

JOMC 50 SERVICE LEARNING PROJECT

Time to Prescribe a Change:
Attention Deficit Hyperactivity Disorder and the Over-prescription
of Ritalin

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I have neither given nor received any unauthorized aid in the
completion of this assignment.

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Attention-deficit/hyperactivity disorder (ADHD) is a common syndrome with onset in childhood. The American Psychiatric Association officially named the disease in 1980. It is believed to be a neurobiological disorder, but there is also evidence that it is a result of an imbalance in neurotransmitters. There has been much controversy surrounding this disease. Included in this controversy is the misdiagnosis of the disease as well as over-prescription of Ritalin, the most common prescription drug used in the treatment of ADD/ADHD. This article argues that Ritalin is not as helpful as originally thought, that it's over-prescribed, and that it's possibly a harmful treatment.

The Diagnostic and Statistical Manual Version IV-TR says that the main diagnostic features include a persistent pattern of inattention and/or hyperactivity-impulsivity that has some level of impairment prior to the age of seven years. The Manual states the criteria for diagnosing the disorder is as follows: the patient must show six or more of the following symptoms of inattention for at least six months to a degree that is maladaptive with developmental level. The signs are “fails to give close attention to details or makes careless mistakes, often has difficulty sustaining attention in activities, often does not seem to listen when spoken directly to, often doesn't follow directions and fails to finish schoolwork, often has difficulty organizing tasks and activities, often avoids engaging in tasks that require sustained mental effort, is often easily distracted by extraneous stimuli, is often forgetful in daily activities” (1).

They also can be diagnosed by exhibiting six or more of the following hyperactivity-impulsivity signs. These are “often fidgets with hands or squirms in seat, often leaves the classroom when supposed to remain seated, often runs about or climbs excessively in inappropriate situations, often has difficulty playing or engaging in leisure activities quietly, is often on the go, talks excessively, blurts out answers before questions have been completed, has difficulty awaiting their turn, and interrupts or intrudes on others” (1). Some of these signs, as previously stated, must be present before the age of seven. The symptoms have to be present in two or more settings. There must be clear evidence of clinically significant impairment in social, academic or occupational functioning. Because of the absence of any positive medical or scientific test, physicians are required to diagnose ADD/ADHD in children and adults based almost exclusively on behavioral criteria. As noted by the lists from the DSM-IV-TR, many of these behaviors are present in children at some point or another. The criteria are very subjective, and are left mostly to the eye of the beholder to discern if the disease is present.

Misdiagnosis of the disease in turn can result in prescribing a drug that may not actually be needed. Once the DSM established criteria for diagnosis of the disorder, “there was a 15-fold increase in the number of children that were diagnosed with ADHD” (3). Also, the information provided to parents is not always the most accurate about the drugs. Ritalin, the brand name for Methylphenidate, is the drug that is the most commonly prescribed solution for people diagnosed with ADHD. Methylphenidate was created in 1955 and accounts for more than 90% of the stimulant use in ADHD in the United States.

Ritalin is taken daily by 4 million to 6 million children in the United States (4). “Since 1995, there has been a nine-fold increase in the United Kingdom in the number of prescriptions for Ritalin” (3). In 1995, there were 16,000 prescriptions for Ritalin in Britain; this increased to nearly 140,000 by 1998. In the United States, Ritalin use has more than doubled in the first half of the decade alone, and the production of Ritalin has

increased 700 percent since 1990 (2). “In 1995, the International Narcotics Control Board (INCB), an agency of the World Health Organization, deplored that 10 to 12 percent of all boys between the ages 6 and 14 in the United States have been diagnosed as having ADD and are being treated with methylphenidate”(6). Approximately 90% of the world’s Ritalin use is consumed by the United States (2).

Most people believe that Ritalin, as described by the *New York Times*, is a “mild stimulant of the central nervous system that, for reasons not fully understood, often helps children who are chronically distractible, impulsive, and hyperactive settle down and concentrate” (2). However, this is underplaying the actual effects of the drug. “According to a 1995 DEA background paper done on the drug, it is a central nervous system stimulant that shares many of the pharmacological effects of amphetamine, methamphetamine, and cocaine” (2). The drug works by suppressing all spontaneous behavior. This includes a reduction in curiosity, socializing, and playing. These effects are the same for children, as for adults, and the drug will do the same to a person who doesn’t have the diagnosis of ADHD.

Like most medications, Ritalin has an extensive list of adverse side effects. The short-term effects include loss of appetite, difficulty sleeping and increased irritability and mood swings (7). The medication is short acting and does not build up in the blood stream (7). Because of this, many people experience a distinct phase when the medicine kicks in, as well as when it wears off. This results in what is medically termed “rebound hyperactivity,” where the supposed symptoms of hyperactivity and impulsivity return (7). This often results in increased dosages of Ritalin until the behavior is acceptable. There has been little research done on the long-term effects of continued Ritalin usage. What studies have been done have suggested decreased growth, tics, and paranoia (7).

Another unintended side effect of Ritalin is its potential for abuse. The FDA classifies Ritalin as a Schedule II drug (7). Drugs that fall under this classification have “current accepted medical use” as well as “high potential for abuse” (7). This means that Ritalin is subject to the same controls that drugs like cocaine and morphine encounter (7). Studies have been done that show that monkeys would work in the same fashion for Ritalin as they would for cocaine. The DEA reported that methylphenidate is actually chosen over cocaine in using non-human primates (3). Methylphenidate, like other stimulants, also appears to increase tolerance for related drugs. New evidence shows that when people have a tolerance to Ritalin, and resort to cocaine, they require higher doses of the cocaine than those who have not taken a previous stimulant (3).

Abuse statistics have flourished alongside the boom in Ritalin prescription writing. In 1994 the DEA reported that in Texas among high school seniors, Ritalin was the quickest growing amphetamine being used “non-medically” (3). In 1991, around 25 hospital emergency room visits were connected to Ritalin overdoses in children (3). Four years later, that number of visits reached over 400, which for this age group that is about the same number as cocaine overdose visits (3).

State legislatures are starting to not allow schools to recommend medications for children who they think have emotional and behavioral problems (5). “Both Minnesota and Connecticut recently passed laws prohibiting schools from discussing drug treatment with parents” (5). “Legislation is also pending in New Jersey, New York, Arizona, Wisconsin and Utah” (5). Meanwhile, drug companies are aiming huge marketing campaigns directly at parents. In 2001, many drug companies started a concentrated

publicity campaign aimed at parents. Their strategy involved advertising placement in magazines with a family focus, such as Ladies' Home Journal (6). Novartis, Ritalin's manufacturer, has had several cases brought against them for deceptive promotion of the disorder and the medicine. In a statement before the United States Congress, the Director of the International Center for the Study of Psychiatry and Psychology said parents throughout the country are being pressured and coerced by schools to give psychiatric drugs to their children(6).

Due to the uncertainty, disagreement and subjectivity of the diagnosis of ADD/ADHD, numerous children can be diagnosed with ADHD when in all actuality they might not have the disorder. The misbehavior could be attributed to a number of other possible circumstances that would require further testing, diagnosis, examination, and more importantly time. There are no solid studies that have been done to assess the long-term side effects of methylphenidate. The drug's pharmacological effects, composition, and systemic chemical effects mirror that of cocaine, in a less substantive manner. There has been numerous bills and legislation passed, or in the process of being passed, to put more restrictions on administration of methylphenidate. The drug is readily prescribed, and this increase in prescriptions has had a direct relationship on the number of abuse cases that Ritalin has been involved with. These reasons provide substantial evidence that there is a possibility that physicians over-prescribe Ritalin.

This article would be useful on a website that is going to be used by a doctor or a parent who has a child with ADD. It discusses possible alternatives as well as side effects of the drug of choice, Ritalin. To assess the effectiveness of this project, you could count how many hits are made for the link to this article. You could also ask to have a questionnaire be filled out and have the questions pertain to how helpful this article was for the reader.

Works Cited

- 1) "Attention Deficit Disorder." Diagnostic and Statistical Manual IV-TR. N.p.: n.p., n.d.
 - 2) Eberstadt, Mary. Why Ritalin Rules? Apr. 1999. Policy Review. 13 Mar. 2004 <<http://www.policyreview.org/apr99/eberstadt.html>>.
 - 3) Smith, Liz. Kids on Pills: BBC documentary examines increase in prescription drug use amongst children. 25 Apr. 2000. World Socialist Web Site. 15 Mar. 2004 <<http://www.wsws.org/articles/2000/apr2000/rit-a25.shtml>>.
 - 4) Vastag, Brian. "Pay Attention: Ritalin Acts Much Like Cocaine." JAMA, The Journal of the American Medical Association 286 (2001).
 - 5) Laws May Restrict Ritalin Promotion. 20 Aug. 2001. Injury Board. 16 Apr. 2004 <<http://www.injuryboard.com/view.cfm/Article=737>>.
 - 6) Dr. Breggin Testifies Before US Congress. 29 Sept. 2000. U.S. House of Representatives. 16 Apr. 2004 <<http://www.breggin.com/congress.html>>.
- Elliott, Jay C. Drugs and Behavior. Class Lecture Notes. Chapel Hill. 23 Oct. 2003.

Annotated Bibliography

- 1) Assessing Complementary and/or Controversial Interventions-CHADD Fact Sheet #6.
Children and Adults with Attention Deficit Hyperactivity Disorder. 13 Mar. 2004
<<http://www.chadd.org/fs/fs6.htm> >.
This website discusses some of the questions that are raised concerning the developmental course of AD/HD, as well as the outcome of certain treatments for AD/HD. It discusses how treatments are evaluated, alternative treatments, questions to ask your health care provider, and how to evaluate media reports about AD/HD.
- 2) "Attention Deficit Disorder." Diagnostic and Statistical Manual IV-TR. N.p.: n.p., n.d.
This book is a reference book that provides diagnostic information for mental disorders. It is helpful because it lists criteria that are necessary for having attention deficit disorder, as well as attention deficit hyperactive disorder.
- 3) Austin, Vance L. "Pharmacological Interventions for Students with ADD." Intervention in School and Clinic 38.5 (2003): 289-296.
Provides possible pharmacological interventions for students with ADD, discusses how the drugs will affect the student, provides guidelines for using drug intervention with ADD, and suggests how to monitor the side effects of the drugs.
- 4) Brown, William D., and Ephant H. Harel. "Attention Deficit Hyperactivity Disorder in Elementary School Children in Rhode Island: Associated Psychosocial Factors and Medications Used." Clinical Pediatrics 42.6 (2003): 497-503. 13 Mar. 2004
<<http://www.ebsco.com/home/default.asp>>.
Discusses a study that was done to explore psychosocial factors associated with referral for attention deficit hyperactivity disorder (ADHD) evaluation or ADHD diagnosis among elementary school children in Rhode Island, as well as to examine the extent of drug therapy among this population.
- 5) Eberstadt, Mary. Why Ritalin Rules? Apr. 1999. Policy Review. 13 Mar. 2004
<<http://www.policyreview.org/apr99/eberstadt.html>>.
Discusses what the drug methylphenidate, also known as Ritalin, does to the body. It also discusses some of the myths that are known about Ritalin. It then discusses how children and teenagers abuse Ritalin. The article concludes with a discussion of what Attention Deficit Disorder is and who is diagnosed with the disorder.
- 6) Inman, S, J R. Parr, and A Ward. "Current Practice in the Management of Attention Deficit Disorder with Hyperactivity (ADHD)." Child: Care, Health and Development 29.3(2003): 215-218.
Evaluates the patterns of referral and techniques used in the diagnosis and management of ADHD.
- 7) Marwick, Charles. "US doctor warns of misuse of prescribed stimulants." British Medical Journal 326 (2003). 13 Mar. 2004
<http://eresources.lib.unc.edu/cgi-bin/external_database_auth?A=P|F=Y|ID=181|REL=NA|URL=http://www.nclive.org/cgi-bin/nclsm?rsrc=124>.

Discusses the misuse of prescribed drugs such as Ritalin, and also notes how the misuse is expanding outside of the United States.

- 8) Resnick, Robert J., and Richard W. Root II. "An Update on the Diagnosis and Treatment of Attention-Deficit/Hyperactivity Disorder in Children." Professional Psychology: Research & Practice 34.1 (2003): 34-41. 13 Mar. 2004 <<http://www.ebsco.com/home/default.asp>>.

Discusses the prevalence of ADHD in school age children, means of assessing ADHD in children, and provides guidelines about different methods of treatment for ADHD.

- 9) Rohena, Elba, and Spencer J. Salend. "Students with Attention Deficit Disorders: An Overview." Intervention in School and Clinic 38.5 (2003): 259-266.

This article is designed to help teachers better understand and work more effectively with students with ADD and their families.

- 10) Smith, Liz. Kids on Pills: BBC documentary examines increase in prescription drug use amongst children. 25 Apr. 2000. World Socialist Web Site. 15 Mar. 2004 <<http://www.wsws.org/articles/2000/apr2000/rit-a25.shtml>>.

This website is the overview of the documentary that the British Broadcasting Company ran investigating the rise in the number of children in the United States and Britain that have been diagnosed with ADD and are prescribed psychoactive drugs to control their behavior.

- 11) Some Basic Facts About ADD Medications. Attention Deficit Disorder Association. 13 Mar. 2004 <<http://www.add.org/content/treatment/meds1.htm>>.

The most commonly prescribed drugs to treat ADD/ADHD are stimulant drugs. Antidepressants and antihistamines are also used to help treat ADD. Ritalin and these other drugs have sparked a controversy because doctors feel that the side effects cause more problems than the disorder itself.

- 12) Vastag, Brian. "Pay Attention: Ritalin Acts Much Like Cocaine." JAMA, The Journal of the American Medical Association 286 (2001).

This article discusses how researchers have shown that Ritalin acts much like cocaine, but may not necessarily cause addiction. However, one study found that children who take Ritalin for attention deficit disorder (ADD) are more likely to become drug addicts as adults than other children.

- 13) What Causes ADD? Attention Deficit Disorder Association. 13 Mar. 2004 <<http://www.add.org/content/research/causes.htm>>.

This article discusses some of the myths that people think have caused ADD/ADHD. It tells what doesn't cause ADD. Brain scan images are used to diagnose people's brain activity and use this as a means of determining if a person could possibly suffer from the disorder. Researchers are also exploring the possibility of Fetal Alcohol Syndrome and a link to the disorder.

- 14) Dr. Breggin Testifies Before US Congress. 29 Sept. 2000. U.S. House of Representatives. 16 Apr. 2004 <<http://www.breggin.com/congress.html>>.

This provides an overview of a Ritalin class action suit. It describes the dangers of stimulant medication and how prescriptions for Ritalin have been increasing. It also describes the legal actions that are being taken to prevent this.

- 15) Laws May Restrict Ritalin Promotion. 20 Aug. 2001. Injury Board. 16 Apr. 2004 <<http://www.injuryboard.com/view.cfm/Article=737>>.

This site describes the actions that schools are taking to help with the over-prescription of Ritalin.

16) Elliott, Jay C. Drugs and Behavior. Class Lecture Notes. Chapel Hill. 23 Oct. 2003.

This was a lecture given to me by my professor in Drugs and Behavior. The lecture was on Ritalin and drugs that modify behavior. It also discusses the effects of these drugs on the body.

