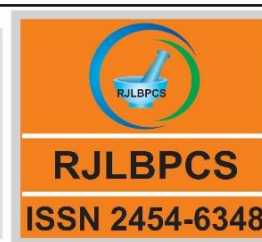


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Research Journal of Life Sciences, Bioinformatics,
Pharmaceutical and Chemical SciencesJournal Home page <http://www.rjlbpcs.com/>**Original Review Article****DOI - 10.26479/2018.0402.12****SIGNIFICANCE IN ASSESSMENT OF IQ IN LEARNING DISABILITY****Manjula Thulasi S**

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ABSTRACT: Learning disabilities are developmental disorders that arise in childhood and typically affects on academic performance, affecting written expression, deficits in handwriting speed, spelling, vocabulary complexity and verbosity, deficits in visuospatial skills, abstract and conceptual thinking, planning and problem solving, motor, mathematical and interpersonal skills. If a child's cognitive ability is much higher than his or her academic performance, the student is often diagnosed with LD. The combination of standardized intelligence testing, age at onset within the developmental period, and calibrated assessment of social functioning, identifies a population which is accepted by most authorities as a reliable and valid indicator of LD.

KEYWORDS: Learning disability, IQ, Developmental disorder

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* Email Address: thulasidasr@yahoo.co.in**1.INTRODUCTION**

Learning Disability (LD) is a neurological disorder that affects the brain's ability to receive, process, store and respond to information. The term LD is used to describe the unexplained difficulty, a person of at least average intelligence has, in acquiring basic academic skills. The term LD is relatively new, Kirk, (1963)¹ introduced the term 'Learning Disability' in a meeting of concerned parents of children having learning problems, and educationalists, in Chicago. A learning disabled child is one with at least average intelligence whose academic performance is impaired by developmental lag in the ability to sustain selective attention. Such a child requires specialized instruction in order to permit the use of his or her full intellectual potential. There are many kinds of learning disabilities, and most of the children are affected by one kind of LD, but some are affected by more than one kind. Wardsworth, (2008)² classified learning disabilities into four types.

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1. Dysphasia (Speech language disorders)
2. Dyslexia (Disability in reading)
3. Dysgraphia (Disability in the area of physical writing)
4. Dyscalculia (Disability in the area of mathematics)

IMPORTANCE OF IQ IN LD

In day to day life, the intelligence of a particular individual is observed on the basis of his or her interest, attitude, the desire for knowledge, communicative skill and similar other attributes that contributes towards his/her performance or behaviour. Intelligence is a concept that has been understood in different ways by different psychologists. The term “IQ” was first coined by the German psychologist, Stern (1914)³. According to him “intelligence is general capacity of an individual to consciously adjust his thinking to new requirements”. “Intelligence is also defined as the ability to undertake the activities that are difficult, complex and abstract and which are adaptive to a goal, and are done quickly and which have social value and which lead to creation of something new and different” (Stoddard, 1943)⁴ and some other psychologist defined intelligence “as the ability to adapt one’s surrounding”.

IQ - ACHIEVEMENT DISCREPANCY

Learning disabilities are identified by school psychologists, clinical psychologists, and neuropsychologists through a combination of intelligence testing, academic achievement testing, classroom performance, and social interaction and aptitude. It is clear that difficulties in the identification of children with LD do not make the disabilities any less “real” to the student who can not learn to read, write, or to understand maths despite good intelligence, an adequate opportunity to learn, and with good teaching. There is currently no universally accepted test or standard for identifying children with LD. While a discrepancy between IQ and achievement has been a widely accepted criterion for the identification of LD. Recent research also has provided little evidence that a discrepancy between formally measured IQ and achievement is a clear indicator of LD. The intelligence assessed through various intelligence tests is expressed in terms of IQ. For the assessment of IQ, the ratio of mental age and chronological age was then multiplied by 100 in order to eliminate the decimal point. Bunday (1985)⁵, in his study on IQ of LD children, reported a learning disabled child to be one who with at least average intelligence but whose academic performance is impaired by developmental lag in the ability to sustain selective attention. Such a child requires specialized instruction in order to permit the use of his or her full intellectual potential. On earlier studies by On earlier studies by Hagerman *et al.*, (1985)⁶ and Kemper *et al.*, (1988)⁷, reported that the affected males having IQ values between 25 and 70 showed intelligence impairment from mild to severe, especially with regard to arithmetic, spatial memory, abstract thought, whereas complex reasoning, verbal skills, including vocabulary and reading, were less significantly impaired reported that the affected males having IQ values between 25 and 70 showed

intelligence impairment from mild to severe, especially with regard to arithmetic, spatial memory, abstract thought, whereas complex reasoning, verbal skills, including vocabulary and reading, were less significantly impaired.

DEFINING LD IN RELATION TO IQ – WORLD HEALTH ORGANIZATION (WHO) APPROACH

The diagnostic system employed by WHO in respect of LD has three crucial elements, IQ, social functioning, and age at onset. The IQ element is the conventional cut-off score of 70, within which exist, mild, moderate, severe, and profound subgroups. Onset is said to be ‘with in the developmental period’, not being more rigorously defined than this, some authorities, notably the American Association for Mental Retardation, have definition systems in which any case with onset up to 18 years can be included (Grossman, 1983)⁸. However, the majority of instances of acquired brain damage in mid childhood or later is distinct from pre and perinatal cases in terms of both nature and outcome of disability (O’Brien, 2000)⁹. The inclusion of social functioning in the WHO definition of LD is an important element of this approach. The principle is to distinguish between ‘impairment, disability, and handicap’, and to stress the need for some identifiable social incapacity to be present, in addition to manifest LD. However, the inclusion of social functioning as an element of the definition of LD has been the subject of some controversy. Much of this criticism centered on whether labeling people with LD as having social incapacities might stigmatize the individuals concerned (Mittler, 1979)¹⁰. Another issue was the problem of social incapacity and its social context. For, any individual with a given level of learning disability might well cope and function sufficiently in an undemanding social situation, while that same individual would struggle within a different setting (Landesman, 1981)¹¹. There have been further concerns that social functioning will inevitably be context dependent, rather than subject to some broadly applicable measurement system (Department of Health¹², 1993; Evans¹³, 1995). The combination of standardized intelligence testing, age at onset within the developmental period, and calibrated assessment of social functioning, identifies a population which is accepted by most authorities as a reliable and valid indicator of LD.

GENDER BASIS OF LD

Numerous neurodevelopment disorders, including cerebral palsy, attention-deficit hyperactivity disorder (ADHD), autism, speech and language disorders and learning disabilities are diagnosed more often in boys than in girls. Researches have advanced theories emphasizing the importance of gender differences in rates of maturation. Chromosomal structure (Childs, 1965)¹⁴ thresholds of genetic vulnerability (DeFries, 1993)¹⁵, thresholds of genetic vulnerability to birth complications (are possible explanations of the male prevalence in neuro-developmental disorders. Girls with LD may be underestimated, putting them at risk for academic, social and emotional challenges (Shaywitz *et al.*, 1990)¹⁶. Teachers refer boys more often than girls for assistance prior to special educators. Green *et al.*, (2007)¹⁷ reported some factors that lead to significantly high reference of boys, and boys tend to have more externalizing problems. Girls exhibit more passive behaviours

such as sitting and day dreaming, so they are less likely to be identified than boys (Shaywitz *et al.*, 1990)¹⁶. Smith, (2004)¹⁸ revealed that boys are 1.5 or 6 times more likely to be identified than girls. These could be linked to possible medical, maturational, sociological and brain organization factors.

2. CONCLUSION

The features of LD children may not be obvious at birth and parents begin to notice their children with some behavioral problems or delayed attainment of developmental milestones and learning disabilities. Sometimes, these signs are subtle and it may take a long time for a physician or other professional to acknowledge. Most of the children with LD are identified as “learning disabled” after a long period of time if the child really struggles with the problem. LD children require a special attention or training or supervision at home or in school. LD often prevents children from reaching their full potentials. The parents, pediatricians and geneticists have a crucial role in earlier identification and giving proper therapies to improve those who are suffering from LD. Any signs of LD, even very early in a child’s school career should be taken seriously and investigated. Early identification and early intervention can prevent most serious learning difficulties or at least reduce the severity of them. LD children require a special attention or training or supervision at home or in school. LD often prevents children from reaching their full potentials. The parents, pediatricians and geneticists have a crucial role in earlier identification and giving proper therapies to improve those who are suffering from LD. Any signs of LD, even very early in a child’s school career should be taken seriously and investigated. Early identification and early intervention can prevent most serious learning difficulties or at least reduce the severity of them

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