



A Study on Learning Disability in Adolescents and Young Adults

KEYWORDS

Disorder, Brain processing.

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ABSTRACT *This paper reports the survey which was done on 93 individuals (both male and female), aged 17-30 years, on their ability to learn and express themselves in terms of their personal, social and corporate abilities. The individuals participated in the online survey from several regions of India. The questions asked were to measure the level of the disabilities of the individuals, its causes and the level of its influence on their life. The study reveals that most of the people had one or more kind of learning problems and many felt the need of extra attention. The study also took in considerations of any kind of influence of the geographical climate and area and their influence on the ability of a person. Learning disabilities are not curable but if that is identified sooner or in the adolescent age, several steps can be taken in order to lower the problems.*

INTRODUCTION:

Learning disability (LD) was firstly defined by Kirk in Chicago, in year 1963 and is commonly used to describe the individual (especially children) having specific problems in speaking, reading, language and communication [1]. Various definitions have been given and formulated on learning disorder because of the complexity of the disorder. According to the National Joint Committee on Learning Disabilities (NJCLD), LD may be defined as a heterogeneous group of various disorders of neurological systems that affects the brains ability to receive, process, store, respond to and communicate information [2, 3].

Although the origin of the disorder is still not fully known but it is presumed to be originated from the disorder of the nervous system. It affects the brain functions significantly and also affects its way of processing the information. The individuals having any kind of the learning disability have different set of skills and abilities but it varies depending upon the frequency and the extent of the disorder. The individuals having LD generally performs poorer than individuals who do not have LD and they find difficulty in acquiring new skills because of very poor processing of brain [4]. But it cannot be assumed that if an individual have any kind of learning disability then he/she will be weak physically, mentally or both. There are people with disability that have superior qualities and may be categorized in the group of being twice exceptional. This term was used by James J. Gallagher to name the individuals that are highly talented and at the same time have LD [5].

The learning disabilities roundtable conference held in 2002 and again in 2004 strongly recommends the need of identification and effective delivery of special attention, education and other related services to the persons with LD [6,7]. The areas which are affected by this disorder include speech, memory, perception, interaction, reasoning, academics, sports, language, and other relevant fields. There are strong chances of improvement in these areas if certain steps are taken toward it. This includes the practical independence and capacity increasing for accessing the universal services before they leave the school. Young individuals as well as their families feel that the support, proper information, suitable opportunity and excellent post-compulsory education may be helpful to increase

their skills set [8].

EXPERIMENTAL

The elements of LD are very vast and needed to be categorized to help reduce the complexity of its study. The survey categorized the learning disorders into the following types:

Dyslexia: This includes the problems associated with language such as writing, spelling, reading etc.

Dyscalculia: The problem is associated with the mathematics and reasoning like computation, mathematical facts and problems.

Dysgraphia: This problem is faced by most of the people and it is associated with the handwriting. The problem is solved as we grow up but in many cases it is persistent.

Dyspraxia: The motor neuronal function of the individual playing a significant role in the coordination and manual dexterity [3].

Previous studies also show that there is a significant influence of the learning disorder on the health of the individuals. It suggests they have a poorer health than non-disabled ones and they also struggle with their health for lifetime. Specific type of genetic and biological causes of LD can cause several diseases like Downs syndrome and Williams's syndrome is associated with congenital heart disease, Prader-Willi syndrome is associated with hypothalamic disorders [9]. Some of the common disorders and Deficiency are:

Auditory Processing Disorder (APD): This is related to the processing of the auditory information by the brain and appropriate response. This includes the process of reading and learning a language. The impairment in the auditory information processing can lead give trouble to the individual in speaking and communicating with others.

Visual Processing Disorder (VPD): The visual interpretation is impaired and the person can have false visual interpretation due to wrong data processing in the visual cortex of the brain and individual can feel difficulty in reading, writ-

ing and reasoning.

Executive Functioning Deficits (EFD): It is associated with inability to plan, organize, memorize, and manage time, space and efficiency.

Attention-Deficit/Hyperactivity Disorder (ADHD): Most common cause of the distraction and over-activity. The person finds difficulty in sitting still, daydreams are common and loss of interest from things and activities is quite often [3].

RESULTS AND FINDINGS:

The online survey was done specifically on the young adults and adolescent in order to find the cause (whether it is by birth or is acquired in the course of the life), its effect on the individuals life and to know their thinking (Mental) process. The result suggests that there is a significant influence of learning disorder on the person’s cognitive, language, speaking, listening, reasoning process etc. Most of the individuals (82.79%) have one or more kind of weakness in learning process. Although many have found the way to overcome these problems but still several finds it difficult to cope up with them and strongly suggests a the need of special attention towards them. The detailed survey results are given in Table 1.

Table 1:
Number of individuals with and without LD

Individuals with LD		Individuals without LD	
Male	Female	Male	Female
49	28	9	7
Total: 77		Total: 16	

A careful study reveals that nearly 37% individuals were found to have more than one kind of problems. This suggests that poor processing of information by brain can affect many functions of an individual. The frequency of each type of LD is described in Table 2. The most common type of learning disorder is seemed to be associated with Executive Functioning Deficits (EFD) which is found to be around half of the individuals having LD.

Table 2:
Number of individuals with LD vs. types of LD

Category of LD	Sub-category	Frequency		Percentage (%)
		Male	Female	
Dyslexia & APD	Speaking	14	04	23.38
	Language	04	03	09.09
	Reading	04	00	05.20
	Listening	03	00	03.90
Dyscalculia	Mathematics	12	10	28.57
	Reasoning	06	02	10.40
Dysgraphia	-	-	-	-
Dyspraxia	Coordination	04	02	07.79
	Distractibility	17	09	33.76
EPD	Memorizing	23	13	46.75
Others	-	04	02	07.79

Additional Information: Since birth: 15 (19.48 %), after

birth: 40 (51.95%), Unsure: 22 (28.57%), No. of individuals who faced problems due to LD: 48 (62.34%), People feeling need of special attention (including individuals with and without LD): 39 (41.94%).

The data suggests that the maximum chances of getting LD are after birth as its frequency was found to be greater than 50%. 19.48% individuals said they had these problems since birth and 28.57% do not even know when actually the problem started. It suggests an external factor may also be responsible for inducing the problems during the course of life. Most commonly of all is the traumatic head injury (THI) which results in low processing rate of brain and also reduced rate of learning of new things. This was studied by Dalby & Obrzut in 1991, Donders & Kuldaneck in 1998 and Fletcher, Levin, & Butler in 1995 [10]. There are some evidences found in the survey that individuals from same geographical region have some kind of similar pattern of problems and it can be estimated that the geographical climate may play some kind of role in the brain development. Also nutritional lack can be a factor reducing the growth and the processing of the brain functions. Low intake of fatty acids, manganese, iodine, vitamins and minerals are the major cause of LD [11-15]. Thus there may be many other factors as well which could be responsible for the LD in individuals.

As expected, the competency level of the individuals having LD are found to be low as compared to their counterparts. Most of the individuals having LD perform in the range average-good. But their counter peers always do well (as the data suggests 87.5 % individuals who do not have LD fall in good and excellent category but this data is only 49.39% for the individuals who have LD). This is evident from Table 3.

Table 3:
Competency level of individuals with and without LD:

Academic Performance	Poor	Average	Good	Excellent
No. of individuals with LD (77)	4	35	35	3
No. of individuals without LD (16)	0	2	12	2

When asked to the individuals with LD whether they feel the requirement of any kind of special attention or extra time on their activities and exams, 50.65% response was positive. This shows the amount of struggle they are facing due to these problems.

Table 4:
Number of individuals who feel the need of extra attention:

Individuals with LD		Individuals without LD	
Male	Female	Male	Female
24	12	2	1
Total: 37 (i.e. 41.94%)			

CONCLUSION AND DISCUSSION:

The study has identified the major kinds of learning disabilities and its various causes in young adults. The majority of the individuals are facing with one or more kind of LD. Most of them think they deserve more attention and extra facilities to cope up with their weakness.

The survey also showed that the majority of the causes of the disability occurs after the birth with several causing agents like head injuries, nutrition lack and difference in the environmental conditions. The responsibility of the family and the individual itself is very important in prevention and in dealing with the disability. Proper amount of nutrition and safety can lower the risk of LD and significantly improve the mental performance of the individual. After getting LD there is no chance of getting out of it but with proper care and appropriate learning techniques this can be lowered. Healthy food, exercise, new learning techniques and support from others are very essential for coping up with LD. The paper findings can be used in effectively dealing with this disability among the young adults and in developing new and effective learning techniques to help the individuals with LD.

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