



# Comparison of Side Efficacy, Reading Disorder and Verbal Intelligence in Normal and Overactive Children

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**Abstract:** *Introduction & Objective:* Side exclusion is one of the indicators of natural brain development and varies in brain developmental damage. Undoubtedly, reading is the most important and most complex educational activity of students in the years of the school's opening. One of the important cognitive components that is effective in reading performance is executive functions. The present study aims to compare the normal and overactive students with three variables of side effects, reading disorder, and verbal intelligence in girls of the third elementary school of Babolsar. *Materials and Methods:* In this study, the statistical population consisted of all elementary school students of the third grade, who studied 135 children in two groups of normal and overweight children in Babolsar schools in the academic year of 2016-17. According to Cochran's formula, 100 people were selected by multi-stage random cluster sampling. The research method is a causal-comparative descriptive study with independent *t*-test. The data gathering tool, the questionnaire, the degree of supremacy of the Edinburgh Supremacy Assessment Checklist, were used to assess the verbal intelligence of the Wechsler Measurement Scale and to assess reading disability, reading and reading tests, Reza KaramiNoori and AlirezaMoradi. Whose validity and its success were confirmed in previous studies. The data was analyzed using descriptive and inferential statistics using SPSS 21 software. *Results:* Independent *t*-test results showed that there was a significant difference between reading and reading students in overactive and normal students. Also, the results obtained in the verbal variable showed a significant difference between the two groups of normal students and Too active. ( $P > 0/05$ ). *Conclusion:* Therefore, it can be concluded that considering the importance of attention deficit hyperactivity disorder (ADHD) in educational settings and the effect of learning children with these two disorders and tackling them and their families and School authorities with its problems, research into the side effects of these two disorders seem necessary.

**Keywords:** Side Effect, Verbal Intelligence, Learning Disorder, Hyperactivity, Dyslexic

## INTRODUCTION

Many students are troubled in learning textbook subjects because of learning disorders yearly. These students always have high or mild intelligence, but in some educational situations they show performance weaker than other students, and never less exposing in suitable educational settings, and also lacking manifest existence tolls and without acute social and mental problems and having mean intelligence they don't able to learning in special fields of main groups of children with learning disorder, one can mention the children with dyslexia,

dyslalia and arithmetic disorder. Against passing half century of different research about learning disorders, yet its cause is unknown, even in some cases, research endeavours for finding cognitional cause of this order lead to different and sometimes un consonant results. Of elements are which paid attention to them in different researches can be biochemical elements (thyroid busybody). Haris and Spay, with the inspiration of Kirks and Chalfman noticed that deficiency in thyroid secretion such as busybody and hypo activity may be the cause of dyslexia. Environmental elements (such as nutrition and hygiene), inheritance and pre term and post birth and physiologic factors (such as cerebral damage and hurt) also are effective. also side supremacy that means accustom to using foot, hand, eye, ear of one side more than other side of body and is important with specializing one hemisphere for language simultaneously, can has determined role because of physiologic effects (Vlass and Maklabin, 2014).

Learning disorder is one of the most important child psychological disorders. As this disorder create trouble in doing school homework and daily affairs, so it was paid attention to. Orthon as first person who considered language and reading problems, believe that reversing words and vocabularies is a symptom of side non dominance in left hemisphere that is the center of language. Based on his theory, left hemisphere must dominant on right hemisphere and control the interference of right hemisphere in lingual activities time that cause to tumble in language. (Ahadi and Kakavand, 2013). With regarding to theorists views in the theory of the attention amplitude default, they believe that child with learning disorders have difficulty in centralize and attention. It seem that there is a mental effect that may child with special deficiency in learning face it and it is inability to centralize attention and precision on desired subject. (Seif Naragh, 2015).

Because of learning problems outbreak prevalence amount, recognizing students with learning disorders with hyperactivity disorders is very important. Considerations showed that in many cases learning disorder interfere with the inattention and hyperactivity.

It was said that 20-25% child with hyper activity with inattention are suffered from learning disorder. (Alaghemand Rad and Momeni, 2015). Based on financial assessment and statements in US in 1997-1998 more than 2/6 millions child aged 6-17 received one of recognition of inattention disorder or learning disorders. Child who only were recognized with learning disorders, are referred to exceptional educational services 5 times more than child with hyperactivity with inattention (Omidfar, 2015).

Always students with learning disorder have higher and mild intelligence but in the same education settings they show weaker educational operation than other students and in against of be in suitable educational setting and also lack of obvious biologic damages and lack of acute social and mental problems, with having mild intelligence don't may to learning in special settings (reading, writing, calculation), so stating problem and finding ways to solving these seem very necessary.

Mehri Nejad and et al (2012), in their research found that total preschool child error score with preparation qualification for affecting inability in dictation and reading in test of Bandar Gostalt is higher than normal preschool child meaningfully.

Also these findings showed that non uniform error in test of Bandar Gostalt is valid index for expecting the child preparation in afflicting in dictation and reading. Shahim and Haroon Rashidi (2007), in a research compared the operation of students with verbal and non verbal learning disorder in the test of Bandar Gostalt that results showed that students with verbal learning disorder have difficulty in cognitive, spatial – visual, conceptional , touch , visual – conceptional and movement – visual match abilities setting related to students with verbal learning disorder.

Martinz and Smrvd – Klykmm (2018) showed that child with dyslalia have difficulty in stablishing social relation and compatibility. Vlochvs and Karaptsay (2017) showed that child with dyslalia operate slower than normal child in reforming shapes. Based on this, they concluded that child with dyslalia suffer from cognitional difficulty that affect on visual memory. Haaman and Kuffman (2014) showed that students with learning disorder, usually have difficulty in memorizing visual and audiel stimulant.

Therefore, current study aim to answer to this question which is "whether is there difference among side supremacy, reading disorder, and verbal intelligence in normal and hyperactive child?"

## Materials and Methods

Method of this study is descriptive, comparative – causal with independent statistical t-test. Because researcher want to compare the side supremacy, reading disorder and verbal intelligence in normal and hyperactive child and consider whether there is difference among side supremacy, reading disorder and verbal intelligence in normal and hyperactive child.

Current study statistical society include 135 normal and hyperactive students

(the girls of the third elementary school of Babolsar), that 100 are selected based on Cochran formula with the random sampling method. Entrance criterion to this research is female gender and girls of the third elementary school of Babolsar and exit criterion is normal and hyperactive. Students having side supremacy non reading disorder and high verbal intelligence. data collecting instrument were questionnaire, of Edinberg side supremacy assessment checklist for assessing verbal intelligence of Veksler intelligence scale and for considering reading disorder, reading and dyslexia test Reza Karami Noori and Alireza Moradi that was distributed among the girls of third elementary school of Babolsar , and necessary explanations were provided to each person for completing questionnaire.

Edinburg side supremacy questionnaire include four parts that consider hand supremacy, foot supremacy, ear supremacy and eye supremacy respectively. Hand supremacy part include 10 questionnaire that characterize side supremacy with answering person or person observer that he use which hand (right or left or both) in doing 10 homework. positive scores show supremacy of right hand negative scores show supremacy of left hand and zero score showed the non side supremacy (range of score is -100 to +100 0. Other parts of this questionnaire include 4 questions. Second used questionnaire was Veksler intelligence scale. Data collecting instrument of Veksler intelligence scale was published for preschool students in 1967 and about preschool child include 110 mini testes that calculate total IQ with two verbal and non verbal scales, which in this study verbal scale is dominant. verbal scale include 5 main mini testes such as information , vocabularies , number calculation, simulations, subject apprehension and a complementary mini testes (phrasing), means if a examinee fail in each of mini testes or tester cant confide to results of one of mini test, he can use complementary or behind mini test and they are arranged based on difficulty. Sentences mini test is a memory test that replaced with number memory in child scale (Azkhosh 2008). For considering reading disorder, reading test and dyslexia by Reza Karami Noori and A lireza Moradi was used. This was provided by Reza Karami Noori and Alireza Moradi and is normalized about Persian, Azari and Kurdi language and has 10 minitest that its aim is considering the reading ability level of normal boy and girl students in elementary school and recognizing child with reading and dyslexia disorder.

Karami Noori and Moradi normalized this test on 1614 students in five educational levels in 2008. Mean of this test was 100 and standard deviance was 150. Students who operate as 2 standard deviance less than test mean were selected as students with reading disorders. Perpetuity of this test was calculated using Kronbakh test that its mean was obtained for different mini test among 43% - 98% (Karami Noori and Moradi 2018). For matching subjects, the page of symbols, dyslexia and dyslalia symptoms of dyslexia and dyslalia symptoms of dyslexia and dyslalia was completed. These are provided with regarding to cognitive criterion of dyslexia and dyslalia disorders, cognitive notebook and mental disorder statistic (DSM-IV), and were selected based on following criterions:

1. Dyslexia based on reading test and dyslexia NAMA
2. non using rytaltine
3. be in third grade and aged 9 years
4. having IQ as 90-115 based on Resksler child intelligence test
5. Visual and audile assessment for differentiate audile and visual difficulties from dyslexia and dyslalia and deleting persons with visual and audile damages.

It is necessary to say that the cause of selecting third grade of elementary school was that some mistakes was seen in dyslexia and dyslalia in child aged 7-8. But only number and immutability of these mistakes can be

meaningful times after first year of learning reading and writing (Dadsetan, 2010). Based on this, in this study third grade students were selected.

Questionnaire authority mean was obtained with Kronbakh method in current study for Edinburg side supremacy scales 87%, verbal intelligence 13%, and reading disorder 89% and total questionnaire 83%. questionnaire perpetuity was done with doing study on subject data . Kronbakh alpha has suitable validity for questionnaire. Collected data in this research was analyzed with independent t- test results showed that there is meaningful difference about reading disorders among normal and hyperactive students and results in done study in verbal intelligence variable showed meaningful difference among normal and hyperactive students. In current study, moral considerations such as getting justification from university moral committee, providing necessary explanations and research aim to participants in study, getting informal consent, be secret and anonymous information and announcing justification for exiting participants in each time.

**Findings**

As we showed in table 1, most part of considered case of descriptive informative was provided about some characteristics of studied person in the side supremacy, reading disorder and verbal in normal and hyperactive child in the form of table.

**Table 1: Mean for variables**

Descriptive statistic		number	mean	Mean difference	Error mean difference
Side supremacy	normal	100	3125.6	85180.1	0.46295
	hyperactive	100	4375.7	96578.2	0.74144
Verbal intelligence	normal	100	4375.3	36473.1	0.34118
	hyperactive	100	5625.5	22017.2	0.55504
Reading disorder	normal	100	3750.6	66833.1	0.41708
	hyperactive	100	1250.4	54380.1	0.38595

Table 1 show the mean amount in two studied classes in side supremacy, reading disorder and verbal intelligence as side supremacy in normal students is (0/462950 and hyperactive students is (0/741440. Mean amount of verbal intelligence variable in normal and hyperactive child This mean in normal students (0/34118 and in hyperactive students (0/55504) The mean amount of reading disorder , variable in normal and hyperactive child This mean in normal students is (0/41708) and in hyperactive students is (0/38595). As the table 2 show, the yield of data analyze and the significance coefficient mean and obtained T was supported by study theory and side supremacy in normal and hyperactive child is different.

**Table 2: the side supremacy T test results in normal and hyperactive child:**

	Variances equality Leven test		T-test for equality of two variances				
	F	Significance level F	t	df	Significance level	Mean difference	Error mean difference
Variances aren't equal	062.3	0/090	-287.1	30	0.008	-12500,1	.87411
Variances aren't equal			-287.1	153.25	0.010	-12500,1	.87411

With regarding to sig (0/008) in t- test there isn't the cause for rejecting H0 and its contrary is invalid, so there is meaningful difference among two subject variables and this show that the amount of side supremacy variable wasn't equal and in confidence level, it is concluded that there is meaningful difference among side supremacy in normal and hyperactive children.

As table 3 show, the yield is supported by data analyze and significance coefficient and obtained mean T and there is difference among reading disorder in normal and hyperactive child.

**Table 3:** the results of t- test of reading disorder in normal and hyperactive child.

	Variances equality Leven test		t- test for equality of two variances				
	F	Significance level F	t	df	Significance level	Mean difference	error mean difference
Variances aren't equal	273.3	0.080	-262.3	30	0.003	-12500.2	.65152
Variances aren't equal			-262.3	919.24	0.003	-12500.2	.65152

With regarding to sig (0/003) in t- test there isn't the cause for rejecting H0 and its contrary is invalid, so there is meaningful difference among two subject variables and this show that the amount of reading difficulty variable in two groups wasn't equal and in the confidence level, it is concluded that there is meaningful difference among reading difficulty in hyperactive and normal children.

As table 4 show, yield is supported by data analyze, significance coefficient mean and obtained mean T of study theory, and there is difference among.

**Table 4:** the result of t- test of verbal intelligence in normal and hyperactive child

	Variance equality Leven test		t-test for equality of two variances				
	F	Significance level F	t	df	Significance level	Mean difference	Error mean difference
Variances aren't equal	000.	100.0	346.1	30	188.	62500.	46435.
Variances aren't equal			346.1	799.29	188.	62500.	46435.

With regarding to sig amount (0/188) in t- test there isn't any cause for supporting H0 and its contrary is right so there isn't any meaningful difference among means of two subjects and this show that variable mean isn't equal in two groups and in significance level it is concluded that there is meaningful difference among verbal intelligence in normal and hyperactive child.

**Discussion and Conclusion:**

Main aim of this article is considering and comparing side supremacy, reading disorder and verbal intelligence of normal and hyperactive child in the girls of third grade of elementary school in Babolsar and current findings show that there is difference among side supremacy, reading disorder and verbal intelligence of the girls of third grade of elementary school in Babolsar. Obtained results of analyzing main study theory is relevant to the research of Alaghe Mand RAD and Momeni (2010), Rasta and Pitter, Raver and Rav (2009). Research results show that of all prevalent behavioral difficulties in child, in attention disorder, low attention and hyperactivity are disorder that most research are done about it , as nearly 1000 scientific article are published about it yearly. Disorder nature complexity that demand description and recognizing it, the difficulties diagnostic strategies variance with this disorder and therapeutic interventions levels is planed, justify the spreading of these researches.

Learning disorders which influence on brain ability in receiving, processing, storing and reacting to information and point to the group of different and various disorders. In this manner , person face to critical difficulty in learning educational basic skills, skills which are vital and necessary in gaining success in education and employment and social life. learning inability may influence person ability in the fields such as earing, speaking, reading and math. (Hassan Poor Hashtajani, Ali Nejad Makari, 2010). with regarding to

the importance on hyperactivity disorder / inattention and dyslexia in educational settings and the influencing of the learning of child with two disorder and involvement of they and their family and school agents with its difficulties , study about its side effect of these two disorders seem necessary.

So it is necessary and is proposed that with regarding to cultural and social and tradition sovereignty and its prevalence in Iran different racial and its effect on the manner of education and learning of child, it is provided that researches similar to determined variables in provinces with cultural difference are execute and result is assessed and concluded in independent study.

Because few researches is done related with this subject, the possibility of more detailed and comparative considerations is provided less than past.

With regarding the high prevalence of the disorder provided in the current study, the necessity of planning for affected child is irrefutable. Otherwise one can expect the continuity of disorders in adulthood period also extending other psychological disorders.

It is proposed that considered subjects is done with variables provided in study in the same age group of male child and is compared concluded.

Current study has some limitation too that include complete disinclination to collaborating in some examinee for answering to questionnaire that cause to of 100 study cases, 20 questionnaire is erased and because of lack of sufficient time , sport or art part was used that cause to students don't pay attention to it sufficiently.

The likelihood of non royal answers is one of critical research limitation that for controlling it, researcher tried to attract the confidence of research unite with communicating with other suitably.

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#### **Benefits contrary:**

It is affirmed that there isn't any benefit contrary in current study.

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