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The Relationship between Attention Deficit & Hyperactivity Disorder ADHD and Learning Disabilities

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ABSTRACT

The purpose of the study was to investigate the relationship between attention deficit and hyperactivity disorder. The study adopted a descriptive survey research design. The sample of the study was 40 pupils suffering from learning disabilities. The instrument used for the study was a ADHD scale designed by the researcher, which was face and content validated by three experts. Cronbach's Alpha reliability method was adopted to determine the internal consistency of the scale, which yielded a reliability coefficient of 0.83. The data collected were analyzed using frequencies, percentage and correlation. The study indicated that there are relationship between learning disabilities and attention deficit & hyperactivity disorders, and the prevalent of attention deficit and hyperactivity disorders among learning disabilities is 87.5%.

Keywords: Attention-Deficit Hyperactivity-Learning Disabilities, Special Need

I. INTRODUCTION

Specific learning disability” means a disorder in one or more basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not apply to children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (Moats, & Lyon, 1993).

The prevalence of learning disability identification has increased dramatically in the past 20 years. The “real” prevalence of LD is subject to much dispute because of the lack of an agreed-upon definition of LD with objective identification criteria. Some researchers have argued that the currently recognized 5% prevalence rate is inflated; others argue that LD is still under identified.

In fact, it appears that there are both sound and unsound reasons for the increase in identification rates. (Lyon, 1996).

Cynthia. & etal (1994) pointed that the learning disability is not a single disorder, but is a general category of special education composed of disabilities in any of seven specific areas: (1) receptive language (listening), (2) expressive language (speaking), (3) basic reading skills, (4) reading comprehension, (5) written expression, (6) mathematics calculation, and (7) mathematical reasoning. These separate types of learning disabilities frequently co-occur with one another and with certain social skill deficits and emotional or behavioural disorders such as attention deficit disorder. LD is not synonymous with reading disability or dyslexia although it is frequently misinterpreted as such. However, most of the available information concerning learning disabilities relates to reading disabilities, and the majority of children with LD have their primary deficits in reading.



The most common disorder that co-exists with learning disabilities is attention deficit/hyperactivity disorder (ADHD). Many studies over the years have indicated a very strong co-morbidity of the two conditions but the exact percentage of overlap varies widely in these studies because of methodological inconsistencies. Studies of the families of children with either learning disabilities or ADHD indicate strong patterns of inheritance for both conditions, but also show that they are independent disorders. ADHD and learning disabilities are two discrete disorders with distinct symptom clusters. However, some symptoms may be common to both disorders, including disorganization, weak executive functioning, and inefficient use of strategies. Without careful assessment, distinguishing between ADHD and learning disabilities can be difficult because of overlapping symptoms and because some behaviors that may, result from learning disabilities can look like ADHD symptoms. For example, individuals with central auditory processing deficits can appear inattentive, and students who have. (Ldad Staff 2014).

a. How Learning Disabilities Differ From ADHD

There are several different types of learning disabilities, and a child may have more than one. When you or your child's teachers suspect a learning disability, your child will undergo psycho-educational testing to confirm it. The testing measures ability or intelligence versus achievement on standardized tests. Students with learning disabilities typically have average or above average intelligence, but they have difficulty processing and retrieving information, which is why they don't do well on tests in school. ADHD may also affect a child's ability to learn. ADHD children have brain function impairments that can make them inattentive, hyperactive, and impulsive. "ADHD children may appear to have learning disabilities because they often are unable to acquire information and working skills as a result of their inattentiveness or hyperactive behaviors," Rubin says. (Beth, 2010)

b. The Connection between ADHD and Learning Disabilities

The most common learning disability in children with ADHD is dyslexia. "We find that 15 to 30 percent of ADHD kids have a reading disability, which is twice the usual prevalence," Rubin says. "We also find that

impairments in several areas of functioning social, academic, and emotional are worse when someone has both a learning disability and ADHD." If a child has a specific learning disability, it needs to be distinguished from the behavioral and attention aspects of ADHD so that it can be addressed, Rubin says. If your child has been diagnosed with ADHD, she is eligible to receive special education services under the Individuals with Disabilities Education Act. A child with a learning disability or ADHD can benefit from, and is legally entitled to, an individualized educational program (IEP) that addresses her needs. Parents, teachers, and guidance counselors should work closely together on forming the IEP before school starts and evaluating and updating it as the school year progresses. No one knows what causes ADHD or learning disabilities, Rubin says. "We believe there are usually multiple factors, including a genetic family predisposition." Once your child has been identified as having ADHD or a learning disability or both, you should work to help him overcome the challenges and succeed in school. Medications and targeted education strategies can help. ([Andersen, Egeland, & Merete. 2013](#))

c. Literate Review:

A few studies have examined the relationships between Attention deficit & hyperactivity disorder ADHD and learning disabilities; LD Study conducted by Cantwell & Baker (1991) discusses the relationship between attention deficit-hyperactivity disorder (ADHD) and learning disability (LD). The data show an increased prevalence of both LD and ADHD among children with early speech/language impairments. Furthermore, LD was strongly associated with ADHD in both the initial and follow-up samples. Study conducted by Ponde, Cruz, Antonio & Andre (2012) Objective to assess the impact of attention deficit on learning problems in a sample of schoolchildren in the city of Salvador, Bahia, Brazil. Results show that a very strong association was found between attention deficit and learning problems (prevalence ratio [PR] = 31.7; 95% confidence interval = [16.1, 62.3]). They suggest either that attention deficit leads to learning problems or that attention deficit or learning problems are comorbid conditions, in which case learning problems may also contribute to secondary symptoms in ADHD. Study conducted by Cynthia & et al (1994) it found that there are significant relationships between learning disabilities and ADHD.

There are some studies conducted to explore the characteristics of children with learning disabilities. One of the earliest profiles, developed by Handwerk & Marshall (1998), includes the following ten frequently cited attributes: hyperactivity, impulsivity, perceptual-motor impairments, disorders of memory and thinking, emotional lability, academic difficulties, coordination problems, language deficits, disorders of attention and equivocal neurological signs. Lerner (2005) identified nine learning and behavioral characteristics of individuals with learning disabilities: disorders of attention, reading difficulties, poor motor abilities, written language difficulties, Oral language difficulties, social skills deficits, psychological process deficits, quantitative disorders and information processing problems. Study conducted by Barkauskien & Bieliauskaite (2002) found that children with learning disabilities had significantly more internal (somatic complaints, isolation, anxiety/depression) and external problems (aggression and delinquency) as well as attention and social problems. Study conducted by [Larry & Silver \(1981\)](#) The findings lend some support to the view that there is a clinical relationship between children who have learning disabilities and children who are hyperactive and/or distractible. Study of [McConaughy, Mattison, & Peterson, \(1994\)](#) show that children with LD scored significantly higher than children with LD on all but CBCL scale and all TRF scales; both groups scored higher than normal controls on all but scale. Teacher-reported aggressive behaviour was the best predictor of SED versus LD classification. Other significant predictors included attention problems, delinquent behaviour, social problems, thought problems, and withdrawal. A study conducted by [Epstein, Cullinan & Neiminen, \(1984\)](#) indicated that the same four factors were found with the learning-disabled boys in both studies: Conduct Problem, Anxiety Withdrawal, Attention Deficit, and Social Maladjustment. Teachers rated the learning disabilities boys on the 55 items. In the ratings given by the teachers, hyperactivity and restlessness were associated with other attention items for younger children. Study conducted by [Jennifer & et al \(2006\)](#) revealed significant associations with anxious/depressed and withdrawn behaviours, as well as an increased likelihood of attention problems among children with LD.

II. METHODS AND MATERIAL

Method Research Approach:

The study was carried out in basic school in Khartoum, capital of Sudan. The study adopted a descriptive method.

Study group:

The population of the study was 230 children suffering from learning in elementary school in Jazan area south of Kingdom of Saudi Arabia.

Study sample:

The researcher chosen 40 children randomly from study group as a study sample. 25 children whom suffering from academic learning disabilities and 15 suffering from developmental learning disabilities as in table 1.

Sample:

Table 1 shows the sample of study according to disabilities type

Disabilities Type	Number	Percent
Academic learning disabilities	25	62.5%
Developmental learning disabilities	15	37.5%
Total	40	100

Tool:

ADHD scale containing 36 items developed by the researcher from literature reviewed was used for data collection. The scale was divided into three sections, A, B AND C, A was designed to obtain hyperactivity disorder, B was designed to obtain impulsivity disorder, and C was designed to obtain attention deficit disorder. The instrument was face and content validated by three experts from Special Education Department in University of Jazan. Cronbach's Alpha reliability method was adopted to determine the internal consistency of the instrument. A reliability coefficient of 0.83 was obtained.

Practical Procedures:

The researcher with the help of three research assistants administered the scale. The respondents were allowed a period of three weeks, after which the researcher and the research assistants went round to collect the scale items for analysis. The data collected was analysed using frequency, percentage, and Cronbach's Alpha.

III. RESULTS AND DISCUSSION

A: RESULT:

When the researcher analysed the data the result are as following:

1- There are Correlation relationship between learning disabilities and attention deficit & hyperactivity disorders.

To verify this hypothesis the researcher used correlation test. Table 2 shows the result of this hypothesis. As you, see in table 2 the value of correlation is 0.86 this value is significant at level 0.01 because the value of Sig 0.005 is less than significant level 0.01. That means there are relationship between learning disabilities and attention deficit & hyperactivity disorders.

Table 2 shows the relationship between learning disabilities and ADH

Variables test	Number	R value	Sig	Result
Learning disabilities	40	0.86	0.005	Significant

2- What is prevalent of ADHD among learning disabilities children?

To answer this question the researcher used Frecouncey and percentage. Table 3 show the result of this question. As you, see in table 3 the numbers of children with learning disabilities and had suffering from attention deficit and hyperactivity disorders ADHD are 35 children out of 40, that means the prevalent of attention deficit and hyperactivity disorders among learning disabilities is 87.5%.

Table 3 shows the prevalent of ADHD among learning disabilities

Disorder	Total Number	Number of child with ADHD	Prevalent Percent
ADHD	40	35	0.87.5

3- What is prevalent of attention deficit among learning disabilities children?

To answer this question the researcher used Frecouncey and percentage. Table 4 show the result of this question. As you, see in table 4 the numbers of children with learning disabilities and had suffering from attention deficit disorders are 33 children out of 40, that means the prevalent of attention deficit disorders among learning disabilities is 82.5%.

Table 4 shows the prevalent of attention deficit among learning disabilities

Disorder	Total Number	Number of child with ADHD	Prevalent Percent
ADHD	40	33	0.82.5

4- What is prevalent of hyperactivity among learning disabilities children?

To answer this question the researcher used Frecouncey and percentage. Table 5 show the result of this question. As you, see in table 5 the numbers of children with learning disabilities and had suffering from hyperactivity disorders ADHD are 34 children out of 40, that means the prevalent of hyperactivity disorders among learning disabilities is 85%.

Table 5 shows the prevalent of ADHD among learning disabilities

Disorder	Total Number	Number of child with ADHD	Prevalent Percent
ADHD	40	35	0.85

B- Discussion:

When the researcher verify the hypothesis and answering the questions, the study revealed that:

There are relationship between learning disabilities and attention deficit & hyperactivity disorders. This result is in line with many studies; in study of Cantwell & Baker (1991), the data show that learning disabilities was strongly associated with ADHD in both the initial and follow-up samples. Ponde, Cruz, Antonio & Andre

(2012) show that a very strong association was found between attention deficit and learning problems. Larry & Silver (1981) the findings show that there is a clinical relationship between children who have learning disabilities and children who are hyperactive and/or distractible. Cynthia & et al (1994) it found that there are significant relationship between learning disabilities and ADHD. The researcher pointed that many studies over the years have indicated a very strong co-morbidity of the two conditions but the exact percentage of overlap varies widely in these studies because of methodological inconsistencies. Studies of the families of children with either learning disabilities or ADHD indicate strong patterns of inheritance for both conditions, but also show that they are independent disorders. Larr & Silver, (1981) pointed that ADHD and learning disabilities are two discrete disorders with distinct symptom clusters. However, some symptoms may be common to both disorders, including disorganization, weak executive functioning, and inefficient use of strategies. Without careful assessment, distinguishing between ADHD and learning disabilities can be difficult because of overlapping symptoms and because some behaviours that may, result from learning disabilities can look like ADHD symptoms. For example, individuals with central auditory processing deficits can appear inattentive, and students who have become discouraged due to learning problems may not stay on task or may appear distractible.

In addition, the study revealed that prevalent of attention deficit disorders among learning disabilities children is 82.5%. This result is in line with study of Barkauskien & Bieliauskaite (2002) they found that children with learning disabilities had significantly more internal and external problems (aggression and delinquency) as well as attention and social problems. McConaughy, Mattison, & Peterson, (1994) show that children with LD scored significant predictors included attention problems, delinquent behaviour, social problems, thought problems, and withdrawal. Epstein, Cullinan & Neiminen, (1984) indicated that the same four factors were found with the learning-disabled boys in both studies: Conduct Problem, Anxiety Withdrawal, Attention Deficit, and Social Maladjustment. Jennifer & et al (2006) revealed significant associations with anxious/depressed and withdrawn behaviours, as well as an increased likelihood of attention problems among children with LD.

Finally, the prevalent of hyperactivity disorders among learning disabilities is 85%. This result with study of Epstein, Cullinan & Neiminen, (1984) indicated that the same four factors were found with the learning-disabled boys in both studies: Conduct Problem, Anxiety Withdrawal, Attention Deficit, and Social Maladjustment. Teachers rated the learning disabilities boys on the 55 items. In the ratings given by the teachers, hyperactivity and restlessness were associated with other attention items for younger children. The researcher pointed that many people mistakenly believe that attention deficit hyperactivity disorder (ADHD) is a learning disability. This may stem from the fact that the two conditions often occur together about 20 to 30 percent of ADHD children also have specific learning disabilities. "Having one condition makes the other more likely," ADHD can also cause difficulties learning ADHD children often can't focus on subjects long enough and have trouble following directions. Still, ADHD is not considered a learning disability. In addition, most common disorder that co-exists with learning disabilities is attention deficit/hyperactivity disorder (ADHD). Additionally the most common disorder that co-exists with learning disabilities is attention deficit/hyperactivity disorder (ADHD).

IV. CONCLUSION

Our study conducted to find out the relationship between learning disabilities and attention deficit and hyperactivity disorder, to verify this aims the researcher used ADHD scale. The study indicated that there are relationship between learning disabilities and attention deficit & hyperactivity disorders, and the prevalent of attention deficit and hyperactivity disorders among learning disabilities is 87.5%. According to these results, the researcher suggest that it is important to distinguish between the two conditions because of different methods of treatment. Intervention for learning disabilities may involve academic skills instruction, the development of compensatory strategies and self-advocacy skills, and appropriate accommodations. Treatment for ADHD may include behavioural strategies, modifications to the learning environment, family counselling, and the use of specific medications.

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