risks like malnutrition or injury, there are socio-culture risks that impoverish the developing individualôs world of essential experiences and relationships and thereby threaten development. A system approach may help in understanding the complex interplay of biological, psychological, social, and cultural forces in early development risks and their amelioration.

Suresh and Sebastian (2003) have found large incidence of learning disabilities even in rural areas in Kerala, attesting to the view that learning disabilities is a widely prevalent, life span disorder. There are many associated features of learning disabilities that are specific to the Indian context. These include the fact that bilingualism and multilingualism are common, classroom conditions are far from ideal and socio-economic factors.

High risk neighborhoods and poor living conditions add to the factor of being more vulnerable to having a learning disability. A study was conducted exploring the areas of

pollution and socioeconomic factors related to having a higher risk of a learning disability. Margai and Henry (2003) used primary data and analyzed clusters of people in a distinct part of a community near a toxic waste place, living in poor neighborhoods and living in poverty. The results confirmed that a majority of the people with a learning disability came from some socio-economic indicator such as poverty, subdivided housing, and lower adult educational attainment. Individuals with a learning disability will rely more heavily on public assistance/welfare than individuals who do not because of their lack of knowledge.

To explore the influence of parental rearing patterns on learning performance in 240 students were examined by using a questionnaire. Results found that Parental emotion warmth and understanding scores of the students were significantly higher than those of the low students, while parental punishment and scores of the low students were significantly higher than those of the top students. Related analysis showed that students' learning performance had significantly negative correlation with parental punishment and severity factors. Conclusion Bad parental rearing patterns have impressive impact on students' learning performance. Appropriate interference measures should be taken according to every student's family circumstance (Junlin 2004).

Smith (2006) studied that children and adolescents with learning disabilities have high rates of mental health problems and behavioural difficulties. Comorbid disorders such as epilepsy, autism and attention ï deficit hyperactivity disorder are common. Psychiatric services provided for these young people and their families. The children suffer as a result and may have to move away from home unnecessarily, at enormous emotional and financial cost. Education and social services assist these complex children and give them to best chance to fulfill their potential.

Michal Al-Yagon (2007) examined the role of maternal personal resources (mother's attachment style, coping strategies, and affect) in moderating the effects of learning disabilities (LD) on children's socio-emotional and behavioral adjustment (self-rated sense of coherence, loneliness, and hope; and mother-rated child behavior checklist measures), as well as on their secure attachment among school-age children with LD. The sample consisted of 110 mother-child dyads: 59 mothers and their children with LD (29 boys, 30 girls) and 51 mothers and their typically developing children (21 boys, 30 girls) from the same schools. Analyses indicated significant group differences on all children's measures and in several of the maternal personal resources. Mothers' low use of avoidant coping strategies and less avoidance in close relationships with significant others were found to moderate the effect of children's disabilities on children's level of loneliness, feelings of hope, and secure attachment. Results are discussed in terms of understanding these maternal personal resources' influences on socio-emotional well-being among school-age children with LD.

Fries and Decker (2008) conducted an extensive family study of reading disabilities. They administered a series of psychometric tests to 125 reading disabled children and their parents and siblings and to 125 control families. The reading disabled children obtained lower scores on some cognitive tests (spatial reasoning, symbol processing speed). These researchers found that environmental factors are conditions in the home, community and school that adversely affect the child's normal development socially, psychologically, and academically. These include traumatic experiences, family pressures, instructional inadequacies, and lack of school experiences. Although these conditions affect academic progress, a child is not considered learning disabled unless the environmental conditions have contributed to deficits in attention, memory and other psychological prose.

Huang *et al.* (2009) carried out a study to find out the influences of parenting style, mental stress and general health qualities on children's learning disabilities. From one school, 112children aged 6～13 years whose school record were below 5% of the students' average were selected as objects of our investigation. Their learning abilities were evaluated and their learning conditions, parenting style and mental stress were investigated.128 children with excellent school record in each individual class were selected as controls. Learning disabilities in children mainly presented the disorders in reading, speaking, perception, action and attention. There were differences between children with learning disability and controls in factors associated with learning conditions, parenting style and mental stress. Parents' anxiety, worry about children's study and their parenting style were significantly correlated with learning disability.

Singh and Dhanda (2009) was carried out in Haryana on 60 respondents from various schools of rural area of Hisar district, preferably a study students with low academic performance in the class were selected for the study which were of the age between the 6-8 years. The mothers of LD children were also interviewed to find out the opinion of mothers and causes responsible for disability among the children through self-structured interview schedule. It was observed that the parents who were not able to provide their children with good resources, proper care, academic and play material suffered from two or more learning disabilities. Parents also had opinion that due to lack of resources, education and enough motivation, they could not provide their children healthy environment for learning.

2.3 Coping suggestions

Fisher (1992) the value of play as therapy has been investigated in a meta-analysis of studies which showed that play therapy resulted in an increase in compliant behavior, improved language development, and a decrease of socio-emotional problems.

Simmons (1995) in his study examined the effects of explicit teaching and peer tutoring on reading achievement of learning- disabled students and non disabled, low

performing readers in academically integrated classroom. The study found that explicit-teaching students did not achieve reliably better than controls; students in the explicit teaching plus peer tutoring condition scored higher in reading fluency end comprehension than explicit teaching or control students.

Jones *et al.* (1997) reported that the curriculum, assessment, and professional teaching standards of the National Council of Teachers of Mathematics (NCTM) called for a shift in mathematics instruction for all students toward higher level mathematical reasoning and problem solving.

Brinton *et al.* (1997) suggest that interventions will not be effective until we have a deeper understanding of the interventions contributions of individuals ódatabase of experiences, social goals, and self-efficacy, and the feedback they receive from peers. Many studies have also described the problems experienced by children with language learning disabilities is lower who frequently engaged in peer interaction.

Montague *et al.* (2000) described Solve It!, a research based instructional program designed to help students having difficulty in mathematics to solve word problems. Solve It! Helped students learn to understand mathematical problems, analyze information, develop logical plans to problem solve, and evaluate solutions. According to the authors, SolveIt! Provided teachers with proven instructional techniques that helped their students acquire and effectively utilize cognitive processes and self regulation.

Nolen (2001) found that quality of classroom environment adds to the probability that children would profit from interventions that take place in the classroom. The classroom as a community of practice in regular primary education could elicit learning opportunities different from those offered in special education.

Three specific interventions strategies have been recommended capitalizing on classroom literacy activities, utilizing classroom scripts in role play, and facilitating problem solving. These are promising interventions that could be used to enhance social competence, for as Donahue has pointed out childrenôs access to the academic curriculum is dependent on their ability to engage in cooperative peer group activities (Donahue, 2002).

Fuchs and Owen, (2002) concluded that when elementary-age students with mild disabilities are taught a strategy to solve math word problems, their performance on process and product was better than that of students who received conventional instruction. In addition, their study showed that an emphasis on transfer skills and peer mediation improved student performance.

Smith and Wisniewski, (2002) investigated that the effectiveness of touch math, a series that stressed the use of manipulative. According to Smith & Wisniewski, many students with disabilities have trouble using manipulative because they forget how many they had counted by the time they are ready to transfer the answer to their worksheet. With touch math,

students did not have to leave their worksheets to record answers. Students were taught that every number, one through nine had touch points that corresponded to the digitôs value.

Stone (2002) described that instructional interventions include scaffolding (that are two notions of support and relinquishment). Scaffolded instruction supports the childôs construction of new understandings, but it does so in a manner that allows for the eventual removal of that support. Such instruction has been as a powerful force in helping children to take ownership of new knowledge and procedures.

Cass *et al.* (2003) investigated the effects of manipulative instruction on the solving of area and perimeter problems by students with learning disabilities. A multiple baseline design was employed to test the effect of manipulative instruction on the perimeter and area problem-solving performance of middle and high school students who had been diagnosed LD in the area of mathematics. Modeling prompting/guided practice, and independence practice in conjunction with manipulative training were employed to teach both perimeter and area problem skills. Analysis of data revealed that the students rapidly required the problem-solving-skills, maintained these skills over a 2-month period, and transferred these skills to a paper and pencil problem-solving format.

Meijer and Pijl (2004) studied that efforts aimed at including students with learning disabilities and slow learners can be centralized so that the board succeeds in referring no more than 4 per cent of the number of the students to the special school. A regular teacher to profit from expertise is offered through consultation by teachers from school in their c special education. Teachers are regular primary schools can then keep students in need of special support in their regular classes.

Yinghe and Xiaomei (2005) reported that strategy refers to goal-directed cognitive operations used to aid problem solving, which is responsible for the execution and control of underlying information process, and his effects on individual learning. Research on children with learning disabilities from strategic perspective was introduced. This article reviewed and analyzed the research in this field, explored some issues as followed, the relation between learning disabilities and strategy, the strategic performance of children with learning disabilities, the reason of their strategy deficiencies and found that intervention programs was helpful for these children.

Jerman and Swanson (2006) cognitive mechanisms such as memory and monitoring processes influence the learning of math.

An online course provide to pre-service teachers with learning disabilities. In light of the importance of online learning as a teaching tool, a three year study was planned to face the challenge of adapting an online course to LD students. The ceruse, ñScience Educationò, is part of the teachers training program for k-2 pre-service teachers. The online course focuses on constructing a science teaching unit and is based mainly on learning scientific concepts,

fostering lab skills through relevant experiments, and finally practicing it in school. This study carefully reports on a slight but explicitly constant edge of LD studentsô achievements in comparison to ôRegularô students studied by Shonfeld and Ronen (2006)

Yang *et al.* (2006) carried out a research to understanding the influence of non-intelligent factors on pupils, achievement score will benefit the children development. Individuals was compared with high score group (HG) whose score was above 90 score. The results indicated that the parent's education and profession have significant impact on student score. Low score group was characterized with high percentage of parents with low education, employed as physical work with low income, difficult family relationship, and students showing poor confidence, while High score group was characterized with parents receiving good training, good payment through employment as teacher, health care, and administration, close family relationship, and students with active and positive characters. The results of personality characteristics showed that low score group with scores of psychoticism, neuroticism were more higher and extrovision and introvision, were more lower than that of high score group. Therefore, self-improvement of parents, creation of family harmony, and encouragement for positive characters will contribute to the healthy development of children.

Montague (2007) suggested that students with LD are extremely poor at self regulation. She argued that self regulation must be explicitly taught to these students. This helps them monitor and control their cognitive abilities as they learn challenging tasks such as problem solving.

The effectiveness of instruction focused on teaching students with learning disabilities (LD) to solve 1- and 2-step word problems of varying types. During the treatment, students received instruction in diagram generation and a strategy that incorporates diagrams as a part of the procedure to solve word problems. The results indicated that all students improved in the number of diagrams they used and in their ability to generate diagrams. The word problem solving performance increased. Moreover, the students generated and used diagrams to solve other types of problems. Students were very satisfied with the instruction and would continue to use the diagrams and the strategy to solve word problems in other classroom settings investigated by Garderen (2007).

Song *et al.* (2009) investigate the factors which might influence children's learning ability and provide data for preventing difficulties in learning. Children 6-9 years of age with learning difficulties were tested. Boys were found significantly more learning disabled than girls. Most of their parents had received high school education, and the percentage of single-parent families was 18%.Children with IQ level in the low and high Limits were significantly more than those with middle and high IQ Level. The outward behavior of girls in low-grade was significantly higher than girls in high-grade primary school. The children who had lower adaptability quotient than normal people and lived with grand-parents in joint families were

found significantly less learning disabled than the ones in single-parent families and nuclear families. Results found that children who have learning difficulties generally have low IQ or are at the low limit. The children in single-parents families have many behavioral problems, while children in joint families tend to have poor adaptability.

Magara (2009) has viewed that learning together by parent and child attending church services, consulting books and reading, planning, doing community participation, family visits and homework together, has contributed in coping with learning disability.

Lyons *et al.* (2010) stated that children with reading disabilities are due to linguistic and cultural background and limited exposure to the language. Early identification of young childrenôs learning problem and timely intervention are very much essential to minimize the prevalence of learning disabilities. Young children can be prepared systematically from the early age to make the link from spoken to written language. This preparation may follow the form of games, songs, dances and other playful activities to make learning fun.

Methods of learning, the condition of mental health and the quality of life were measured by Wang *et al.* (2010) in four groups. He found that significant difference for learning, anxiety, loneliness, self-accusation, hypersensitivity and the status of mental health. The average scores appeared to be as follows: children with learning disability, children with average school achievement, and children with excellent school achievement. After Psychological counseling, the total scores in learning, loneliness, self-accusation tendency, hypersensitivity tendency and mental health status for the children with learning disability were found remarkably reduced. The scores in the relationship of child and parents, the relationship of companions, the relationship of teacher and student, living environment, activity opportunity, social psychological status, social environment status and quality of life were found remarkably increased. Remarkable difference was found in the scores after psychological counseling. There are certain mental problems among children with learning disability, psychological counseling is effective in improving their mental health condition and quality of life.

CHAPTER-III

MATERIALS AND METHODS

Research is common parlance refers to a search for knowledge. It is scientific and systematic search for pertinent information on a specific topic. The way systematically solves the research problem lies in the research methodology. It represents the logic behind the methods used by researcher in the context of research study and explains the relevance of a particular method or technique adopted for the research purpose.

This chapter encompasses the methods, techniques and various tools used for the present study. The certain methodological steps were adopted to achieve the three specific objectives of this investigation. The chapter has been divided into two sections:

Section I: To asses the learning disability among boys of 10-12 years age group.

Section II: To delineate various human ecological factors related to learning disability.

Various methodological steps undertaken to achieve these objectives are as follow:

3.1 Locale of the study

3.2 Sampling procedure

3.3 Variables and their measurements

3.4 Tools used for data collection

3.5 Data collection

3.6 Statistical analysis

3.1 Locale of the Study

As per the objectives of the study, Haryana state was selected purposively as the locale for the present investigation because the researcher is student of CCS Haryana Agricultural University, Hisar.

3.2 Sampling Procedure

Multistage sampling procedure was followed to have the representative sample of the population. It consisted of the following sub-heads:

3.2.1 Selection of district

District Hisar of Haryana state was taken purposively. The purpose of selection was easy accessibility and approachability. Block-I of Hisar district was selected randomly.

3.2.2 Selection of area

To have rural sample villages namely Kaimari, Mangali, Harikoat, Daya and Singran from the selected block were taken randomly. To have urban sample Hisar city was taken purposively

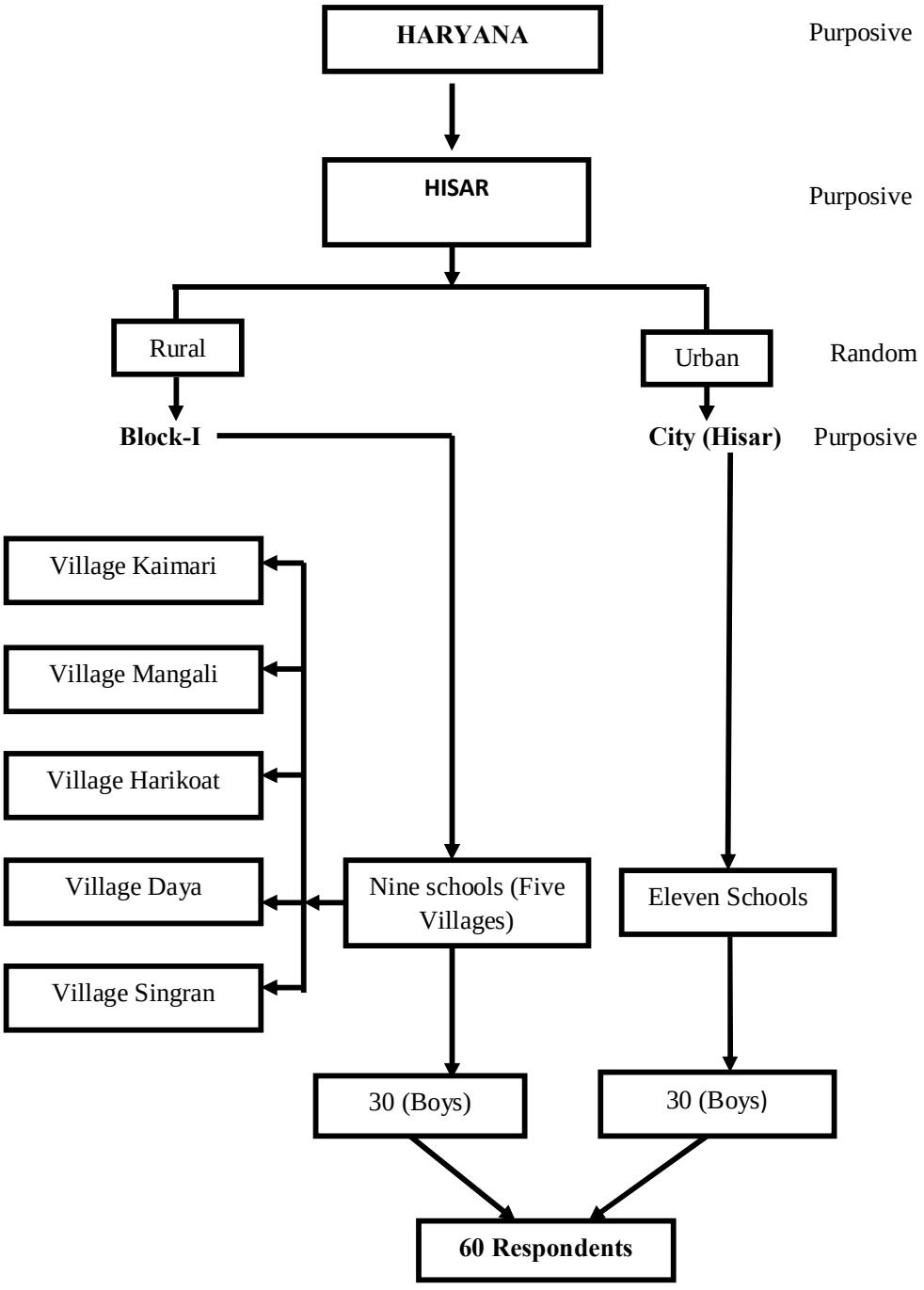

Fig. 3.1 sampling procedure for sample selection

Selection of schools

From the selected villages and city, schools were identified purposively to meet the sample size. Criterion for school selection was the age of the boys. For selecting rural sample, nine schools were taken from the cluster of villages purposively to meet the sample size. For urban sample, eleven schools were selected purposively from the selected city Hisar.

3.2.3 Selection of respondents

A sample of 60 learning disabled boys between 10 -12 years of age was drawn from the selected schools of Hisar city and block-I of Hisar district. The major criterion for the selection of respondents was age. The final sample is consisted of 60 boys, 30 from rural and 30 from urban, in 10-12 years age group.

3.3 Variables and their Measurements

The study consisted of two types of variables. These were dependent and independent variables. The measurement of variables is depicted below.

Dependent variables :

Learning disability among boys of 10-12 years of age was taken as dependent variable for the present investigation. It has the following components:

a) Language
b) Mathematics
c) Creativity

Identification of learning disability:

To identify learning disabled boys a check list was administered on all the boys 10-12 years of age for screening purpose after that Indian Adaptation of Stanford ï Binet (1971) was administered for diagnosis of learning disabled boys of 10-12 years of age.

Administration and scoring procedure of the test for identification of learning disability of boys

(a) Language

i) Vocabulary-I: A series of increasingly difficult words are presented and child is asked what each word means, for example what do you understand by orange? Each item is scored according to their performance. The activity is discontinued after six consecutive failures.

Score ï 8 plus

ii) Vocabulary-II: Procedure same as vocabulary-I.

Score ï 11 plus.

iii) Memory for stories: Show the card, say ñHere is a story about ôNaughty Kamalaõ. Listen carefully while I read it because I shall ask you question about itò. Give the child a copy of the selection and let him follow it as you read it aloud.

Score ï 5 plus.

iv) Verbal absurdities-I: Read each statement and, after each one, ask, ñWhat is foolish about thatò? The response is frequently ambiguous without further explanation. It if is not clean whether the subject sees the absurdity E must ask, ñWhy is that foolish?ò

Score ï 3 plus.

v) Verbal absurdities-II: procedure same as verbal absurdities-I.

Score ï 3 plus.

vi) Similarities and differences: Say. óIô am going to name two things and I want you to tell me how they are alike and how they are different.

(a) Base ball and orange (c) Ocean and Silver

(b) Airplane and kite (d) Penny and quarter

Score ï 3 plus

vii) Word naming: Say, ñNow I want to see how many different words you name is one minute. Just any word will do, like ócloudsô, ódogô, óchairô, óhappyô. If student given sentences or counts, stop him, saying counting (or sentences) not allowed ou must name separate words. Go ahead as fast as you can.

Score ï 28 words is one minute. Score ï 1 plus.

b) Mathematics

i) Making change: Ask, ñIf I were to buy four centsô worth of candy and should give the storekeeper ten cents, how much money would I get back?ò

Score ï 2 plus

ii) Repeating 4 digits reversed: I am going to say some numbers, and I want you to say them backwards:

(a) 8-5-2-6 (b) 4-9-3-7 (c) 3-6-2-9

Score ï 1 plus. The series must be repeated backwards in correct order without error after a single reading.

iii) Block counting: Show the card and, painting to the first illustration, ask, ñHow many block and there here?ò Then point to the second pile of blocks and ask, ñAnd here there are how many and point to the first square and ask, ñHow many here ?ò For the second square ask, ñAnd hereò. Record the count for each square in order from studentôs left to his right. Do not allow student to point to each block with a pencil while counting.

Key

6	9	6	6	5	12	3
4	10	11	8	9	11	10

Score ï 8 plus

iv) Comprehension: A series of questions is asked to the child and give score depending upon the response. The activity is discontinued after 4 consecutive failures.

Score ï 4 plus

viii) Naming the days of the week : Say, ñName the days of the week for meò. If student fails to comprehend the task and being to name the various holidays or the like, say ñNo, that is not what I mean. I want you to name the days of the weekò. If student names them all in correct order, give three cheeks of asking ñwhat day comes before é ..?ò

(a) Tuesday (b) Thursday (c) Friday

Score : All must be named in correct order 2 of 3 cheeks correct 2 plus.

ix) Abstract word-I : Say ñwhat do we mean by é .?ò Or ñwhat is é ..?ò

(a) Pity (b) Curiosity (C) Grief (d) Surprise

Score ï 2 plus

x) Finding reasons-I : Say : (a) ñGive two reasons why children should not be too noisy in schoolò. (b) Give two reasons why most people would rather have an automobile than a bicycle.

If student gives only one reason and stops, do not try to elicit the second by further questioning.

Score ï 2 plus

xi) Repeating 6 digits : ñI am to say some number and when I am through I want to say them just the way I do. Listen carefully and get just right. Pronounce the digits distinctly and with perfectly uniform emphasis at the rat of one per second.

(a) 4-7-3-8-5-9 (b) 5-2-9-7-4-6 (c) 7-2-8-3-9-4

Score ï 1 plus. The series must be repeated in correct order without error after a single rading.

c) Creativity

i) Paper cutting : ñWatch carefully what I do. See, I fold the paper this way ! faiding it over once through the middle, making a rectangle. Now I will cut out the piece right hereò. Draw lines to show where the paper would be greased and show how and where it would be cutò. Repeat the instructions as before.

Score ï 1 plus.

ii) Memory for designs : Card with two designs. With the card in you hand, but before showing the designs say. ñthis card has two drawings on it. I am going to show them to you for ten seconds, then I will take the card away and let you draw from memory what you have seen. Have student reproduce the designs immediately, and not which is the top of was drawing.

Score ï 1 plus.

iii) Drawing

Score ï 5 plus.

Independent variables

Various crucial factors of the human ecological environment influencing the learning disability of boys were studied as independent variables. The factors have been classified into

five groups operating at five levels of human ecological environment of boys, which are as below:

1. Microsystem
2. Mesosystem
3. Exosystem
4. Macrosystem
5. Chronosystem

VARIABLES AND THEIR MEASUREMENTS

Variables	Measuring tool
Dependent variables	
1. Learning disability	
(i) Language	Indian adaptation of the Stanford
(ii) Mathematics	Binet Intelligence Scale by
(iii) Creativity	Kulshreshtha (1971)
Independent variables	
1. Microsystem variables	
(i) Age	
(ii) Type of family	
(iii) Family size	
(iv) Number of siblings	
(v) Education of parents	Self developed
(vi) Family income	interview schedule
(vii) Surroundings of residence	
(viii) Stay of grandparents	
(ix) Interactions with grandparents	
(x) School environment	
(xi) Relationships with teachers	
(xii) Relationships with peers	
2. Mesosystem variables	
(i) Motherôs occupation	
(ii) Fatherôs occupation	Self developed
(iii) Visit to and by Relatives /family friends	interview schedule

3.	**Exosystem variables**	
i)	Neighborhood status	Self developed
ii)	Relationship with neighborsô	interview schedule
iii)	Interaction with neighbors	
4.	**Macrosystem variables**	
(i)	Caste	
(ii)	Discipline by parents	
(iii)	Exposure to mass media	Self developed
(iv)	Values, laws, policies And programs of govt.	interview schedule
5.	**Chronosystem variables**	
	Any incidence happened in Microsystem, Mesosystem, Macrosystem or Exosystem that affected personôs life.	Self developed interview schedule

Microsystem variables

It is defined as the immediate social settings in which the child lives. Childôs family environment and neighborhood environment comprise the immediate social settings of the child. The following factors were studied under Micro system and were operationalized as follows:

1. **Age** refers to the number of years completed by the respondent at the time of testing. It was categorized as 10-11 years and 11-12 years.
2. **Type of family** means whether it is nuclear, joint or extended family. A nuclear family is comprised of members of only one couple and their offspring. A joint family refers to one, which is constituted by two or more brother families. An extended family consists of dependents, other than offspringôs together.
3. **Family size** is defined as the total number of members in the respondentôs family and was categorized as small (1-4 members), medium (4-6) and large (more than 6 members).
4. **Number of siblings** refers to the number of brothers and sisters, respondent had, both elder and younger.
5. **Education of the parents** was operationalized as the number of years of formal education completed by the respondentôs parents.
6. **Family income** refers to the monthly earnings of the family from all the sources.
7. **Surroundings of the residence** was operationalized as the quality of development in the nearby area.

8. **Grandparents' stay** means whether respondent interacts with them in his/her own family/house.
9. **Interactions with grandparents** means amount of time spent with the grandparents and the activities done together.
10. **School environment** means the quality of physical and educational standards provided by the school.
11. **Relationship with teachers** means the type of interactions shared by teachers and students.
12. **Relationship with peers** was operationalized as the quality of interactions and relationship shared by the respondent with the peer group.

Mesosystem variables

It refers to the relations between Microsystem or connections between the social settings of the child. The variables studied under Mesosystem were as follows:

1. **Visits to and by relatives/family friends** refer to how often the child visits the relatives place and how frequently relatives visit the childôs place.
2. **Occupation of parents** was operationalized as the means of livelihood of respondentôs parents.

Exosystem variables

It refers to the contexts that influences childôs development though the child does not have an active role in those contexts. The factors comprising settings of exosystem were operationalized as follows:

1. **Neighborhood status** was operationalized as the status of the people living in the neighborhood.
2. **Relationship with neighbours** was operationalized as the quality of relations perceived by the respondentôs family and children of these families interact with each other.
3. **Interaction with neighbours** means amount of time spent by respondentôs family members with the neighbors and the activities done together.

Macrosystem variables

It refers to the attitudes and ideologies of the culture. The factors comprising settings of Macrosystem were operationalized as follows:

1. **Caste** refers to the class or distinct heredity order of society. The categories framed were:
    a) Low (Chamar, Bhangi, Doom, Khati, Dhobi, Badi)
    b) Middle (Lohar, Kumhar, Darzi, Nai, Ahir, Bania, Sunar)
    c) High (Brahmin, Rajput, Jat, Bishnoi)
2. **Discipline by parents** refers to rules and regulations adopted by the parents to ensure that children follow societal norms.

3. **Exposure to mass media** was operationalized as the projected and non-projected sources of information available to the child.
4. **Laws, policies and programs of government** were operationalized as the governmentôs efforts to support and encourage learning disabled children.

Chronosystem variables

It refers to the temporal changes in the environment, which produces new conditions that affect development of the person. These conditions can be imposed externally or arise from within the child.

1. Some special happening or incidence in life was operationalized as any happening in the Microsystem, Macrosystem, Mesosystem and Exosystem, which affected the respondentôs life and brought significant changes in personality.

3.4 Tools Used For Data Collection

Indian Adaptation of the Stanford Binet Intelligence Scale by Kulshreshtha (1971) was used for identification of the respondents (Appendix-I).

Questionnaire was developed to gather data for human ecological factors of respondents (Appendix-II).

3.5 Data Collection

For the purpose of data collection, the 10-12 years old boys in the schools were approached with the permission of their principle. To identify learning disabled boys a check list was administered on all the boys 10-12 years of age of selected schools for screening purpose after that their academic records, notebooks and sample of their performance (language, mathematics and creativity) were checked. After having exposure to their performance and records, Indian Adaptation of the Stanford Binet Intelligence Scale (1971) was administrated on these boys to asses the level of learning disability.

3. 6 STATISTICAL ANALYSIS

The collected data were analyzed by using the following statistical techniques :

Arithmetic Mean :

It was obtained by adding up all the scores and dividing their total by number of observations.

Formula : $$\overline{X} = \frac{\Sigma X}{n}$$

Where,

$\overline{X}$ = Arithmetic mean

ΣX = Sum of all variables

n = Number of items

Standard Deviation

It is the most widely used measure of dispersion of series. It is defined as the square of deviations of individual observations from their arithmetic mean. It was worked by using the following formula :

$$\sigma = \sqrt{\frac{\Sigma(X_i - \overline{X})^2}{n}}$$

Where,

$\overline{X}$ = Arithmetic mean

σ = standard deviation

X_i = i^{th} value of the variable X

n = Number of items

T-test : It was used to study the statistical difference in the means of family environment, mental health :

$$\text{άô} = \frac{\overline{X}_1 - \overline{X}_2}{SE\,(X_1 - X_2)}$$

$$SE = \sqrt{S\left[\frac{1}{N_1} + \frac{1}{N_2}\right]}$$

$$S = \sqrt{\frac{SD^2_1(N1 - 1) + SD^2_2\,(N_1 - 1)}{N_1 + N_2 - 2}}$$

$$SD_1 = \sqrt{\frac{\overline{X}_1 - X_i}{N_1 - 1}} \quad , \quad SD_2 = \sqrt{\frac{\overline{X}_2 - X_i}{N_2 - 1}}$$

Where,

SE = Standard score of difference of means

SD_1 = Standard deviation of sample 1

SD_2 = Standard deviation of sample 2

$\overline{X}_1$ = Mean of sample 1

$\overline{X}_2$ = Mean of sample 2

N_1 = Number of subjects in sample 1

N_2 = Number of subjects in sample 2

Percentage – It was calculated to find out the frequency distribution of the respondents with regard to the studied variable.

CHAPTER IV

RESULTS

The data were collected in accordance with the research methodology to achieve the specific objectives of the study. Results presented under this chapter are based on the statistical analysis of data for fulfillment of the objectives of the study and are presented in the following subsections. Four constituents of this section are.

4.1 Personal socio-economic profile of the respondents

4.2 Identification of the learning disability and comparison of rural and urban boys.

4.3 Human ecological factors affecting learning disability.

4.4 Coping suggestions for learning disabled boys and their parents.

4.1 Profile of the respondents

This part of chapter deals with the personal and socio-economic profile of respondents. In every study, it is essential to know the general background in which enquiry had been conducted. The personal and socio-economic profile of the respondents has been clearly explained to bring out their characteristics features presented in Table 4.1. The respondents included in the study were in the age range of 10-12 years, and they all were boys.

The perusal of data in the table reveals that more than half (55%) of respondents were from 10-11 years of age group, and rest 45 per cent respondents were from 11-12 years of age group. On the basis of family type results shows that more than half respondents (53.33%) belonged to nuclear families, although area wise distribution showed that most of the rural respondents (73.33%) were from joint families in contrast to 80 per cent urban respondents who belonged to nuclear families. As far as family size is concerned 45 per cent respondents were from medium sized families followed by small (43%) and large (16.66%).

Table further elucidate that more than half of the respondents (51.67%) had more than two siblings while only 48.33 per cent had one-two siblings. A (36.67%) proportion of the sample came from medium caste followed by low caste families (35%) and 28.33 per cent in high cast families.

Parental education was taken as important predictor of socio-economic status**.** Results revealed in Table 4.1 show that 48.33 per cent respondentôs mothers were educated up to graduation level while only 26.7 per cent were educated up to primary to middle level and 25 per cent of the mothers were found illiterate. Table further shows that 58.34 per cent of the fathers were educated up to graduation level, followed by28.33 per cent who were educated up to primary to middle level, while 13.33 per cent were found illiterate.

Data regarding fathers shown in table show that 26 respondents i.e. 43.33 per cent had adopted farming as a means of livelihood followed by 31.67 per cent fathers were

practicing own business. Fathers of only 25 per cent were doing jobs to earn livelihood. Results further pinpointed that 56.67 percent mothers were homemaker. Mothers of 25 percent respondents were engaged in service, while 18.33 per cent mothers were engaged in farming.

Regarding income of families 46.67 per cent families ranged between more than Rs. 5000 per month followed by 41.67 per cent families whose income ranged between Rs. 1000-5000 and 11.66 per cent families who earned below Rs. 1000 only per month.

Data further shows that more than half of the respondentôs residents (58.34%) were situated in developing area followed by underdeveloped areas (23.33%) while only 18.33 per cent of the families had developed surroundings and easy access to the developmental facilities like roads, health facilities, school and governmental organization.

When study was carried out for the people living in nearby area, it was found that 41.67 per cent respondentôs neighborhood was constituted by middle class people followed by 31.66 per cent low class and 26.66 per cent high class. Results revealed from the table indicate that 51.67 per cent respondents had adequate developmental facilities in their area, while 48.33 per cent respondents had inadequate facilities.

It was further observed that 45 percent families of the respondents had good relationship with their neighbours, whereas 33.67 per cent and 18.33 per cent respondentsô families were have not good and average relationship respectively. As far as interaction with neighbours was concerned, it was found that 41.67 per cent of the respondentsô families were having average interaction while 35 per cent having good interaction and only 23.33 per cent were having not good kind of interaction with their neighbourhood. On the basis of visits 45 per cent respondents were rarely visited by their relatives or friends, while 30 per cent had frequent visits by their relatives and 25 per cent respondents were visited occasionally by their relatives.

Data in Table further presents that 46.67 per cent parents adopted permissive type of discipline on their children and 28.33 exerted authoritative discipline followed by 25 per cent parent using authoritarian discipline. Grandparents of 51.67 per cent of the respondents live along with their grandchildren. However, 41.67 per cent respondents interact 3-6 hours per day with their grandparents as compared to 21.66 per cent who had interaction by more than 6 hours with their grandparents, while 36.67 percent respondents having no interaction with their grandparents.

Data compiled regarding relationships with friends, depicts that46.67 per cent respondents were having average relationship with their peers, followed by not good relationships (28.33%) and good relationship (25%). The data related to relationship with teachers showed equal percentage (38.33%) of respondent showed good and average relations followed by 23.33 per cent were having not good relations with their teachers.

Table 4.1: General profile of the respondents

N=60

Sr. No.	Variables	Rural F (%)	Urban F (%)	Total F (%)
1.	**Age**			
	10-11 yrs	13(43.33)	20(66.67)	33(55.00)
	>11-12 yrs	17(56.67)	10(33.33)	27(45.00)
2.	**Type of family**			
	Nuclear	8(26.67)	24(80.00)	32(53.33)
	Joint	22(73.33)	6(20.00)	28(46.67)
3.	**Family size**			
	Small	6(20.00)	20(66.68)	26(43.33)
	Medium	22(73.33)	5(16.66)	27(45.00)
	Large	2(6.67)	5(16.66)	7(11.67)
4.	**No. of siblings**			
	1-2	17(56.67)	12(40.00)	29(48.33)
	3-4	13(43.33)	18(60.00)	31(51.67)
5.	**Caste**			
	Low	14(46.68)	7(23.33)	21(35.00)
	Medium	8(26.66)	14(46.67)	22(36.67)
	High	8(26.66)	9(30.00)	17(28.33)
6.	**Mother education**			
	Illiterate	12(40.00)	3(10.00)	15(25.00)
	Primary to middle	12(40.00)	4(13.34)	16(26.67)
	High school/graduate	6(20.00)	23(76.67)	29(48.33)
7.	**Father education**			
	Illiterate	8(27.67)	0(0.00)	8(13.33)
	Primary to middle	13(43.33)	4(13.33)	17(28.33)
	High school/graduate	9(30.00)	26(86.67)	35(58.34)
8.	**Father occupation**			
	Service	3(10.00)	12(40.00)	15(25.00)
	Farming	20(66.67)	6(20.00)	26(43.33)
	Own business	7(23.33)	12(40.00)	19(31.67)
9.	**Mother Occupation**			
	Service	0(0.00)	15(50.00)	15(25.00)
	Farming	8(27.67)	3(10.00)	11(18.33)
	Homemaker	22(73.33)	12(40.00)	34(56.67)
10.	**Family income(per month)**			
	Low(1000 below)	7(23.33)	0(0.00)	7(11.66)
	Medium(1000-5000)	18(60.00)	7(23.33)	25(41.67)
	High(more than 5000)	5(16.67)	23(76.67)	28(46.67)
11.	**Residential surrounding**			
	Under developed	3(10.00)	11(36.66)	14(23.34)
	Developing	27(90.00)	8(26.68)	35(58.33)
	Fully developed	0(0.00)	11(36.66)	11(18.33)
12.	**People living nearby area**			
	Low class	9(30.00)	10(33.33)	19(31.66)
	Middle class	14(46.67)	11(36.67)	25(41.68)
	High class	7(23.33)	9(30.00)	16(26.66)

13.	**Developmental facilities in area**			
	Adequately	13(43.33)	18(60.00)	31(51.67)
	Inadequately	17(56.67)	12(40.00)	29(48.33)
14.	**Relationship with neighbours**			
	Not good	15(50.00)	7(23.33)	22(36.67)
	Average	4(13.33)	7(23.33)	11(18.33)
	Good	11(36.77)	16(53.34)	27(45.00)
15.	**Interaction with neighbours**			
	Not good	8(26.66)	6(20.00)	14(23.33)
	Average	14(46.68)	11(36.67)	25(41.67)
	Good	8(26.66)	13(43.33)	21(35.00)
16.	**Visit to and by relatives/friends**			
	Rarely	13(43.33)	14(46.67)	27(45.00)
	Occasionally	6(20.00)	9(30.00)	15(25.00)
	Frequently	11(36.67)	7(23.33)	18(30.00)
17.	**Type of discipline**			
	Authoritative	8(26.66)	9(30.00)	17(28.33)
	Permissive	15(50.00)	13(43.34)	28(46.67)
	Authoritarian	7(23.34)	8(26.66)	15(25.00)
18.	**Stay of grandparents**			
	No	14(46.67)	17(56.67)	31(48.33)
	Yes	16(53.33)	13(43.33)	29(51.67)
19.	**Time spend with grand parents**			
	More than 6 hours	8(26.67)	5(16.67)	13(21.66)
	3-6 hours	10(33.33)	15(50.00)	25(41.66)
	Nil	12(40.00)	10(33.33)	22(36.68)
20.	**Relationship with friends**			
	Not good	8(26.68)	9(30.00)	17(28.33)
	Average	11(36.66)	17(56.67)	28(46.67)
	Good	11(36.66)	4(13.33)	15(25.00)
21.	**Relationship with teachers**			
	Not good	5(16.67)	9(30.00)	14(23.34)
	Average	12(40.00)	11(36.67)	23(38.33)
	Good	13(43.33)	10(33.33)	23(38.33)
22.	**Exposure to mass media**			
	Low	12(40.00)	13(43.33)	25(41.67)
	Medium	12(40.00)	8(26.67)	20(33.33)
	High	6(20.00)	9(30.00)	15(25.00)
23.	**Any significant happening**			
	No	17(56.67)	15(50.00)	32(53.33)
	Yes	13(43.33)	15(50.00)	28(46.67)

Table further reveals exposure to mass media (both printed and non-printed) it was found that 41.67 per cent respondents had low exposure to mass media, 33.33 respondents were having medium access to media constituted per cent of the total sample whereas 25 per cent had high exposure.

Results showed that 28.67 percent respondents reported that they had incidences which affected them strongly or changed their life; however 53.33 percent respondent reported that they had not faced any situation like this.

4.2 Identification of levels of various components of learning disability

This part deals with the identification of mathematics, language and creativity aspect of learning disability.

Results shown in the Table 4.2 indicate that for two components of learning disability namely language and mathematics in the rural and urban areas, maximum number of the respondents were falling in the ôbelow averageö category. Area wise distribution also showed the same trend for language component 83.33 per cent and 76.67 per cent respondents were in below average category from rural and urban area respectively. On mathematics component majority (93.33%) of rural respondents were below average in comparison to (86.67%) urban respondents in below average category. While for creativity component, boys from both areas were very creative as majority of the boys were (80%, 73.33%) in average category.

Table 4.2: Frequency distribution of learning disability for rural and urban boys

(N=60)

Sr. No.	Components	Rural		Urban	
		Below average	Average	Below average	Average
1.	Language	25(83.33)	5(16.67)	23(76.67)	7(23.33)
2.	Mathematics	28(93.33)	2(6.67)	26(86.67)	4(13.33)
3.	Creativity	6(20.00)	24(80.00)	8(26.67)	22(73.33)

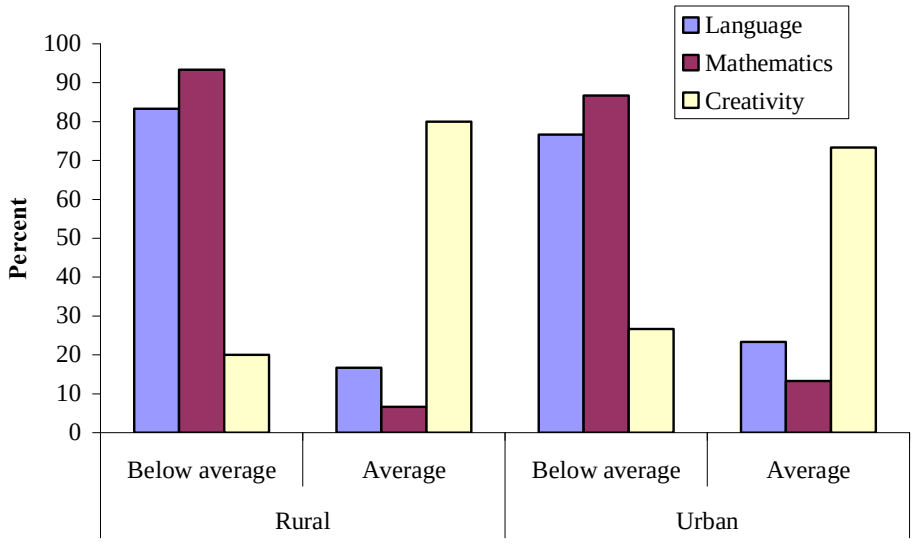

Fig. 1 : Distribution of learning disability for rural and urban boys

4.3 Comparison of rural and urban respondents for learning disability

To see the difference between rural and urban children for different components of learning disability like language, mathematics and creativity, t-test of significance was applied. Data in Table 4.3 indicate that the area wise comparative distributions of the respondents on different components of Stanford Binet Intelligence scale. There was no significant differences in all the components of learning disability i.e. language, mathematics and creativity. Thus it can be said that cultural settings i.e. rural and urban was not having any significant impact on learning disability.

The table 4.3 depicts the mean scores of respondentôs performance on learning disability. However, on the basis of mean differences urban respondents showed slightly higher values ($\overline{X}$=7.67, 2.46, and 4.38) in comparison to mean values of rural respondents ($\overline{X}$ = 6.87, 2.16 and 4.07) for language, mathematics and creativity respectively.

Table 4.3: Mean differences by cultural settings for learning disability

Sr. No	Components	Rural	Urban	t-value
		Mean ± S.D.	Mean ± S.D.	
1.	Language	6.87±3.76	7.67±3.86	0.76
2.	Mathematics	2.16±1.36	2.46±1.54	0.54
3.	Creativity	4.07±0.82	4.38±0.70	0. 59

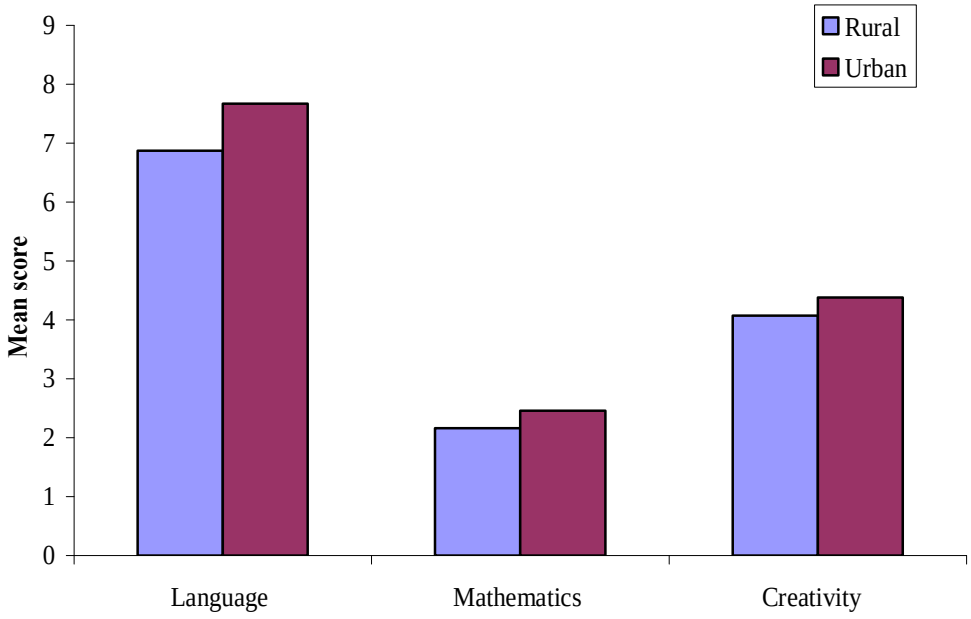

Fig. 2 : Mean differences by cultural settings for learning disability

4.3 Factors affecting the learning disability

This part of the chapter deals with the human ecological factors that influence the learning disabilities of boys. Human ecological factors were identified and studied are being presented under the following subheads.

4.3.1 Effect of Microsystem variables on learning disability

4.3.2 Effect of mesosystem variables on learning disability

4.3.3 Effect of exosystem variables on learning disability

4.3.4 Effect of macrosystem variables on learning disability

4.3.5 Effect of chronosystem variables on learning disability

To see the association between dependent and independent variables, the Chi-square (G2) test of independence was applied. But due to small sample size as 45 per cent of the cells have expected count less than 5, so the Chi-square was not valid test. Therefore, it was decided to use the descriptive statistics and the data were analyzed with the help of frequency and percentage.

4.3.1 Effects of micro system variables on learning disability

Table 4.3.1 portrays that more than half respondents were 10-11 years of age and they were falling in below average category in language (84.84%) and mathematics (75.75%). But for creativity component 63.63 per cent younger respondents were in average category. Results show that respondents which were more than eleven in age were falling in below average category in language (74.07%) and mathematics (62.96%) but for creativity component 59.25 per cent younger respondents were in average category.

The data presented in Table 4.3.1 anticipated that more than half respondents belonged to nuclear family and they were falling in below average category. For language 90.63 per cent and for mathematics 81.25 per cent, but creativity component 93.75 per cent were in average category. Many of the respondents belonged to joint families were falling in below average category in language (78.57) and mathematics (85.72) and for creativity component 75 per cent respondents were fall in average category.

As far as family size is concerned 45 per cent respondents were from medium size family were falling in below average category for language (81.48%) and mathematics (88.88%) but for creativity component 77.77 per cent were in average category. In other side 43 per cent respondents belonged to small size families were in below average category for two components of learning disability i.e. language (73.07%) and mathematics (88.46%) but on creativity component these respondents were in average (69.23%) category.

According to Table 4.3.1 more than half respondents have 1-2 siblings and they were falling in below average category for language (62.07%) mathematics (75.87%) but they were average in creativity (86.21%) component of learning disability. In contrast table shows that

4.3.1: Effects of micro system variables on learning disability

N=60

Sr. No.	Variables	Learning disabilities					
		Language		Mathematics		Creativity	
		Below average	Average	Below average	Average	Below average	Average
		F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
1.	**Age**						
	10-11	28(84.84)	5(15.16)	25(75.75)	8(24.25)	12(36.37)	21(63.63)
	>11-12	20(74.07)	7(25.93)	17(62.96)	10(37.04)	11(40.74)	16(59.26)
2.	**Type of family**						
	Nuclear	29(90.63)	3(9.67)	26(81.25)	6(18.75)	2(6.25)	30(93.75)
	Joint	22(78.57)	6(21.43)	24(85.72)	4(14.28)	7(25.00)	21(75.00)
3.	**Family size**						
	Small	19(73.07)	7(26.93)	23(88.46)	3(11.54)	8(30.76)	18(69.24)
	Medium	22(81.48)	5(18.52)	24(88.88)	3(11.12)	6(22.23)	21(77.77)
	Large	5(71.43)	2(28.57)	6(85.72)	1(14.28)	3(42. 86)	4(57.14)
4.	**No. of siblings**						
	1-2	18(62.07)	11(37.93)	22(75.87)	7(24.13)	4(13.79)	25(86.21)
	3-4	27(87.09)	4(12.91)	26(83.87)	5(16.13)	6(19.35)	25(80.65)
5.	**Education of mother**						
	Illiterate	12(80.00)	3(20.00)	15(100.00)	0(0.00)	7(46.67)	8(53.33)
	Primary to middle	11(68.75)	5(31.25)	14(87.50)	2(12.50)	4(25.00)	12(75.00)
	High school/ graduate	21(72.42)	8(27.58)	25(87.21)	4(13.79)	9(31.03)	20(68.97)
6.	**Education of father**						
	Illiterate	6(75.00)	2(25.00)	8(100.00)	0(0.00)	3(37.50)	5(62.50)
	Primary to middle	13(76.47)	4(23.53)	10(58.83)	7(41.17)	5(29.42)	12(70.58)
	High school/ graduate	33(94.28)	2(5.72)	31(88.57)	4(11.43)	7(20.00)	28(80.00)
7.	**Family income**						
	Low	7(100.00)	0(0.00)	6(85.72)	1(14.28)	2(28.57)	5(71.43)
	Medium	20(80.00)	5(20.00)	22(88.00)	3(12.00)	6(24.00)	19(76.00)
	High	22(78.57)	6(21.43)	26(92.85)	2(7.15)	5(17.85)	23(82.15)
8.	**Residential surrounding**						
	Under developed	13(92.85)	1(7.15)	12(85.72)	2(14.28)	4(28.58)	10(71.42)
	Developing	29(82.85)	6(17.15)	30(85.72)	5(14.28)	7(20.00)	28(80.00)
	Fully developed	9(81.82)	2(18.18)	10(90.91)	1(9.09)	3(27.28)	8(72.72)
9.	**Stay of grandparent**						
	No	27(87.09)	4(12.91)	29(93.55)	2(6.45)	6(19.36)	25(80.64)
	Yes	22(75.86)	7(24.14)	25(86.21)	4(13.79)	3(10.35)	26(89.65)
10.	**Time spend with grand parents**						
	More than 6 hours	8(61.54)	5(38.46)	9(69.24)	4(30.76)	3(23.07)	10(76.93)
	3-6 hours	22(88.00)	3(12.00)	21(84.00)	4(16.00)	5(20.00)	20(80.00)
	Nil	20(90.91)	2(9.09)	21(95.45)	1(4.55)	5(22.73)	17(77.27)
11.	**Relationship with friends**						
	Not good	16(94.12)	1(5.88)	15(88.24)	2(11.76)	5(29.42)	12(70.58)
	Average	22(78.57)	6(21.43)	23(82.15)	5(17.85)	7(25.00)	21(75.00)
	Good	10(66.67)	5(33.33)	12(80.00)	3(20.00)	2(13.33)	13(86.67)
12.	**Relationship with teachers**						
	Not good	13(92.85)	1(7.15)	14(100.00)	0(0.00)	4(28.57)	10(71.43)
	Average	20(86.95)	3(13.05)	19(82.61)	4(17.39)	5(21.73)	18(78.27)
	Good	18(78.27)	5(21.73)	16(69.57)	7(30.43)	4(17.39)	19(82.61)

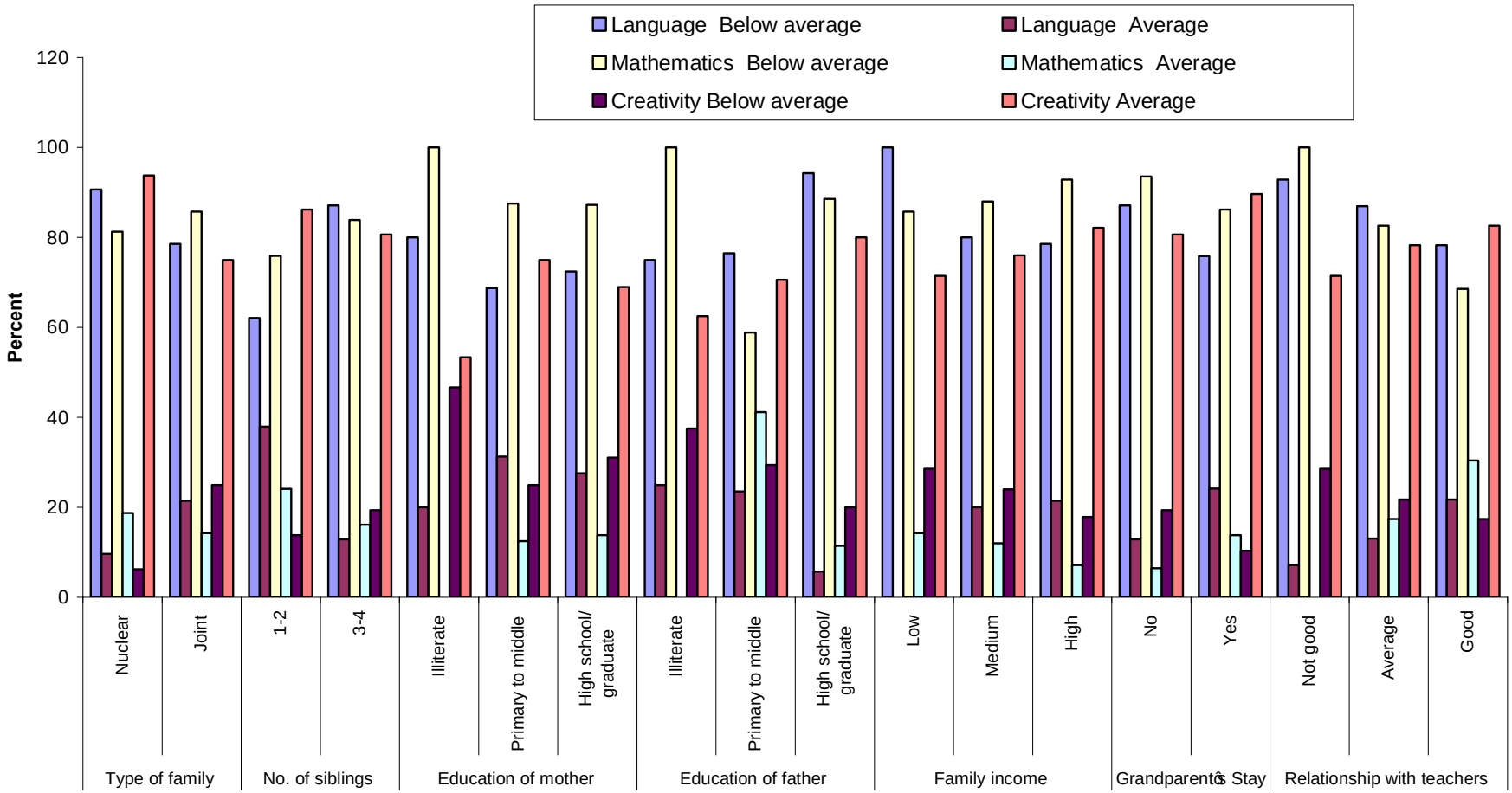

Fig. 3 : Effects of micro system variables on learning disability

48.33 per cent respondents have more than two siblings and they were falling in below average category for two components of learning disability i.e. language (62.06%), mathematics (75.86%) but they were fall in average category for creativity (86.20%) component.

Table 4.3.1 further depicts that 48.33 per cent respondentôs mothers were educated up to graduation level were falling in below average category in language (72.42%) and mathematics (87.21%) but they were average in creativity (68.96%). The same trend was observed for fatherôs education. More than half respondentôs fathers were educated up to graduation level were falling in below average category in language (94.28%)and mathematics (88.57%) but they were average in creativity (80.00%) component.

More than half of the respondents were belonged to high income group families and they were falling in below average category in both components of learning disability i.e. language (78.57%) and mathematics (92.85%) and average for creativity component (82.15%).

As far as area was concerned most of the respondents were living in developing area they were falling in below average category for language (82.85%) and mathematics (85.72%) but they were fall in average category for creativity component (80%).

It is clear from the table that the respondents whose grandparents were live with them and had good interaction with them were falling in below average category for both components of learning disability i.e. language (75.86%), mathematics (86.21s%) and in average category in creativity component (89.65%).

Results regarding relationship with peers indicated that many of the respondents have average relationship with peers and they were falling in below average category for language (78.57%) and mathematics (82.15%) and average category in creativity (75 %).

Relationship with teacher was also considered and it was observed that many of the respondents have average relationship with teacher and they were falling in below average category for language (86.95%) and mathematics (82.61%) and average category in creativity (78.27%).

4.3.2 Effects of mesosystem variables on learning disability

This part of the chapter deals with interaction between mesosystem variables and component of learning disability. Results presented in the Table 4.3.2 emphasized that most of the respondents were falling in below average category in language (79.42%) and mathematics (88.24%) and average in creativity (76.47%) whose mothers were homemaker.

The majority of the respondents were falling in below average category for language (88.47%) and mathematics (84.62%) whose fathers were engaged in farming. But they were average in creativity (69.23%).

The Table further 4.3.2 indicated that learning disability is more prevalent among those respondents who rarely visit to relatives and friends for both the aspects of learning disability i.e. language (85.18%) and mathematics (96.29%) but Creativity aspect of these children was average (70.37)

4.3.2 Effect of mesosystem variables on learning disability

Sr. No.	Variable	Learning disability					
		Language		Mathematics		Creativity	
		Below average	Average	Below average	Average	Below average	Average
		F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
1.	**Mother's occupation**						
	Service	11(73.33)	4(26.67)	10(66.67)	5(33.33)	3(20.00)	12(80.00)
	Farming	10(90.91)	1(9.09)	11(100.00)	0(0.00)	3(27.27)	8(72.73)
	Homemaker	27(79.42)	7(20.58)	30(88.24)	4(11.26)	8(23.53)	26(76.47)
2.	**Father's occupation**						
	Service	12(80.00)	3(20.00)	9(60.00)	6(40.00)	5(33.33)	10(66.67)
	Farming	23(88.47)	3(11.53)	22(84.62)	4(15.38)	8(30.77)	18(69.23)
	Business	18(94.73)	1(5.27)	16(84.22)	3(15.78)	3(15.78)	16(84.22)
3.	**Visit to and by relatives**						
	Rarely	23(85.18)	4(14.82)	26(96.29)	1(3.71)	8(29.63)	19(70.37)
	Occasionally	13(86.67)	2 (13.33)	14(93.33)	1(6.67)	5(33.33)	10(66.67)
	frequently	14(77.77)	4(22.23)	15(83.33)	3(16.67)	4(22.23)	14(77.77)

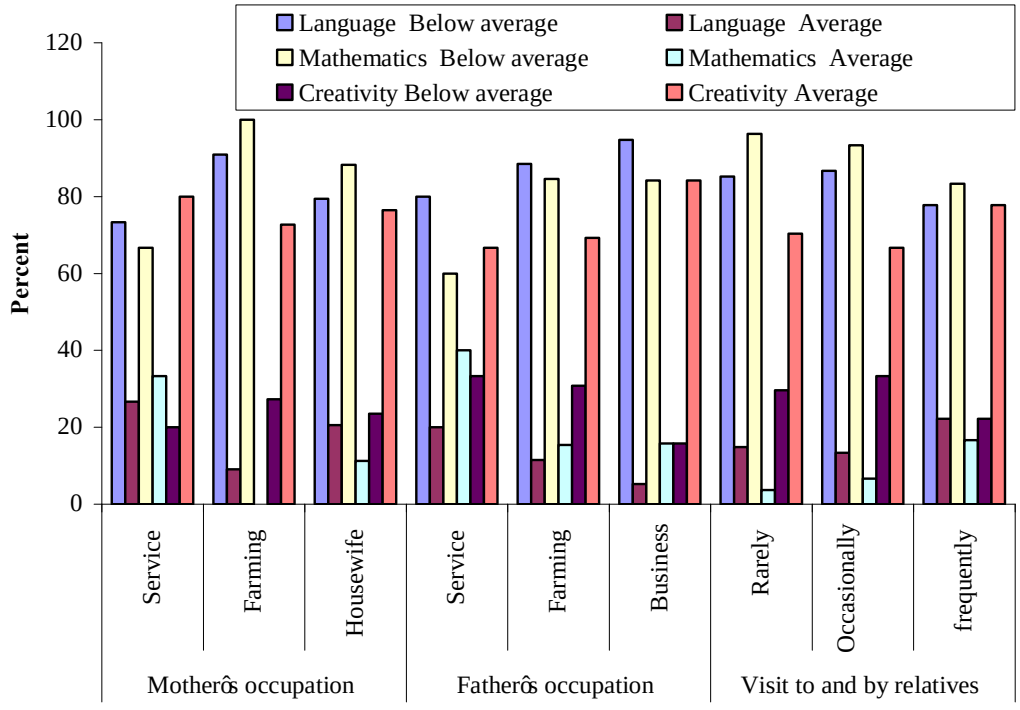

Fig. 3 : Effect of mesosystem variables on learning disability

4.3.3 Effects of exosystem variables on learning disability

In this part of the chapter exosystem variables and their perceived effects on the components of learning disability were studied. The exosystem variables included neighbourhood status, relationship with neighbours, interactions with neighbours

Table 4.3.3 shows that most of the respondents who were falling in below average category were having middle class neighborhood status in both the aspects of language (80.00%) and mathematics (84.00%) but they were falling in average category in creativity component (88.00%).

The most of the respondents were having good relationship with their neighbors and they were falling in below average category in both the components of language (92.85%) and mathematics (85.17%), but average in creativity (89.28%).

The majority of the respondents were having average interaction with their neighbors and they were falling in below average category in both the components of language (80.00%) and mathematics (88.00%), but average in creativity (76.00%).

4.3.3 Effect of exosystem variables on learning disability

Sr. No.	Variable	Learning disability					
		Language		Mathematics		creativity	
		Below average	Average	Below average	Average	Below average	Average
		F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
1.	**People living nearby areas (neighborhood status)**						
	* Low class	16(84.22)	3(15.78)	18(94.73)	1(5.27)	2(10.53)	17(89.47)
	* Middle class	20(80.00)	5(20.00)	21(84.00)	4(16.00)	3(12.00)	22(88.00)
	* High class	15(93.75)	1(6.25)	12(75.00)	4(25.00)	3(18.75)	13(81.25)
2.	**Relationship with neighbour**						
	* Not good	21(95.45)	1(4.55)	20(86.95)	3(13.05)	6(27.27)	16(72.73)
	* Average	8(72.73)	3(27.27)	9(81.82)	2(18.18)	4(36.37)	7(63.63)
	* Good	26(92.85)	2(7.15)	24(85.72)	4(14.28)	3(10.72)	25(89.28)
3.	**Interaction with neighbours**						
	* Not good	13(92.85)	1(7.15)	14(100.00)	0(0.00)	4(28.57)	10(71.43)
	* Average	20(80.00)	5(20.00)	22(88.00)	3(12.00)	6(24.00)	19(76.00)
	* Good	15(71.43)	6(28.57)	17(80.95)	4(19.05)	3(14.28)	18(85.72)

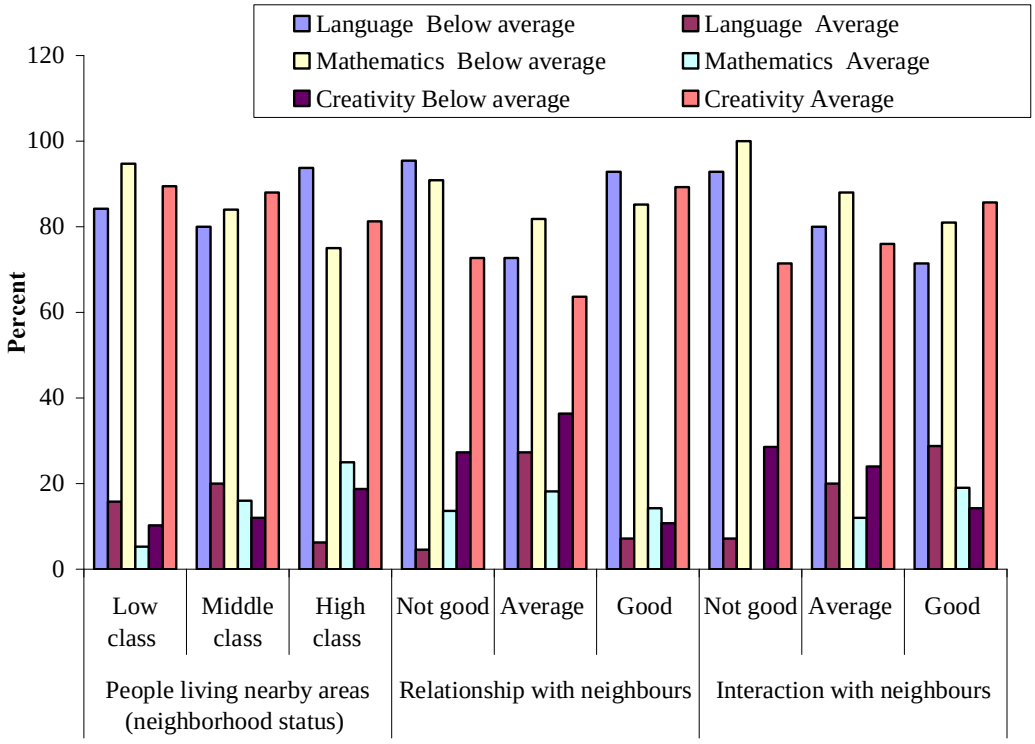

Fig. 4 : Effect of exosystem variables on learning disability

4.3.4 Effects of macrosystem variables on learning disability

This part deals with the macrosystem variables effects on learning disability of the respondents. The macrosystem variables which represent the norms and standards of a particular culture were studied. These include caste, parenting techniques and exposure to mass media.

Table indicates that many of the respondents belong to medium caste and they were falling in below average category for language (81.81%) and mathematics (86.36%), but average in creativity (81.81%).

It was perceived that the most of the parents were permissive and their children were falling in below average category for language (85.71%) and mathematics (92.85%) though average (78.57%) in creativity.

The majority of the respondents were having low exposure to mass media and they were falling in below average category for language (88%) and mathematics (88%), but respondents with low exposure to mass media were in average category in creativity (73.00%) component.

4.3.4 Effect of macrosystem variables on learning disability

Sr. No.	Variable	Learning disability					
		Language		Mathematics		creativity	
		Below average	Average	Below average	Average	Below average	Average
		F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
1.	**Caste**						
	Low	19(90.47)	2(9.53)	20(95.23)	1(4.77)	6(28.57)	15(71.43)
	Medium	18(81.82)	4(18.18)	19(86.37)	3(13.63)	4(18.18)	18(81.82)
	High	14(82.36)	3(17.64)	13(76.47)	4(23.53)	6(35.29)	11(64.71)
2.	**Type of discipline**						
	Authoritative	11(64.71)	6(35.29)	14(82.36)	3(17.64)	4(23.53)	13(76.47)
	Permissive	24(85.72)	4(14.28)	26(92.86)	2(7.14)	6(21.43)	22(78.57)
	Authoritarian	13(86.67)	2(13.33)	14(93.33)	1(6.67)	3(20.0)	12(80.00)

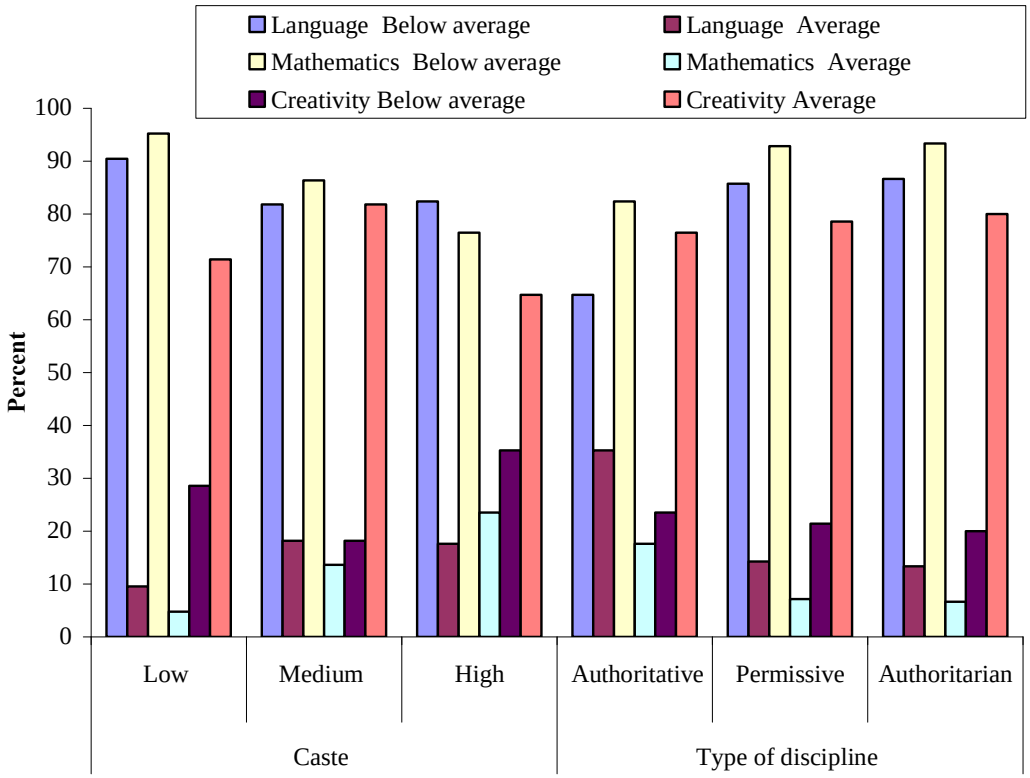

Fig. 5 : Effect of macrosystem variables on learning disability

4.3.5 Effects of chronosystem variables on learning disability

Table 4.3.5 shows that chronosystem is the variable which does not necessarily act on every individualôs life. So its effects may not be directly influence the learning disability of the individual.

4.3.5 Effect of chronosystem variables on learning disability

Sr. No.	Variable	Learning disability					
		Language		Mathematics		Creativity	
		Below average	Average	Below average	Average	Below average	Average
		F (%)	F (%)	F (%)	F (%)	F (%)	F (%)
1.	**Any significant happening**						
	No	28(87.50)	4(12.50)	26(81.25)	6(18.75)	8(25.00)	24(75.00)
	Yes	26(92.85)	2(7.15)	25(89.28)	3(10.72)	4(14.28)	24(85.72)

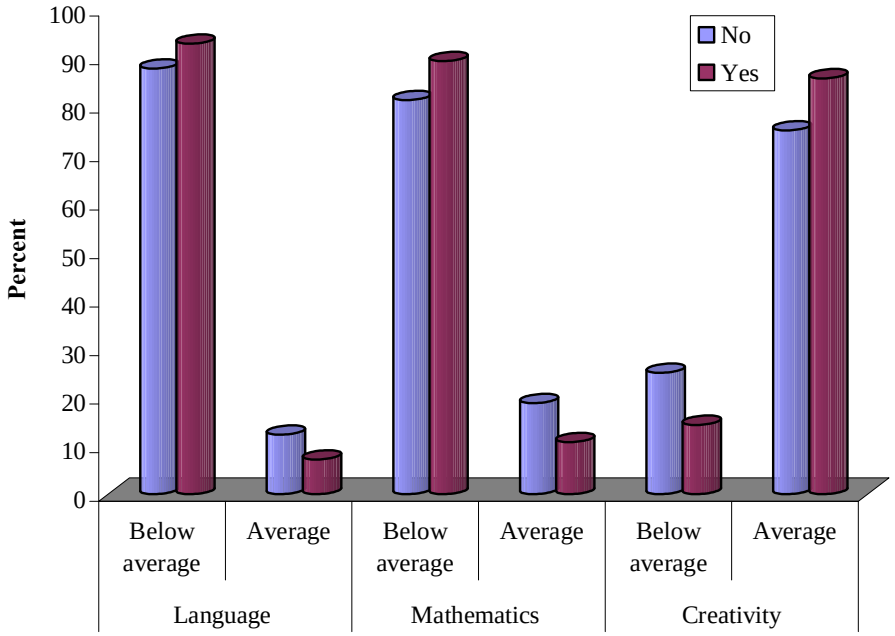

Fig. 6 : Effect of chronosystem variables on learning disability

4.4 Coping Suggestions

Learning disability is a disorder which can be remedied using appropriate instructional strategies. For helping children who have problem of learning disabilities, parents and teachers may consider following instructional approaches and coping suggestions. These instructional approaches and coping suggestions will play as a means of psychological vaccination for the children to save them from the problem of learning such as reading disabilities, writing disabilities, mathematical problem and the communication problem of the children. These instructional approaches and teaching strategies are used by teachers, parents and other professionals to help children with learning disability.

1. Early diagnosis of the problem is very important, as it is very difficult to correct a child in a later stage. Trained professionals may perform a diagnostic educational evaluation assessing the child's academic and intellectual potential and level of academic performance. Other professionals such as speech and language therapists also may be involved.
2. Some medications may be effective in helping the children for enhancing attention and concentration. Psychological therapies may also be used.
3. Take the time to listen to the child as much as possible. It will help them to feel more secure and belonged.
4. Motivate and encourage children to build positive strengths, interests, and abilities. Help them to use these as compensations for any limitations or disabilities. Reward them with praise, good words and nice gestures.
5. Provide organized games, motor activities and opportunities that will stimulate them in their development.
6. Take them to libraries and encourage them to select and check out books of interest. Encourage them to discuss their books and also provide stimulating books and reading material.
7. Ensure the best chance of success for the child over the long term, focus on helping child develop important life skills and pay attention to his/her physical and emotional well-being.
8. Siblings understand that the learning disability creates special challenges, they can easily feel jealous or neglected. Parents can help curb these feelings by reassuring all of their children that they are loved, providing homework help, and including family members in any special routines for the child with learning disability.
9. Don't hesitate to consult with teachers or other specialists whenever it becomes necessary in order to better understand what might be done to help the child.
10. The most common treatment for learning disabilities is special education. Provide structured program for children with learning disability through which they know their

daily routines, understand the rules. Curriculum should be in an organized, sequential fashion and can concentrate on learning tasks rather than distract by extraneous stimuli. Parents and teachers should follow appropriate approaches to facilitate academic, daily living and vocational preparations by remediating weakness capitalizing on studentôs strengths and teaching studentôs ways to work around their weaknesses.

11. Teacher may use task analysis approach in which teacher chooses a learning task appropriate for the child to master and states the terminal objectives in behavioural term. Next the terminal goal is broken down into incremental steps arranged in order of complexity with each item being a prerequisite for the subsequent one until the terminal goal is reached. It is important for teachers to state behavioural objectives clearly and concisely, being sure to specify what the child is expected to do as a result of instruction.
12. Cognitive Behaviour Modification programs can also be used as it attempts to help children internalize efficient learning strategies by actively involving them in the learning process, including verbalization, discrete step of responses, modelled strategies and planned, reflective goal statement.
13. Use multisensory approach in learning process which includes feelings, seeing, saying, and hearing of different objects.
14. Parents and teachers can use direct instructional approach which is academically focused and teacher centred. In this approach, children are taught in small groups, with teachers following a rigidly prescribed fast packed script that includes ample opportunities for unison group responses. There are on-going evaluation and continual regrouping according to demonstrated competencies or weaknesses. It includes both mathematics and reading components. This approach includes systematic assessment, instruction and evaluation.
15. Another approach, programmed instruction, is also very helpful for learning disabled children as these children need special attention and remedial programs. Programmed instruction approach is based on the principle of individual tutoring. This program has an organized series of simple stages, leading step by step carefully designed scheme of work modules which helps a child to proceed at his own pace and provides reinforcement resulting from the completion of a set or frame which in turn increases the motivation to learn. The small step sizes reduce the information processing requirement thereby compensating for some deficiencies.
16. This is the era of technology and computer is one of the boons. It can be used to present information to the children in the form of drill and practice, game and stimulation, tutorial etc. Computers are also helpful in receiving and analysing childrenôs responses and also in taking appropriate actions for remedial teaching. Computer assisted instructions can be used to provide individualized interactions. Multimedia features and graphic presentations

enable the disabled children to visualize the models and problems which besides providing a clearer understanding, enhances intuitive thinking of children.

17. For specific learning disabilities in basic math, provide step-by-step models demonstrating how to solve math problems.
18. Special workshops can be organized to educate parents and teacher regarding learning disability. So, that they can identify their childrenôs talent and help them to utilize it up to the optimum level.
19. Encourage some healthy emotional habits. Try to give them outlets for expressing their anger, frustration or feelings of failure. Doing so will help them connect with their feelings and, eventually, learn how to pacify themselves and regulate their emotions.
20. Consolidate student learning during lecture through the peer guidance.
21. Encourage child to participate in school activities. It is important to protect her study time, but it is also important to her emotional well-being to have positive extra-curricular activities that build leadership and bonds with others beyond the classroom.
22. Counselling can help affected children, teenagers, and adults develop greater self-control and a more positive attitude toward their own abilities. Talking with a counsellor also allows family members to air their feelings as well as get support and reassurance.
23. Joining a support group may be helpful for parents. Support groups can be a source of information, practical suggestions, and mutual understanding.
24. Government may provide special facilities and plan expert visits to schools regularly and assist the staff in schools related to learning disability among children, and promoting their talent in the right direction**.** Government may plan some policies, programs and approaches in the educational institutes to promote learning disabled children.

CHAPTER-V

DISCUSSION

Learning disability among boys (10-12 years) for the components of learning disability i.e. language and mathematics in both cultural settings shows that maximum number of boys fall in the below average category. Slavica, (2004) supported that certain abilities of phonological awareness are connected with early achievement in reading and writing and those disabilities in these skills significantly contribute to disabilities of reading/dyslexia and writing/dystrophic academically.

Boys in rural and urban areas have same trend for learning disability, Chadha (2001) observed that children have similar trend for learning disability, because learning disabilities are due to genetics, hence no influence of culture was observed on it. They are not caused by factors such as cultural or language differences, inadequate instruction, socio-economic status or lack of motivation, although these and other factors may compound the impact of learning disabilities. Frequently learning disabilities co-exist with other conditions, including attention, behavioral and emotional disorders, sensory impairments or other medical conditions

More than half of the respondents were from 10-11 years of age and they were falling in below average category in both the components i.e. language and mathematics, but average for creativity component. Teachers noticed that, when these boys entered in school system they had many behavioral and adjustment problems with peer groups and teachers because their teachers and parents have great expectations from them in the field of academics as well as in general behavior. Parents and teachers did not understand the problems of these boys. While most of the parents were educated up to graduation level but they did not have knowledge about learning disability among children. Learning disabled children look like normal children but they are different in some specific fields like language and mathematics etc. Huang *et al.* (2009) studied the influences of parenting style, mental stress and general health qualities to children's learning disabilities. They found that parents' anxiety, worry about children's study and their parenting style were significantly correlated with learning disability. Learning disabilities in these children mainly presented the disorders in reading, speaking, perception, action and attention.

Majority of the respondents belonged to nuclear families and they have language and mathematical disabilities. This may be due to lack of interaction with others, because child is living only with their parent. Sometimes experienced grandparents had knowledge about such problems and can be helpful in identifying the problem and handling these children. Michal Al-Yagon (2007) supported that role of maternal personal resources (motherôs attachment style, coping strategies, and affect) in moderating the effects of learning disabilities on childrenôs socio-emotional adjustment as well as on their secure attachment among school age

children with learning disability. Matheny *et al.* (1987) reported that all aspects of child development were affected by the poor parent child relationships. Ukech (2009) also viewed that interaction between parents and children with learning disabilities encourage reading skills in future.

Majority of boys have more than one/two siblings and they were falling in below average category in both components i.e. are language and mathematics of learning disability but average in creativity. Brown and Dunn, (1992) found that siblings exert important influences on development, both directly, through relationship with each other and indirectly, through the effects an additional child has on the behaviour of parents. When siblings are close in age they relate to one another on a more equal footing than do parents and children, they often talk about their emotions in playful ways and call attention to their own wants and needs when conflicts arise Learning disabled adolescents experiencing problems in peer relationship which can be compensate by siblings. East and Rook (1992)also found that number of siblings has different effects; more number of siblings can lead to less time to pursue oneôs interest, more financial pressures, more sibling rivalries, less privacy and lesser close parent-child relationship which can negatively affect the development.

Parentôs education, family income, surroundings of residence and stay of grandparents may not be having direct impact but as all the microsystem variables are working as interrelated networking system, these factors may have their indirect impact on the learning through influencing other factors. Studies by Panda (1995) have shown that academic and scholastic achievements are negatively affected by social disadvantages. Scholastic achievement of disadvantaged children is lower than that of advantaged children. Study further showed that deprivation had a deleterious effect on cognitive functioning, motivational patterns, aspiration levels, and academic achievement. As far as achievement is concerned, children from socially disadvantaged backgrounds are victims of unfavorable teacher expectations. Snow et al. (2000) in their report have identified several groups factors as constituting risk factor for learning disabilities. These include poor schools, low income/poor neighborhoods, limited proficiency in medium of instruction, and dialectal difference in language. Many of these factors are pervasive in the Indian socio culture context and educational system and would require closer examination. Perhaps an ecological approach would be a more satisfactory approach and would enable us to study the many different factors that contribute to learning disabilities.

Maximum boys were falling in below average category in language and mathematics having average relationship with peers and teachers this result supported by Cartledge *et al.* (1985) he found that a significant number of students with learning disabilities experience difficulty in establishing friendship and drawing positive responses from peers. Warger, (1991) also studied that peer tutoring has been shown to benefit friendships, social skills,

academic class work, and positive attitudes and interaction between children with disabilities and their typical peers.

Maximum respondentôs mother was housewife and fathers were in farming. Karanth (2004) has pleaded the case for environment factors that are associated with learning disability. As enumerated by her, these include poverty, parental illiteracy, lack of exposure to literacy skills in the home environment, lack of access to pre-school instruction, lack of command over instructional medium, overcrowded classrooms and poor instruction. Thus she asserts, ñOften learning disabilities reflects the accumulated effects of several of these risk factorsò.

Singh and Dhanda, 2009 reported that the parents who were not able to provide their children with good resources, proper care, and academic and play material suffered from two or more learning disabilities. Parents also had opinion that due to lack of resources, education and enough motivation, they could not provide their children healthy environment for learning because they were always busy in their own work.

Learning disability was more prevalent among those boys who rarely visit to their relatives and friends. Ruble, (1983) studied that relatives, friends and other community members may encourage and exhibit effective ways of interacting with children. Which help them in improving their social skills.

Most of the learning disabled boys were having middle class neighborhood status and they had good relationship and average interaction with their neighbors. High risk neighborhoods and poor living conditions add to the factor of being more vulnerable to having a learning disability. Cluster of people in a distinct part of a community near a toxic waste, living in poor neighborhoods and living in poverty having higher risk of a learning disability. Individuals with a learning disability will rely more having on public assistance / welfare than individuals who do not because of their lack of knowledge. Further results revealed that majority of learning disabled children were having parents who were members of any organization (Ruble, 1983).

Maximum number of learning disabled boys was from medium caste and most of the families in the study were found to be practicing permissive type of discipline. Kumari (1998) found that standards and values often vary depending upon social classesô background. Different caste people may have different ideologies than other caste people. Usually in rural areas, people with similar caste stay/reside in a specific area and thus have viewpoints which are entirely different from other caste. For example, at few places Jats are considered to be only involved in farming and people from lower castes act as landless laborers. This can account for present studyôs results where caste has been found to be affected the learning disability. Nitasha *et al.* (1999) also revealed that socio economic status of the family was associated with learning disabilities.

Majority of parents were used permissive disciplining technique and their boys were fell in below average category. Results regarding parental discipline supported by Junlin, (2004). He found that parental emotion warmth and understanding scores of the students were significantly higher than those of the low students, while parental punishment and scores of the low students were significantly higher than those of the top students. Related analysis showed that students' learning performance had significantly negative correlation with parental punishment and severity factors. Conclusion can be drawn that parental rearing patterns have impressive impact on students' learning performance. Appropriate interference measures should be taken according to every student's family circumstance.

Chronosystem variable does not necessarily act on every individualôs life. So its effects may not be directly associated with learning disability of the individual. Smith (2006) found that children and adolescents with learning disabilities have high rates of mental health problems and behavioral difficulties.

CHAPTER-VI

SUMMARY AND CONCLUSIONS

Learning disability refers to a neurobiological disorder in one or more of the basic processes involved in understanding spoken or written language. This brain variance may influence an individualôs ability to speak, listen, read, spell, reason, organize information, or do mathematical calculations which create problems in learning in the academic side. Learning disability affects how children think, feel and act their ability to learn and engage in relationships, their self-esteem and ability to evaluate difficult situations and make choices. This can lead to trouble with learning new information and skills, and putting them to use. The present investigation entitled ñlearning disability in boys of 10-12 years age groupò was undertaken with the following objectives:

1. To assess rural and urban boys with learning disabilities.
2. To delineate the human ecological factors related to learning disabilities.
3. To provide coping suggestions to the parents and boys with learning disabilities.

Materials and Methods

Hisar district from Haryana state was selected purposively. From Hisar district Block I was selected randomly. Hisar city was also purposively selected for urban sample. From Block I five villages named Kaimari, Mangali, Harikot, Daya and Singran were selected randomly. A sample of 60 boys, 30 from rural and 30 from urban, schools was taken. Independent variables considered were all human ecological factors i.e. Microsystem, Mesosystem, Exosystem, Macrosystem and Chronosystem. Learning disability among boys of 10-12 years age group was taken as dependent variable.

In the process of assessment of learning disabled boys a check list was administered on all the boys 10-12 years of age for screening purpose after that Indian Adaptation of Stanford ï Binet Intelligence Scale by Kulshershtha (1971) was used. A questionnaire was developed and used to gather the data for human ecological factors of respondents. Three learning disability components of children viz., language, mathematics and creativity were studied.

Descriptive statistics, frequency, percentage, and mean, standard deviation was used and inferential statistics, t-test was used to analyze the data for drawing the inferences. The results of the present investigation are summarized as below:

Major Findings

Results demonstrated that the respondents were 10-12 years of age group from rural and urban areas and greater part of the sample were from nuclear and small sized families. Most of the boys were belonged to medium caste. It is also indicated that most of the boys were having more than two siblings. Parents of most of the respondents were found educated up to high school. It was observed that most of the mothers were housewives, whereas fathers

were involved in farming. It was found that most of the respondents belonged to medium income group families. Many of the respondents have their residences in developing area. Most of the respondents have middle class neighbors and their relationships with their neighbors were good. It was further observed that most of the respondents were rarely visited by their relatives. Results further shows that most of the parents were found to be using permissive disciplining technique for their boys. It was also observed that most of the respondents were having average relationships with their friends / peer and teacher. It was observed that most of the respondents live along with their grandparents and stay with them for 3-6 hours per day. It was found that most of the boys had low exposure to mass media.

Human ecological factors affecting learning disability among boys

Human ecological environment have some effect on the learning disability among boys, factors related with home environment, neighborhood were considered and found to do be have effect on major learning disability. While more than a few factors do not have effect on to be associated with learning disability among boys, but, as the human ecological system work as interrelated networks so all the factors can be said to be directly and indirectly associated with major components of learning disability among boys.

Variables include in microsystem, such as education of parents, discipline by parents, surroundings and location, relationship with grandparents influenced the components of learning disability of the boys. Further variables such as family income etc. have effect on learning disabled boys. Variables include in exosystem such as profession of parents, relationship with neighborhood were having influence on the learning disability among boys. Results regarding occupation of mother also have some influence on the learning disability of boys. The macrosystem and chronosystem variables also shows some influence on the learning disability among boys.

Assessment of learning disability among boys

Results discovered that majority of the respondents were found in below average category for language and mathematics components of learning disability both in rural and urban area but above average category in creativity component.

Comparison of learning disability rural and urban boys

Results discovered that άô values were not found to significant by different for language, mathematics and creativity components of learning disability between rural and urban boys. Accordingly it can be concluded that cultural settings i.e. rural and urban do not have any impact on learning disability among boys.

Suggestion

1) Government may provide special facilities and plan expert visits to schools regularly and assist the staff in schools which are having learning disability among children, and promoting their talent in the right direction**.** Government may plan some

policies, programs and approaches in the educational institutes to promote learning disabled children.

2) Media can generate awareness in common people related to learning disability, like concepts, techniques and approaches which can help the learning disabled children.

3) People who are involved in preparing reading material for children should construct article, video games and other play material manipulating particular aspects of children with disability.

4) Professionals such as speech and language therapists may be helpful for learning disabled children so this should be the part of schools. Some medications may be effective in helping the child learn by enhancing attention and concentration. Psychological therapies may also be used in schools and parents should be involved during these therapies.

BIBLIOGRAPHY

Ashok, S. 2008. Parent child interaction and academic achievement in kindergarten, primary and middle school. *Indian journal of Applied Psychology,* **45**: 11-15

Balasubrahmanyam, S.N. 2001. Dyslexia and intercultural comparisons. *Current Science*, **81** (80 : 872-875.

Bandian, N.A. 1999. Reading disability defined as a discrepancy between listening and reading comprehension: A longitudinal study of stability, gender differences and prevalence. *Journal of Learning Disabilities,* **32** (2) : 138-148.

Brinton, B., Fujiki M., Spencer, J. and Robinson, L. 1997. The ability of children with specific language impairment to access and participate in an ongoing interaction. *Journal of Speech, Language and Hearing,* **40** (5) : 1011-1025.

Cartledge, G., Frew,T., and Zaharias, J. 1985. Asocial skill needs mainstreamed students: peer and teacher interaction. *Learning Disability*,**8** : 132-140.

Cass, Michall, Castes, Dennis, Smith, Michelle and Jackson, Crynthia. 2003. Effects of manipulative instruction on the solving of area and perimeter problems by students with learning disabilities. www.teaching.ld.org.

Chadha, A.2001. The concept of learning disabilities, A guide to educating children with learning disabilities. Vikash Publication House, Pvt. Ltd. New Delhi.

De Fries, F. and Decker, S. 2008. Genetic aspects of reading disability. In Paaron and M. Hala Lesha (Eds.), Neuro-psychological and Neuro-psycholinguistic aspects of reading disabilities. New : Academic Pres.

Donahue, M. 2003. Cognitive Mechanisms underlying achievement deficits in children with mathematical learning disability. *Child Development*, **78** (4): 1343ï1359.

Donahue, M.L. 2002. Hanging with friends : Making sense of research on peer discourse in children with language learning disabilitiesô, in K.G. Butler and E.R. Sillinan (eds.), speaking, reading and writing in children with language new paradigms in research and practice, pp. 239-258, Mahwah NJ : Lawrence Erlbaum.

East, P.L., and Rook, K.S. 1992. Compensatory patterns of support among childrenôs peer relationships: A test using school friends, non-school friends and siblings. *Developmental Psychology*, **28** : 168-172.

Fisher, P. 1992. The impact of play on development: meta-analysis. *Play and Culture*, **5** (2) 159-81.

Fuchs, S.L. and Owen, L. R. 2002. Mathematical problem-salving strategy instruction for third-grade students with learning disabilities. *Remedial and Special Education*, **23** (5) : 268-278.

Garbarino, J. 2002. The Human ecology of early risk, in S.J. Meisels and J.P. Shonkoff (eds.), Handbook of Early childhood Intervention, pp. 78-96, Cambridge University.

Gardenen, D. V., and Montague, M. 2002. Visual ï special representation, mathematical problem solving, and students of varying abilities. www.teachingld.org.

Garderen, D. V. 2007. Teaching students with learning disabilities to use diagrams to solve mathematical word problems. *Journal of Learning Disabilities*, **40** (6) : 540-553.

Geary, D. C., Hoard, M. K. Craven, J. Nugent, L. Numtee, C. 2007. Cognitive Mechanisms underlying achievement deficits in children with mathematical learning disability. *Child Development*, **78** (4): 1343ï1359.

Gretchell, N., Pabreja, P., Neeld, K. and Caario, V. 2007. Comparing children with and without dyslexia on the movement assessment battery for children and the test of gross motor development. *Perceptual and Motor Skills,* **105** (1) : 207-214.

Hoien, T. and Lundberg, I. 2000. Dyslexia : From theory to intervention. Dordrecht, The Netherlands : Kulwer Academic.

Huang, X., Jing, J. and Chen, X. 2009. A study on children with learning disabilities and family influential factors. *Journal of Learning Disabilities*, **77**(3): 236-263.

Individual with Disabilities Education Act (IDEA). 1990. P.L. 101-476, 20 U.S.C. 1400 et seq.

Jerman, O. and Swanson, H. L. 2006 Main disabilities: A selection Meta-Analysis of the literature. *Review of Educational Research*, **76** (2) : 249-274.

Johnson, D.J. and Myklebust, H.R. 1967. Learning disabilities : Educational Principles and Practices, New York : Grunge and Stratton.

Jones, G.A., Langrall, C.W. and Thornton, C.A. 1997. Mathematics intervention for elementary students with learning disabilities. *Journal of Learning Disabilities,* **30** (2) : 142-150.

Junlin, L. 2004. An Exploration for the Influence of parental rearing patterns on learning performance in Junior Middle School Students. http://www.dsm5.org/ProposedRevisions/Pages/ proposedrevision.aspx?rid=429.

Karnath, P. 2004. Introduction, in P. Karnath and J. Rozario (eds.). Learning Disabilities in India : Willing the Mind to Learn, pp. 17-29, New Delhi, Sage Publications.

Katz, L.J., Goldstein, G. and Beers, S.R. 2001. Learning disabilities in older adolescents and adults : Clinical utility of the neuropsychological perspective, New York : Kluwer Academic/ Plenum Publishers.

Kenneth, J., Nicolson, H. and Raven, J. 2002. Overlearning, fluency and Automaticity. *Journal of Educational Psychology*, **76**:610-622.

Kulshreshtha, S. K.1971. Standford Binet Intelligence Scale, Bureu of psychology, Allahabad.

Kumari, Lata. 1998. Development and assessment of social cognition tool for 8-10 years children. Unpublished Ph.D Thesis, CCS HAU, Hisar.

Lenneberg, E.H. 1969. A biological perspective of language. In E. Lenneberg (ed.). New directions in the study of language. Cambridge, Mass : MIT Press.

Levine, L. 2003. Automatization aspects of dyslexia: Speed limitation in word identification. *Journal of Learning Disabilities*, **32**(5):417-428.

Lyon, G.R. and Rumsey, J.M. 1996. Neuroimaging : A widow to the neurological foundations of learning and behaviour in children, Baltimore : Paul Brookes Publishing Co.

Lyons, G.R. and Fletcher, J.M., Shaywitz, S.E., Shaywitz, B.A., Torgsen, J.K., Wood, F.B., Schulte, A. and Olson, R. 2010. Rethinking learning disabilities, in C.E. Finn, A.J. Rotherman and C.R. Hokanson (eds.), Rethinking education for a new century, pp. 259-287. Washington D.C. : Thomas B. Fordham Foundation and the Progressive Policy Institute.

Magara, E. 2009. Building family literacy skills among parents and children in developing countries: a case for Uganda. World library and information congress: ñLibraries a voyage of discoveryò. August 14th to 18th, Oslo, Norway.

Margai, F. and Henry, N. 2003. A community-based assessment of learning disabilities using environment and contextual risk factors. *Social Science and Medicine*, **56** (5) : 13.

Matheny, A.P., Jr. Wilson, R.S., and Thoben, A.S 1987. Home and mother: Relationship with infant temperament. *Development Psychology,* **23** : 323-331.

Meijer, C.J.W. and Piyal, S.J. 2004. WSNS welbeschouwd (Going Together to School Again : Reflections). Antwerpen : Garnt.

Michal Al-Yagon. 2007. Socio-emotional and behavioral adjustment among school-age children with learning disabilities. *The Journal of Special Education*, **40** (4) : 205-217.

Montague, M., Morgan, T.H. and Warger, C. 2000. Solve it strategy instruction to improve mathematical problem solving. *Learning Disabilities Research and Practice,* **15** (2) : 110-116.

Montague, M.2007. Self-regulation and mathematics instruction. *Learning Disabilities Research and Practice,* **22** (1): 75-83.

Mouly, George J. 1963. The science of educational research. New York: American Book Company.

Nakara. R. 1997. Learning disability quarterly. http://findarticles:com/p/articles/mi hb6504.

National Dissemination Center for Children and Youth with Disabilities (NICHY). 2004. Perspectives on learning disabilities in India. http://www.ldonline.org/article/6113.

National Policy on Education. 1986. Ministry of Human Resource Development, Government of India, New Delhi.

Nitasha, Chhikara, S. and Sangwan, S. 1999. Extent of learning disabilities and related factors. *Disabilities and Impairments.* **13** (1-2) : 105-110.

Nolen, S.B. 2001. Constructing literacy in the kindergarten : Task structure, collaboration and behavioural problems. *Cognition and Instruction,* **19** (1) : 99-145.

Odom, S.L., Mc Connell, S.R. and Mc Evoy, M.A. 1992. Social competence of young children with disabilities: Issues and strategies for intervention, Baltimore: Paul H. Brookes.

Panda, K.C. 1995. Social psychology and education, in J. Pandey (ed.) Psychology in India. The State-of-the-art, Vol. 2, Basic and Applied Psychology, pp. 279-337, New Delhi : Sage Publications.

Roberta, J. Eleanor, L. Marshell, H. and Knneth, L.2002. teaching ñlife success in individual students with learning disabilities. http://findarticles.com/p/articles/mihb6504.

Ruble, D.M. 1983. the development of social comparison processes and their role in achievement-related self socialization. In: E.T. Higgins, W.W. Hartup and D.N. Ruble (Eds.) Social Cognition and Social Development. A Socio-cultural Perspective. Cambridge University Press.

Sheri, A, Ozgul, Y. and Leah, W.M. 2004. Middle and high school students with learning disabilities: Practical academic interventions for general education teachers. American Secondary Education. http://www.summerschoolsscotland.com.

Shonfeld, M. and Ronen. I. 2006. Online learning : Bright spots for students with learning disabilities. Proceeding (525) Education and Technology.

Simmons, Deborah C. 1995. Effects of explicit teaching and peer tutoring on the reading achievement of learning disabled and low-performing students in regular classrooms. *Elementary School Journal,* **95** (5) : 387-408.

Singh, C.K. and Dhanda, B. 2009. Improvement in conceptual abilities through stimulating environment. *Disabilities and Impairments,* **23** (1) : 64-66.

Slavica, M.G 2004. Phonological processing of children with language disabilities and reading disabilities. *Pedagogical*, **59** (2): 32-40.

Smith, D. and Wisniewski, Z.G. 2002. How effective is touch math for improving students with special needs academic achievement on math addition mad minute timed tests. EDRS : 1-13.

Smith, P.A. 2006. Mental health of children with learning disabilities. *Advance in Psychiatric Treatment*, **12**:130-138.

Snow, C.E., Burns, M.S. and Griffin, P. 2000. Preventing reading difficulties in young children. U.S. National Research Council Report, Washington, DC : National Academy Press.

Song, H. Wang, H. JIN, C.H. 2009. Analysis of the related factors in children with learning difficulties. Pediatric Research Institute. http://www.nrcld.org/about/research/states/section4.html.

Sternberg, R.J. 1999. Our labeled children: What every parent and teacher needs to know about learning disabilities. Reading, MA : Persons Group.

Stone, C.A. 2002. Promises and pitfalls of scaffolded instructions for students with language learning disabilities in India : Willing the Mind to Learn, pp. 30-43, New Delhi : Sage Publication.

Suresh, P. and Sebestian, S. 2003.Epidemiological and neurological aspects of learning disabilities. learning disabilities in India, 30-43. New Delhi: Sage Publication.

Ukech, C. 2009. Promoting the reading culture in primary school in Uganda: role of NLU, and ULA: a dissertation submitted in department of library and information.

Vogel, M. 1990. The prevalence of learning disabilities in a sample of children considered hyperactive. *Journal of abnormal child psychology*, **8**:33-50.

Wang, G. Rong, H. Zhen, Y. 2010. Mental Problems of Children with Learning Disability and Outcomes of Psychological Counseling. Department of Child and Adolescent Health, Maternity and Child Health Care. *Journal on Disabilities and Impairment*, **24**(1): 23-25.

Warger, C.L. 1991. Peer tutoring: When working together is better than working alone. Research resources on special education (Number 30). Reston, VA: ERIC Clearinghouse on Handicapped and Gifted Children.

Wong, B.Y.L. 1991. Learning about learning disabilities. San Diegos CA : Academic Press.

Yadav,D.P.S. Shankar, A.2007. Different approaches for teaching learning disabled children. *Journal son Disabilities and Impairments*, **24** (1) : 42-46.

Yang, Y. Hong, L. Ling, L. Xiao, M. 2006. Relationship of family and personality factors with pupils, achievement scores. *Journal of Child Health Care,* **22** : 401-412.

Yinghe, C. and Xiaomei, Z. 2005. Researchers on children with learning disabilities from strategic perspective. *Advance in Psychological Science*, **13** (5):547-556.

Zhaoping, J. and Gualiany, M Y.2005. Development and prospect of nonverbal learning disabilities. *Journal of Psychological Science.* 12 (5) : 47-55.

ANNEXURES

1. जब कहीं जाते हो तब आसानी से अपना रास्ता भूल जाते हो या confuse हो जाते हो ?
2. Practical Classes से theory classes ज्यादा कठिन लगती है ?
3. क्या तुम्हारा स्कूल छोड़ने का मन करता है ?
4. क्या तुम्हे words, letter और numbers को लिखने में कठिनाई आती है ?
5. क्या तुम्हें सीधो से उल्टे कहनें में कठिनाई आती है ?
6. क्या तुम सीधी लाईन बना सकते हो ?
7. पढ़ते समय ज्यादातर अपनी पढ़ने वाली लाईन या जगह भूल जाते हो ?
8. Black board और Book में से नकल उतारने में अधिक समय लगता है ?
9. क्या तुम बहुत शर्मीले हो ?
10. क्या तुम्हें अपने साथ के बच्चों के साथ रहने में कठिनाई होती है ?
11. क्या तुम बोलते समय बीच में अटक जात हो ?
12. जब तुम कोई कार्य करते हो क्या तुम्हें ज्यादा ध्यान और समय लगाने की आवश्यकता होती है ?
13. क्या तुम अच्छी तरह पढ़ नहीं पाते हो ?
14. क्या तुम्हें शब्दों में confusion होता है ?
15. क्या तुम्हें गणित कठिन लगता है ?
16. क्या तुम्हें इंच, फिट, मील, किलोमीटर, लीटर, पाउण्ड आदि याद करने में कठिनाई होती है ?
17. क्या तुम जल्दबाजी में समय confuse हो जाते हो ?
18. क्या तुम दिन में काम करते समय बहुत अधिक सपने देखते हो जिससे तुम्हारे काम में रूकावट आती है ?
19. क्या तुम्हें किसी काम पर ध्यान लगाते समय कठिनाई होती है ?
20. क्या तुम्हें याद करते समय बोलने की आदत है ?
21. क्या तुम्हें कहानी के भागों को दोबारा सुनाने में कठिनाई होती है ?

APPENDIX-I

RECORD BOOKLET—*Form L-M*

Stanford-Binet Intelligence Scale

Name..... Sex..... Date of test ..... Day ..... Month ..... Year .....

Date of birth..... ....

Address.....

School..... Class..... Examiner .....

Parent.....

Birthplace..... of father..... of mother.....

Occupation of father..... of mother.....

C.A.	
M.A.	
I.Q.	

FACTORS AFFECTING TEST PERFORMANCE

Overall Rating of Conditions

Optimal | Good | Average | Detrimental | Seriously detrimental

Attention

(*a*) Absorbed by task.....Easily distracted

Reactions during Test Performance

(*a*) Normal activity level.....Hyperactive or depressed

(*b*) Initiates activity.....Waits to be told

(*c*) Quick to respond.....Urging needed

Emotional Independence

(*a*) Socially confident.....Shy, reserved, reticent

(*b*) Realistically self-confident.....Distrusts own ability or over-confident

(*c*) Comfortable in adult company.....Ill-at-ease

(*d*) Assured.....Anxious about success

Problem-solving Behaviour

(*a*) Persistent.....Gives up easily or can't give up

(*b*) Reacts to failure realistically.....Withdrawing, hostile, or denying

(*c*) Eager to continue.....Seeks to terminate

(*d*) Challenged by hard tasks.....Prefers only easy tasks

Independence of Examiner Support

(*a*) Needs minimum of commendation.....Needs constant praise and encouragement

Was it hard to establish a positive relationship with this person?.....

TEST SUMMARY

	Years	Months		Years	Months		Years	Months
II	.....	.....	VII	.....	.....	A.A.	.....	.....
II-6	.....	.....	VIII	.....	.....	S.A. I	.....	.....
III	.....	.....	IX	.....	.....	S.A. II	.....	.....
III-6	.....	.....	X	.....	.....	S.A. III	.....	.....
IV	.....	.....	XI	.....	.....			
IV-6	.....	.....	XII	.....	.....	Total	.....	.....
V	.....	.....	XIII	.....	.....	M.A. Score	.....	
VI	.....	.....	XIV	.....	.....	Testing-time	.....	

Examiner's Notes

Test evidence of special strengths:

Test evidence of special weaknesses:

Reason for referral:

Suggestions:

YEAR VIII (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. *Vocabulary (8+) [ ]

☐ 2. Memory for stories: A Fall in the Mud (5+) [ ]

(a)..... (b)..... (c)..... (d).....
(e)..... (f).....

☐ 3. *Verbal absurdities I (3+) [ ]

(a) .....
(b) .....
(c) .....
(d) .....

☐ 4. *Similarities and differences (3+) [ ]

(a) Cricket-ball—orange .....
(b) Aeroplane—kite .....
(c) Sea—river .....
(d) One new penny—5 new penny piece .....

☐ 5. *Comprehension IV (same as VII, 4) (4+) [ ]

☐ 6. Naming the days of the week order correct. 2 checks+) [ ] *Tu*..... *Thu*..... *Fri*.....

..... Alternative. Problem situations I (2+) [ ]

(a) .....
(b) .....
(c) .....

___ Months credit at Year VIII

YEAR IX (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. Paper-cutting (same as XIII, A (1+ [ ] (a)..... (b).....

☐ 2. Verbal absurdities II (same as XII, 2) (3+) [ ]

(a) .....
(b) .....
(c) .....
(d) .....
(e) .....

☐ 3. *Memory for designs I (same as XI, 1, ... (1+ or 2 with ½ credit each) [ ] (a)..... (b).....

☐ 4. *Rhymes: New form (3+) [ ] (a)..... (b)..... (c)..... (d).....

☐ 5. *Giving change (2+) [ ] (a 12-4..... (b) 24-10..... (c) 30-4.....

☐ 6. *Repeating 4 digits reversed (1+) [ ]

(a) 8-5-2-6..... (b) 4-9-3-7..... (c) 3-6-2-9.....

..... Alternative. Rhymes: Old form (2+) 30 sec. each) [ ]

(a) .....
(b) .....
(c) .....

___ Months credit at Year IX

YEAR X (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. **Vocabulary** (11+) [ ]

☐ 2. **Block counting** (8+) [ ] .....

☐ 3. ***Abstract words I** (same as XII, 5) (2+) [ ]

(*a*) Pity .....

(*b*) Curiosity .....

(*c*) Grief .....

(*d*) Surprise .....

☐ 4. **Finding reasons I** (2+) [ ]

(*a*) .....

(*b*) .....

☐ 5. ***Word Naming** (28 words in one minute) [ ]

☐ 6. ***Repeating 6 digits** (1+) [ ]

(*a*) 4-7-3-8-5-9..... (*b*) 5-2-9-7-4-6..... (*c*) 7-2-8-3-9-4.....

..... **Alternative. Verbal absurdities III** (2+) [ ]

(*a*) .....

(*b*) .....

(*c*) .....

___ **Months credit at Year X**

YEAR XI (6 tests, 2 months each; or 4 tests, 3 months each)

☐ 1. ***Memory for designs I** (same as IX, 3) (1½+) [ ]

☐ 2. ***Verbal absurdities IV** (2+) [ ]

(*a*) .....

(*b*) .....

(*c*) .....

☐ 3. ***Abstract words II** (same as XIII, 2) (3+) [ ]

(*a*) Connexion .....

(*b*) Compare .....

(*c*) Conquer .....

(*d*) Obedience .....

(*e*) Revenge .....

☐ 4. **Memory for sentences II** (1+) [ ]

(*a*) At the summer camp the children get up early in the morning to go swimming.

(*b*) Yesterday we went for a ride in our car along the road that crosses the bridge.

☐ 5. **Comprehension V** (2+) [ ]

(*a*) .....

(*b*) .....

(*c*) .....

☐ 6. ***Similarities: Three things** (3+) [ ]

(*a*) A snake—a cow—a sparrow .....

(*b*) A rose—a potato—a tree .....

(*c*) Wool—cotton—leather .....

(*d*) A knife-blade—a new penny—a piece of wire .....

(*e*) A book—a teacher—a newspaper .....

..... **Alternative. Finding reasons II** (2+) [ ]

(*a*) .....

(*b*) .....

___ **Months credit at Year XI**

APPENDIX -II

General Background Information Questionnaire

1. Name of the respondent:
2. Date of birth:
3. Age of the respondent:
4. Type of family: Nuclear/Joint
5. Size of the family:
   i) Small (4 members or below)
   ii) Medium (5-6 members)
   iii) Large (6 and more)
6. Number of siblings: 1-2 3-4
7. Caste:
   a. Low (Chamar, Bhangi, Doom, Khati, Dhobi, Badi)
   b. Middle (Lohar, Kumhar, Darzi, Nai, Ahir, Bania, Sunar)
   c. High (Brahmin, Rajput, Jat, Bishnoi)
8. Education of parents:

Sr.no	Category	Mother	Father
1.	Illiterate		
2.	Primary to middle		
3.	High School/Grad.		

9. Occupation of parents:

Sr.no	Category	Father	Mother
1.	Service		
2.	Farming		
3.	Any other.	Own	Housewife

10. Family income:
    (1) Low (1000-below)
    (2) Medium (1000-5000)
    (3) High (More than 5000)
11. Surroundings of the residence
    Underdeveloped Developing fully developed

12. Type of people living in the nearby area:
    High class Middle class Low class

13. Developmental facilities in the area:
    Post office/Hospital/Bank/School/Panchayat ghar/ any other

14. What type of relationship do you have with your neighbors?
    Good Average not good

15. What type of interactions do you have with your neighbors?
    Good Average Not good

16. How frequently do you visit and are visited by your friends and relatives?
    Frequently Occasionally Rarely

17. What type of discipline your parents exert?
    - Authoritative
    - Permissive
    - Authoritarian
18. Do your grand parents stay with you? Yes/No
19. If yes, how much time do you spend with them?
    - More than 6 hours
    - 3-6 hours
    - nil
20. Parents member of any organization?
    Yes No

21. What type of relations do you have with your friends?
    Good Average Not good

22. What type of relations do you have with your teachers?
    Good Average Not good

23. Exposure to media:
    Low (Have access only to Radio or nothing)

    Middle (have access to television)

    High (Access to magazines, newspaper etc. along with radio and television)

24. Have you encountered any situation or happening in your family or surroundings which affected or changed your life?
    Yes No

School Environment Questionnaire

1. Name of the School.
2. Recognized/Non recognized
3. Name of the principal
4. Educational qualifications
5. Experience of the Principal.
6. Total no of students
7. Number of teachers
8. Teacher-child ratio
9. Educational qualifications of the teachers
   Maximum Minimum

10. Experience of the teachers
    Maximum Minimum

1. Size of the class. Small/Medium/Large
2. Ventilation in the classrooms. Proper/Improper
3. Lighting in the classrooms. Proper/Improper
4. Source of water Hygienic/unhygienic
5. Number of toilets Adequate/not adequate
6. Maintenance of toilets. Proper/improper
7. Is there any play ground Yes/no

If yes, size of the play ground Small/Medium/Large

Maintenance of the play ground Proper/improper

8. Play equipment
   a) Indoor Sufficient/Insufficient

   b) Outdoor Sufficient/Insufficient

9. Does school has a Library? Yes/No

10. Does school has audio-visual aids?

    If yes, specify

    Blackboard Charts/posters/models

    Tape recorder T.V/V.C.R.

    Computer Overhead projector

    Any other

Opportunities for Social Competence

1. How frequently audio-visual aids are used?
   Daily Weekly Occasionally Rarely Never

2. Are competitions held in the school? Yes/No
3. Are children encouraged to participate in the competitions? Yes/No
4. Are trips and picnics organized in the school? Yes/No
5. Do the teachers use punishments? Yes/No
   Verbal/physical/corporal/any other

6. Do children get adequate reward for their outstanding performance? Yes/No

Classroom observation Checklist

1. Teacher pays individual attention to students.
   Always / Sometimes / Never

2. Teacher talks freely and openly with students
   Always / Sometimes / Never

3. Teacher plans the lesson in advance.
   Always / Sometimes / Never

4. Teacher considers interest of students
   Always / Sometimes / Never

5. Teacher encourages queries from students.
   Always / Sometimes / Never

6. Teacher attempts to satisfy the queries of students.
   Always / Sometimes / Never

7. Teacher encourages students to d their work independently.
   Always / Sometimes / Never

8. Teacher respects and welcomes the ideas of students.
   Always / Sometimes / Never

9. Teacher only gives verbal instructions.
   Always / Sometimes / Never

10. Teacher demonstrates the activities to students.
    Always / Sometimes / Never

11. Teacher encourages learning by doing.
    Always / Sometimes / Never

12. Teacher uses teaching aids to make the lesson interesting.
    Always / Sometimes / Never

13. Teacher provides constant guidance and counselling to students.
    Always / Sometimes / Never

14. Teacher has sympathetic attitude towards students.
    Always / Sometimes / Never

15. Teacher uses appropriate methods to reward students.
    Always / Sometimes / Never

16. Teacher is self motivated to carry out the job with pleasure.
    Always / Sometimes / Never

ABSTRACT

1.	Title of thesis	:	Learning Disability in boys of 10-12 years age group
2.	Full name of degree holder	:	NIGAM RANI
3.	Admission No.	:	2008HS82M
4.	Title of degree	:	Master of Science
5.	Name and address of Major Advisor	:	Dr. (Mrs.) Sudha Chikkara Professor Department of HDFS I.C. College of Home Science CCS Haryana Agricultural University, Hisar ï 125004 (India)
6.	Degree awarding University/ Institute	:	CCS Haryana Agricultural University, Hisar-125004
7.	Year of award of degree	:	2011
8.	Major subject	:	Human Development and Families Studies
9.	Total No. of pages in thesis	:	49+iv+IX
10.	No. of words in the abstract	:	Approx 325

Key Words : Learning disability, language, mathematics, creativity

The present research was carried out to asses the learning disability among boys of 10-12 years of age. A reasonable analysis was done to know the differences between rural and urban boys of 10-12 years of age. Haryana state was selected purposively while Hisar district was also selected purposively. From Hisar district Block I was selected randomly. Hisar city was purposively taken for urban sample while villages Kaimari, Mangali, Harikot, Daya and Singran were selected randomly. A sample of 60 boys, 30 from rural and 30 from urban, schools was taken. Independent variables considered all human ecological factors. Learning disability among boys of 10-12 years age group was taken as dependent variable.to identify learning disabled boys a check list was administered on all the boys 10-12 years of age for screening purpose after that Binet intelligence Scale by Kulshershtha (1971) was used. A questionnaire was developed and used to gather the data for human ecological factors of respondents. Most of the respondents belonged to nuclear and small sized families. Most of the Parents were educated up to high school. Neighbourhood status of the most of the respondents was from middle class families. Permissive disciplining technique adopted by most of the parents for their children (boys).The independent variables of human ecological environment exhibited some influence on the learning disability among boys. Maximum boys were found in below average category in language and mathematics components both in rural and urban area but above average category in creativity. No significant ‘ô’ values were found between rural and urban boys for all the components of learning disability which are language, mathematics and creativity. Thus it can be said that cultural settings i.e. rural and urban do not have any impact on learning disability.

MAJOR ADVISOR **DEGREE HOLDER**

HEAD OF THE DEPARTMENT

CURRICULUM VITAE

a) Name of the Student : Nigam Rani

b) Date of Birth : 17th June 1987

c) Place of Birth : Bijnor

d) Motherôs Name : Mrs. Kamalesh Devi

e) Fatherôs Name : Sh. Ajay Pal Singh

f) Permanent Address : VPO:Block Jalilpur, Distt: Bijnor (U.P.) Pincode: 246725

g) Telephone : -01345-284075

h) Mobile : 09017097982,09457124262

i) E-mail : nigam.rani87@gmail.com

j) Academic qualifications :

Degree	University/Board	Year of passing	Percentage of marks	Subjects
Matric	U.P. Board	2003	57	Hindi,English, home science, science,social science ,music
10+2	U.P.board	2005	64.4	HomeSci., Geography, Hindi, Eng., economics. .
B.Sc. (Home Sci.)	Kurukshetra University Kurukshetra	2008	72.25	FN, HDFS, FRM, CT, HSEE
ONE YEAR CERTIFICATE COURSE	Kurukshetra University Kurukshetra	2008	85.25	Fashion and textile designing
M.Sc. (Home Sci.)	CCSHAU, Hisar	2011	7.63	Human Development and Families Studies

k) Co-curricular activities : Cô and óBô certificate of National Cadet Corps ,
State level player in Kabaddi

l) Medals/Honours received : Nil

m) List of publications : Nil

NIGAM RANI