



Evaluation of the Effectiveness of Medications Used in the Treatment of Attention Deficit and Hyperactivity Disorder (ADHD) in Primary School Age Children in terms of Parent and Teacher Views: (Example of Trabzon Province)

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To cite this article: Collaborate, Current Science, Volume 5, No. 5-8, 2023, p. 600 – 615. - 0099-0001-2308-0514.

Our studies are in a format accredited, approved, and supported by EAALS - European Academic Studies and Laboratory Services. ("Scientific Studies - Current Science Georgia") "EAALS offers all our works, services, and publications to the world scientists at the stage of carrying our control, accreditation, and support processes to the international platform." ("CURRENT SCIENCE") ("Scientific Studies - Current Science Georgia")

Issn: 2667-9515

Barcode: 977266795001

Editors Group:

Concessionarie: Tsisana Kharabadze

Niyaz Bokvadze

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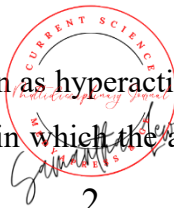
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Abstract

Being unusually active, sometimes known as hyperactivity, is another name for hyperactivity. To put it another way, it is a mental illness in which the affected youngsters are unable to exercise



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self-control. Children who suffer from attention deficit hyperactivity disorder (ADHD) may struggle to concentrate or sit still for long periods of time. Some youngsters diagnosed with attention deficit hyperactivity disorder (ADHD) may struggle not just at home but also in the classroom because of the symptoms of their condition. Because of the possibility that this may lead the youngster to behave differently depending on the level of hyperactivity that he has. For instance, children that exhibit hyperactivity may have a harder time establishing friends than other children do. Their ability to concentrate and their responses to situations are quite distinct from those of other youngsters. Without so much as lifting a finger, he is able to provide straightforward responses to the questions that are posed by his instructors. Because they are so easily distracted, they are prone to making careless mistakes in memory. Daydreaming is a common problem for them in general. They might misplace stuff or have difficulty completing their duties. According to acibadem.com.tr, they may talk excessively or interrupt others without realizing they are doing it. The first signs of attention deficit hyperactivity disorder (ADHD) often show up around the age of 3, but a diagnosis isn't established until the child is in elementary school. To counter this, recent advances in testing have made it possible to diagnose attention deficit disorder and hyperactivity disorder in children as young as those enrolled in elementary school (hizmethastanesi.com). Due to the difficulties their children face, the parents of such children find a solution by taking their children to a child psychiatrist. This allows the doctor to obtain specific information about the general condition of the child by interviewing the child, observing the child, interviewing the parent, and interviewing the child's class teacher. The doctor can then diagnose the child as having attention deficit hyperactivity disorder (ADHD). After that, a blood sample is taken from the youngster so that a determination can be made about the medication and dosage that should be given to the child based on how sensitive he is expected to be to the medications that will be given to him. The youngster may also be sent to a pediatric cardiologist by certain physicians in order to get a cardiac checkup. Because the majority of these medications have warnings on the inserts that come with them about the possibility of having a heart attack. When treating these kinds of youngsters, medical professionals may sometimes combine pharmacological treatment with psychotherapy.



Keywords: ADHD, Attention Deficit Hyperactivity Disorder, ADHD drug use, primary school age, hyperactivity, hyperactivity, attention deficit

Introduction

Adderall, which may be prescribed to children as young as three and adults as old as 21, has been linked in clinical trials to an increased risk of sudden cardiac death, particularly in those less than 21 years old. This is despite the fact that the drug's adverse effects are quite uncommon. These stimulant medicines may cause a rise in both the heart rate and blood pressure of the user. For instance, the prescription drug dextroamphetamine known as Adderall XR was taken off the market in Canada in 2005 due to the fact that it was linked to the sudden cardiac deaths of 20 adults and children as well as 12 strokes. It was stated that unexpected death occurred in 300 persons, and 25 of those deaths were connected to medication use. The system that records the adverse effects of pharmaceuticals used to treat ADHD patients also reported that these deaths occurred. The autopsies of several of these 25 instances revealed that they also suffered from structural heart disease. There were 26 reports of people experiencing chest discomfort, heart attack, stroke, or cardiac arrhythmia as a result of taking a medicine. According to research published on the website izmircocukcardioloji.com, it is suggested that a pediatric cardiologist be followed closely both before and throughout treatment with this category of medications.

Methodology

In our country, we can list the drugs given by doctors mostly for use in the treatment of ADHD: Ritalin, Concerta, Adderal, Clonidine, Pemolin, Carbamazepine and Antidepressant drugs.

one of these drugs, for example Concerta, the initial dose given is 18 mg. According to the package insert, the various side effects of the drug are listed as follows (CONCERTA 18 mg Controlled Release Tablet):

Common: Joint inflammation of the nose and pharynx (nasopharyngitis), upper respiratory tract infection, inflammation of the air spaces in the facial bones (sinusitis)



Uncommon: Decreased white blood cell count (leucopenia)

Very rare: Anemia Metabolism and nutrition disorders

Very common: decreased appetite (in adults)

Common: decreased appetite (in children), eating disorder (anorexia) Psychiatric disorders

Very common: Insomnia (in adults)

Common: Insomnia (in children), anxiety (anxiety), inability to fall asleep, depressed mood, restlessness, aggression, irritability, teeth grinding, depression, unstable state, decreased sexual desire (libido), panic attack, nervousness, confusion (confused) mood), mood swings, abnormal behavior, twitches (tics)

Uncommon: In a neurological disorder characterized by anger, suicidal ideation, hypervigilance, mood changes, sleep disturbance, tearfulness, as well as recurrent involuntary, rapid, sudden movements or twitches (tics) with sounds (Tourette). syndrome) worsening of twitches (tics), restlessness

Very rare: Suicide attempt (including committed suicide), abnormal thinking, apathy, repetitive behaviors, hyperfocus

Very common: Headache Common: Dizziness, tremor, numbness (paresthesia), tension headache, somnolence Uncommon: Drowsiness, somnolence (sedation), hyperactivity

Very rare: Accompanied by writing movements of the hands, arms, face or neck, similar to the condition characterized by flicking movements of the hands, face and other parts of the body (choreoathetoid movements), neuroleptic malignant syndrome (a life-threatening condition caused by the use of neuroleptic drugs). situation)

Common: Blurred vision, impaired accommodation at different distances **Uncommon:** Dry eye

Rare: Visual acuity disorders Ear and inner ear disorders

Common: Dizziness Cardiac disorders

Common: changes in your heartbeat (increased heart rate, heartbeat irregularities, palpitations)

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Uncommon: Chest pain

Very rare: cardiac arrest, heart attack

Vascular diseases

Common: high blood pressure (hypertension), hot flushes

Very rare: Inflammation and/or occlusion of cerebral vessels (cerebral arteritis and/or occlusion), chills in the legs and feet (peripheral coldness) Respiratory, thoracic and mediastinal diseases

Common: Cough, mouth and pharyngeal pain, dyspnea, Gastrointestinal disorders

Very common: Dry mouth, nausea (in adults)

Common: Diarrhea, abdominal pain, abdominal discomfort, upper abdominal pain, vomiting, indigestion, digestive upset, constipation, nausea (in children) Hepatol - biliary diseases

Very rare: Abnormal liver function, including hepatic coma. Skin and subcutaneous tissue disorders

Common: Excessive sweating, rash **Uncommon:** Spotting rash, swelling of the face and throat as a result of allergies (angioneurotic edema)

Very rare: Erythema multiforme (usually spontaneous, hypersensitivity condition with lace-like redness on the hands, face and feet), a type of skin disease causing exfoliation (exfoliative dermatitis), fixed drug rash Musculoskeletal disorders, connective tissue and bone diseases

Common: Muscle tension, muscle spasms **Very rare:** Muscle cramps Renal and urinary disorders

Uncommon: **Blood** in the urine (hematuria) Reproductive system and breast disorders

Common: Erectile dysfunction (erectile dysfunction)

Rare: Male breast enlargement (gynecomastia) General disorders and administration site conditions

Common: fever (pyrexia), hypersensitivity to stimuli (irritability), fatigue, feeling nervous, retarded growth in children due to prolonged use, weakness (asthenia), thirst

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Very rare: sudden cardiac death

In addition, under the title of **Sports in the package insert of the drug**, “The active substance contained in this drug gives positive results in drug use and doping tests. Therefore, use CONCERTA carefully.” phrase is included.

Literature review

Based on the results of the review of the relevant literature, the side effects of ADHD drugs are clearly evident. Despite all these side effects, it is known that ADHD drugs used are not curative, but are effective as long as they are used. **So, despite so many side effects, does the use of these drugs reduce or eliminate the symptoms in children?** In this study, an answer to this question was sought by referring to the opinions of the Parents and Teachers. For this purpose, 10 children using ADHD medication and studying in primary school were randomly selected and the parents (mother or father) and teachers of these children were contacted (n=10+10). **(EGF) and the Teacher Interview Form (ÖGF)**, which consists of 9 open-ended questions in the unstructured form, were applied and qualitative analysis was made in line with the data obtained from the answers given, and the answers were compared and an attempt was made to find an answer to the problem statement of the research.

Survey Study

ADHD PARENT INTERVIEW FORM (EGF)

This interview form was designed in order to acquire information from the student's parent (mother or father) about the general state of the kid in order to assess the impact of the drug on children who are studying at primary school and are getting medication owing to a diagnosis of ADHD. The purpose of this evaluation is to determine whether or not the medication is effective in treating ADHD in children. During the course of the research project, both the student's and



the institution's identities will be kept under wraps. Kindly respond with your most honest answers to the questions.

Information Relating to Demographics:

I am the mother of the child

I am the father of the child

My child is primary school He is studying in the classroom.

My child is currently years old and Ever since He has been using drugs for years.

Please explain if there is a different situation.

Parent Opinion:

- 1- When and why did you suspect that your child has Attention Deficit and Hyperactivity Disorder? How long after suspicion did you take him to the doctor?
- 2- Have you read the package insert (content) of the drugs given for treatment? Are you aware of its side effects?
- 3- Do you use the given medicine constantly or occasionally? Do you inform your doctor when you take a break from the medication?
- 4- Have you ever tried it yourself because you were wondering about the effects of the medications given to your child? If so, can you tell us about your experience?
- 5- What are the differences between your child's situation at home before he/she was on medication and his/her current situation (while using medication)?
- 6- What are the differences between your child's situation at School before he/she was on medication and his/her current situation (while using medication)? For example, was his success affected by this situation?



- 7- When your child is not using medication, is it noticed that he/she is not using medication? Is there any feedback from the school based on behavioral differences (such as being overactive, distracted)?
- 8- Is there anything else you would like to point out in addition to the questions above?

ADHD Treatment May Reduce Symptoms

It has been shown that therapy for ADHD helps alleviate the symptoms of both schizophrenia and bipolar disorder. It has been shown to lower the chance of engaging in drug usage. On the other hand, ADHD that is left untreated may result in long-term dysfunction as well as a variety of other catastrophic effects. Long-term incapacity, a rise in the incidence of automotive accidents, and an increase in drug usage are some of the repercussions that may be seen as a result of this, although the list is not exhaustive. Prevention as well as Instruction of Patients attention deficit hyperactivity disorder who have ADHD need to have regular follow-up consultations so that their symptoms and any other problems they may have may be monitored. There is no feasible way to put sufficient importance on the role that patient education plays in the accomplishment of therapeutic aims. It is important for the parents of children who have attention deficit hyperactivity disorder (ADHD) to acquire a formal education on the illness so that they may comprehend the logic behind the diagnosis of their child's condition. The primary caregiver and the patient's family need to maintain regular communication in order for there to be any hope of developing an effective medication.

Many parents have a negative view of drugs and look for alternatives whenever they can. There is no way to refute the fact that the medications that are now on the market assist certain patients in enhancing their level of function. One of the neurodevelopmental conditions that is identified with the greatest frequency is attention deficit hyperactivity disorder, sometimes known as ADHD. It affects roughly 8-12% of children all over the globe, and up to 65% of ADHD symptoms and cognitive impairments remain into adulthood (Faraone et al., 2003; Polanczyk et al., 2015). In the United States, the prevalence of ADHD is estimated to be between 1% and 5% of adults. Individuals who are not treated continue to deteriorate and, ultimately, encounter issues



in their financial, legal, and social lives. The signs and symptoms of attention deficit hyperactivity disorder (ADHD) have a negative influence not only on the lives of the individuals who suffer from it but also on the lives of their families and on society as a whole. These elements include, but are not limited to, educational and social results, strained parent-child relationships, greater health care consumption, as well as increased health costs. In addition, there are educational and social outcomes that are associated with increasing rates of obesity. Attention Deficit Hyperactivity condition, often known as ADHD, has been called a heterogeneous condition in the past (Casellanos et al. 2006; Costa). This has been stressed in a number of previous research. (2015; Dias et al.). This is something that may be comprehended in terms of multiple etiological risk factors, varied expression of symptom domains, comorbid illnesses, cognitive disorders, and long-term trajectories. Etiological heterogeneity in terms of biological and environmental factors is likely reflected in variation in neural correlates (Nigg and Casey, 2005; Mackie et al., 2007; Fair et al., 2012; Costa Dias et al., 2013, 2015; Karalunas et al., 2014) and results in diverse cognitive and behavioral profiles and developmental trajectories of the disorder (Halperin and Schulz, 2006; Rajendran et al., 2013; Schulz et al., 2017). Recent studies have shown that genetic differences, as well as prenatal and perinatal risk factors, are connected with the emergence of ADHD symptoms and seem to be linked to a range of neurodevelopmental and psychiatric outcomes (Bonvicini et al., 2018; Uchida et al., 2018). These findings were published in the journals Bonvicini et al., and Uchida et al., respectively. These results may be found in Bonvicini et al. (2018) and Uchida et al. (2018). Attention deficit hyperactivity disorder (ADHD), age-inappropriate inattention, and/or hyperactivity-impulsivity symptoms are some of the current diagnostic criteria for attention deficit hyperactivity disorder (ADHD). These criteria are outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association). After that, these symptoms are sorted into one of the following three presentations: a presentation that is generally hyperactive or impulsive, a presentation that is mostly inattentive, or a blended presentation. When attempting to make a diagnosis of attention deficit hyperactivity disorder (ADHD), a clinician would often take into consideration the number of behavioral symptoms, the severity of these symptoms, as well as the amount of time that these symptoms have been present. They are not classified based on any biologically recognizable marker or any aetiological source due to the fact that there is none. about the clinical criteria, etiological causes, and neurobiological



substrates of ADHD, there is still a significant amount of space for conjecture about the existence or nonexistence of linkages between these factors. A substantial amount of effort has been done to explicate these links, as will be discussed in the next section of this article. According to Reale et al. (2017), attention deficit hyperactivity disorder (ADHD) is associated with a broad range of comorbid behavioral and mental diseases. These illnesses include learning difficulties, language problems, mood disorders, anxiety, and conduct/defiant disorder, to name a few. The diagnosis and treatment of ADHD might become more challenging when comorbid disorders such as these are present. It is believed that neurocognitive abnormalities are an essential part of the symptomatology of ADHD (Casellanos and Tannock, 2002; van Lieshout et al., 2017; Kofler et al., 2018; Castellanos and Tannock, 2002). Neurocognitive disorders are often seen in patients who have attention deficit hyperactivity disorder (ADHD). These diseases may affect areas such as sustained attention or wakefulness, executive function (EF), working memory, and self-regulation, although they are not restricted to these areas alone. It is essential to keep in mind that the manifestation of neurocognitive deficiencies varies widely across persons, and that some people do not have these kinds of challenges (Nigg et al., 2005; Willcutt et al., 2005). The attention deficit hyperactivity disorder (ADHD) has also been linked to common structural and functional brain abnormalities in children as well as adults. striatum, thalamus, and frontal lobe all play a role. It has been found to have a function in the pathophysiology of attention deficit hyperactivity disorder (ADHD). (Bush et al., 2005; Li et al., 2012; Xia et al., 2012; Shaw et al., 2013) These three areas of the brain are essential components of the cortico-striato-thalamo-cortical (CSTC) cycles that enable attention and cognitive processing. Studies (Proal et al. 2011; Xia et al. 2012; Cortese et al. 2013; Shaw et al. 2015) reveal that functional and structural problems in the frontal lobe and thalamus are related with the development of attention deficit hyperactivity disorder (ADHD). On the other hand, neuroimaging and neuropsychological studies have shown contradictory results. One theory suggests that the developmental decrease of ADHD symptoms may be connected to the maturity of the frontal cortex and associated circuits supplied by the CSTC loops (Makri, on the other hand, neuroimaging and neuropsychological studies have revealed inconsistent findings. Even though a smaller volume in the frontal lobe is a very typical observation, there is a lack of consensus about the following elements of the anomaly: Is it 1) only down (Stevens and Haney-Caron, 2012), only superior (Hill et al., 2003), or both (Gehricke et al.,



2017)? Is it 1) unilateral (Li et al., 2007; Ambrosino et al., 2017) or bilateral (Gehricke et al., 2017)? Larger studies have shown that only 1% of those with ADHD had an impairment in the most sensitive measures of executive function (Barkley, 1997), which was measured by the Stop Signal Response Time; Nigg et al., 2005; Willcutt et al., 2005. This is despite the fact that numerous studies provide support for an impairment in executive function (EF), which is thought to be mediated by prefrontal circuits (Barkley, 1997). In addition to the idea that developmental and environmental factors may play a role, there is also the possibility that the etiological heterogeneity of the disorder may be a significant factor contributing to the inconsistency of these findings. In this article, we will examine research that has been previously published in order to get an understanding of the prevalence of attention deficit hyperactivity disorder (ADHD), as well as its clinical profile, course, neurocognitive impairments, neurobiological, and pathological processes.

Conclusion

If hyperactivity-attention deficit hyperactivity disorder (ADHD) is shown to have a negative influence on educational achievement, then treatment that is successful may be able to lessen the effect that ADHD has on educational performance. This study tests the hypothesis that children's academic performance may be affected by successful medical therapy for attention deficit hyperactivity disorder (ADHD) using a naturalistic experiment design. According to research that has been published in peer-reviewed medical publications, somewhere between 25 and 30 percent of patients who are medicated for ADHD do not react to the treatment. Non-responders are those who do not respond to the medicine either because it has no impact on them or because it causes them to have major adverse effects, which leads them to cease therapy despite having the same symptoms as responders prior to treatment in both of these circumstances. It is necessary to predict treatment response by individual factors such as age, gender, IQ, ADHD subtypes and symptoms, and neuropsychological features. This is because there is no substantial socioeconomic difference between those who react to therapy and those who do not respond to therapy. We compare the academic performance of children diagnosed and treated for ADHD who



either stopped taking their medication (these children are referred to as non-responders) or kept taking their medication (these children are referred to as responders) in order to evaluate the influence that medical treatment has on academic performance. This comparison was carried out on the basis of the presumption that there were no significant differences between those who responded and those who did not. There was no patient selection for therapy at the time of our research since all of the people who participated in our analysis went in search of treatment initially. After the treatment, you will most likely have several options to choose from. Nevertheless, as was said previously, we get the impression that the choice to stop the treatment was made at random. We have come to the conclusion that obtaining medical treatment has a considerable influence on long-term academic performance results. These outcomes are determined by a student's grade point average after they have graduated from high school.

RESOURCES

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