



Effectiveness of medical treatments to improve learning disorders

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ABSTRACT

The aim of this study was to Effectiveness of medical treatments to improve learning disorders in the Ilam, Iran. The sample consisted of 40 secondary school students 12 to 15 years with mean age 13/5 were with learning difficulties is based on the American Psychiatric Association(DSM-IV, 2004). Then Two groups were randomly divided into experimental group and control And were placed psychiatric treatment and control group received only the training school. There were not statistically significant differences in learning disabilities in children before and after premedication. These preliminary findings suggest that premedication children with learning and intellectual disability among those with potential need for specialist care.

Keywords: Learning disability, Medical treatments, secondary school students.

INTRODUCTION

While Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition Defined Learning Disorders as "Learning Disorders are diagnosed when the individual's achievement on individually administered, standardized tests in reading, mathematics , or written expression is substantially below that expected for age, schooling, and level of intelligence. [3] had new category for learning disability (specific learning disorder) which combines diagnoses of reading disorder, Mathematics disorder, disorder of written expression, and learning disorder not otherwise specified. Because learning deficits in the areas of reading, written expression, and mathematics commonly occur together, coded specifies for the deficit types in each area are included. The text acknowledges that specific types of reading deficits are described internationally in various ways as dyslexia and specific types of Mathematics deficits as dyscalculia [3]. People with learning disabilities are sometimes prescribed psychotropic medication to help manage their challenging behavior.

People with learning disabilities (LD) are generally thought to be more likely to experience mental health problems than the general population. However, the symptoms are often not easily recognized and usually manifest as changes in behavior. Behavioral disorder can manifest as aggression directed to others but also in the form of self-injury. Unfortunately, the belief that medication alone will work is too readily embraced. The most important treatment, however, may simply be someone helping the child/adolescent/young adult accept who they are and determine the best ways to move on. In learning disabilities, psychotropic medication may be prescribed for a range of psychiatric disorders such as psychotic illness, affective disorders, anxiety disorders, attention deficit hyperactivity disorder, autism, insomnia etc. There is a call for alternative therapies particularly when a condition lacks a reliable remediation. For example, there is no cure for autism; the main goals of mainstream behavioral and medical management are to lessen associated deficits and family distress, and to increase quality of life and functional independence [28]. Some alternative therapies, such as gluten-free, casein-free diets, may be appealing to some parents because the treatment recommended by most experts is thought to be "cold and manipulative [40]. Parents may also consider a drug treatment for attention deficit as avoidable. Alternative treatments to a stimulant

medication range from natural products to psychotherapeutic techniques and highly technological interventions. It has been argued that although texts that promote alternative therapies do not directly accuse parents of inadequacy, the claims that the disability is caused by certain factors, such as poor nutrition, supports the culture of mother-blame [27]. Before prescribing medication, there should be a clear diagnosis or target problem and a person-centered treatment plan.

Although the rate of functional psychiatric illness such as schizophrenia and affective disorders [20] seems similar in adults who have learning disabilities (LD) to that in the general population, the rate of problem behavior is quite high [21]. The rate of psychosis is significantly higher among adults. According to some estimates, between 20% and 45% people with ID receive psychotropic medications [20]. Of them 14% to 30% are receiving these medications for the management of problem behavior and not for the treatment of any psychiatric disorder [15]. Clarke and colleagues (1990) had previously found that 36% of adults with LD who did not have a diagnosis of mental illness were receiving psychotropic medication. Whereas the use of psychotropic medications in the treatment of psychiatric disorder is justified, their use in the management of problem behavior in people with LD in the absence of a diagnosed psychiatric disorder remains controversial for the following reasons: (a) overall these medications are not licensed for use in the management of problem behavior, (b) these medications have potential adverse effects, particularly if used over a long period of time, (c) once prescribed these medications are difficult to withdraw, and (d) overall there is very little good quality evidence available to support the use of medications under these circumstances. Nevertheless in a recent prospective 12 months follow-up study of 100 adults who have been seen by psychiatrists in the UK for the management of aggressive behavior, Unwin and colleagues (2011) found more than 90% of the participants received psychotropic medications. Of them 66% received antipsychotics, 42% antiepileptics, 35% antidepressants, 14% anti-anxiety/ beta blockers, 43% as required medications, and 23% received medications to counteract adverse effects of other psychotropic medications.

Use of medication is only one of many strategies that could be employed to manage psychopathology and problem behavior in people who have LD. Treatment should be provided within the context of a carefully drawn individualized care programmed after proper discussion with the person with LD, their careers, and other professionals involved in the care of the person see [26] see international guide [16]; national guide [37]; [35]. The overall aim of the treatment should not only be symptom control but to provide a better quality of life for an individual with ID and his/her careers. Indications for the use of psychotropic medications for psychiatric disorders such as psychoses (e.g., schizophrenia etc.), affective disorders (e.g., depressive or bipolar disorders etc.), and anxiety related disorders (e.g., obsessive compulsive disorder, phobias etc.) should be the same among people with LD as they are for the general population. For a comprehensive summary of evidence for the effectiveness of antipsychotic medications systematic reviews by [35], [38] and [36]. Currently there is equivocal evidence (two RCTs showing positive result and one, Tyrer et al., 2008 showing negative result) in support of risperidone's effectiveness among adults with LD. For a summary of evidence on the effectiveness of antidepressants see Sohanpal et al. (2007). Overall, there is little evidence in support of use of antidepressants. Anti-anxiety medications such as benzodiazepines, buspirone and also beta-blockers have been used for the management of problem behavior in people with ID, although evidence in support of their effectiveness is lacking [21]. There is no evidence to guide clinicians which medications may be helpful for which particular problem behavior. Many people who have LD receive psychotropic drugs for many years without proper assessment of their treatment. [5] and [10].

EXPERIMENTAL SECTION

Participants

In Semi-experimental study Participants were 20 LD students (8 boys and 12 girls) from Tehran, Iran, ages 12 to 15 age ($M = 13.5$ ages, $SD = 11.78$) from the Learning disorder Research Institute and secondary school in Tehran. Children's ages were calculated to the day from birth records provided to the school where the children were tested. Then randomly divided into control and experimental groups. IQ test students' on top 90 and did not have any psychological problem. All subjects using the test LD were evaluated. Then, the experimental group participated in training with medicine. Training program for one year, two one-hour sessions per week were offered. After all of these steps are subject (both experimental and control groups), again in terms of LD, performance were evaluated. A reminder - which the students know did not receive any intervention control group and both groups, received training school. After one month, follow-up test was performed.

RESULTS

Table 1: compares the scores of students with learning disability before premedication

Subtest	Experimental group N=20			Control group N=20		
	M	SD	t	M	SD	t
mathematic	9/83	1/059	9/08	1/003	1/74	
reading	9/78	1/78	10/75	1/16	0/91	
writing	9/35	0/014	8/01	1/91	1/83	
Composition	9/13	1/209	10/28	0/011	1/19	
Dictation	8/43	0/91	9/05	1/370	1/52	

P<0/05

Table1: comparison of score of achievement academic pre intervention) include of: reading, mathematics, science, Foreign language, sport , Comprehension that no difference in to groups The results in Table 1 show that both experimental and control groups in grades Composition, dictation, writing, reading, mathematics, with no significant difference. Level is also significant {t (20) = 1/74, P <0/05}.

Table 2: compares the scores of students with learning disability after premedication

Subtest	Experimental group N=20			Control group N=20		
	M	SD	t	M	SD	t
mathematic	9/83	1/583	9/21	1/840	1/76*	
reading	10/57	1/293	10/31	1/85	1/18*	
writing	9/52	0/199	10/91	0/743	1/58*	
Composition	11/10	0/712	9/71	1/01	2/91*	
Dictation	9/09	1/014	9/13	1/890	1/47	

The results in Table 2 show that both experimental and control groups in scores of dictation, writing, reading, mathematics after premedication have no significant difference. But there is a difference in the Composition. These researchers found that medical treatments had no effect on the academic achievement of students with learning disabilities. {t = 1/17, P <0/05 }.

CONCLUSION

Carried out important studies to assess which factors affect the withdrawal of psychotropic medications after a long term use. They successfully reduced antipsychotic medication, without the resurgence of problem behavior in 52% of 36 adults with ID, of whom 33% completed the full withdrawal programmed. They also found that factors such as staff perceptions, environmental factors, and staffing ratios influenced prescribing habits. In Research Unit of Pediatric Psychopharmacology (RUPP) continuation (2005) study 63% of those in whom placebo replaced risperidone showed resurgence of problem behavior as opposed to 13% of those who continued to have risperidone in the long term. In the absence of adequate evidence base, clinicians are advised to consider guidelines developed for the use of psychotropic medications for the management of problem behavior in people with ID in the absence of any psychiatric diagnosis [31]; [7]; [23]; [14]; [8]; [16]; [37]. Consider non-medication based first approach to manage behavior problems in people with LD who do not have a psychiatric diagnosis. In each follow-up consider the initial formulation and consider non medication based management and if possible consider lowering of medication or withdraw.

This article has attempted to show how the gap between Learning disorder and practice can be bridged. By using Medicine and learning methods based on educational theories and derived principles, medical educators will become more effective teachers. This will enhance the development of knowledge, skills, and positive attitudes in their learners, and improve the next generation of teachers. Ultimately, this should result in better trained doctors who provide an even higher level of patient care and improved patient outcomes Several intervention studies have assessed drug reduction or 'rationalisation'. Fischbacher²⁵ showed in an uncontrolled or randomized study that reduction of at least one AED was feasible for many patients and could have an associated behavioral improvement. Begh and colleagues²⁶ using a similar uncontrolled non randomized approach, were able to show a reduction in AEDs from 1.84 to 1.05 per patient over a mean of 12.5 months. A further non-controlled, open, no-randomized stud from the UK²⁷ showed that out of 172 patients remaining over three years (from a population of 215 patients) the mean number of AEDs reduced from 1.41 to 1.05 per patient. This was associated with an increase in dosage of remaining drugs and a less than clear effect on seizure frequency, with a reduction in 48% of patients, an increase in 33% and no change in 19%. Unfortunately for the practicing clinician, while there appears to be a groundswell of support for 'rationalization', aspects of the methodology used in all of the above studies, crucially lack of control and randomization, leave the issue unproved. Unfortunately people with learning disability do not fit well into established evaluation processes. This can be seen by a continued trend to open trials and retrospective case note evaluations with a paucity of randomized, controlled trials, as we will discuss late.

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