

VIEWPOINT

The Pharmaceutical Treatment of ADD, Weight Gain, & Zombie-Like Behavior

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In June of 2010 the Joint Conference on Theoretical and Clinical Optometry (JCTCO) was held in Forest Grove, OR. This is a discussion-oriented, educational meeting sponsored by the Optometric Extension Program Foundation (OEP) and hosted by Pacific University. It addressed attention deficit disorder and attention deficit hyperactivity disorder (ADD/ADHD). Organized in large part by Dr. Wid Bleything, Dean Emeritus of Pacific's College of Optometry, various experts, including Jack Richman, O.D., and David Willis, M.D., spoke on different aspects of ADD/ADHD. As an introduction to that program, I was honored to give a brief presentation on ADD/ADHD cases selected from a Job Corps study.^{1,2} Approximately 80 Job Corps student records were reviewed for references to a diagnosis of ADD/ADHD or to the use of some stimulant medication. This research led me to question the effectiveness of those medications. A large proportion of these prescribed medications were apparently ineffective for the treatment of ADD/ADHD. A good number of adolescents who had been prescribed medications for ADD/ADHD reported that they had discontinued the use of the medications.

I would like to share a case that exemplifies this observation. An 18-year-old male Job Corps student was examined a month after Joint Conference. He reported that Job Corps testing placed his reading proficiency at the 5.4 grade level (Tests of Adult Basic Education®) and certainly below his expected level. My vision examination showed him to have intermittent central suppression, a primary binocularity defect. His College of Optometrists in Vision Development-Quality of Life (COVD

QOL) checklist score was elevated (45). He also answered a simple ADD/ADHD medication questionnaire at the end of our checklist form. The questionnaire asks if the patient has taken medications for ADD/ADHD. The question continues, "If yes what did the medication do to you or for you?" The student answered that the medication "didn't work, but I lost a lot of weight."

Of course, it would be an error to categorically state that medications are never useful in the treatment of ADD/ADHD. One of the important speakers at this JCTCO was a mother, Priscilla Lowery, who gave a chronicle of her son's life. She clearly recounted the child's behavioral challenges and how his life was changed by ADD medications. Yes, sometimes stimulant medications are helpful. The question is, how often are they compared against how often they are actually prescribed?

ADD/ADHD was not the primary concern when I undertook the Job Corps study. Information from the first few years' of subjects was only spontaneously offered on their written health history. Those medical histories sometimes listed stimulants or listed ADD as a prior diagnosis. This trend interested me enough to add specific questions for incoming Job Corps students. The questions asked were: If the student had been diagnosed with ADD/ADHD, what stimulants were prescribed? Who diagnosed the ADD/ADHD? What was the eventual result of pharmacological treatment?

Twelve of the 80 students (15%) reported a diagnosis of ADD/ADHD. Nine of these reported a primary care physician was involved in the diagnosis and three of the 12 did not report who diagnosed the condition. Contributions by the parent and parent/teacher might easily be interpreted

that parents and teachers contributed significantly to the final diagnosis.

The described responses to these stimulants fueled my unease about the medications. Two students had discontinued the medications because (both students used this specific language) the drugs made them "feel like a zombie." Two stopped after being depressed. Three said the medications didn't work. One student's mother refused the recommendation for ADD/ADHD medication.

It can be surmised from this small informal clinical survey that eight of the 12 (66%) were not successfully treated for ADD/ADHD with prescribed medications. Of the four who reported that the medication helped, three chose to discontinue the stimulants. Therefore, 91% were unsuccessful. For some of the students, medications had significant side effects. Depression and perceptual changes were noted. Apparently these changes were disconcerting enough to be reported as "zombie-like."

This outcome was troubling enough that I further explored the records of 26 Job Corps students for whom I had pre-and post-vision therapy data.² My therapy staff picked from the 30 item COVD-QOL instrument, questions they considered to be indicative of ADD/ADHD, or that parents of ADD/ADHD children frequently reported. The identified COVD QOL questions were:

11. Difficulty copying from the chalk board
12. Avoids near work
19. Trouble keeping attention on reading
20. Difficulty completing assignments
25. Clumsy, knocks things over
26. Doesn't use time well
28. Loses things
30. Forgetful, poor memory

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Table 1.

WHO	COVD
1. Trouble wrapping up details	(QOL 20: Difficulty Completing Assignments)
2. Trouble getting things in order	(QOL #12: Avoids near work/reading; and #26: Doesn't use time well)
3. Problems remembering	(QOL #28: Loses things; and #30: Forgetful, poor memory)
4. Delay starting tasks	(QOL #11: Difficulty copying from the chalkboard)
5. Fidgets	(QOL #25: Clumsy, knocks things over)
6. Overly active	(QOL #19: Trouble keeping attention on reading)

These items were compared to an on-line World Health Organization (WHO) Adult ADD/ADHD six-question screening checklist.⁴ We attempted to match the WHO screener questions to those chosen from the COVD-QOL checklist. This produced what we considered adequate matches (Table 1):

Pre- and post-therapy COVD-QOL scores for these ADD/ADHD-diagnosed students were then calculated into questions deemed to be related to the WHO screener. Using the pre-therapy, WHO ADD score, the Job Corps students would have been scored symptomatic for ADD/ADHD. After therapy scores indicated, they would not have been considered ADD/ADHD.

These Job Corps students, diagnosed with a primary binocularity defect of intermittent central suppression, averaged a pre-therapy COVD-QOL score of 46. If we use the common 20-point cutoff score that implies concern,⁵ this group has more than double the visual symptoms that are expected. Since ADD/ADHD is a diagnosis based on exclusion and reported symptoms, the high level of symptomatology could be misdiagnosing the patient as ADD/ADHD when in fact, the patient has a visual problem. This is not a new idea. It is logical that a person with a binocularity problem might not sit quietly and read, but would instead fidget or look for something more rewarding or entertaining.⁶⁻¹⁰ Symptoms of impaired attention seen by others (teachers and parents) would be considered to be a problem with impulse control, consequently putting the student at risk for an ADD/ADHD diagnosis.

Taken together, this suggests a question to explore. "If we can reduce visual symptomatology, would a simultaneous reduction in the symptomatology of ADD/ADHD occur?" A carefully planned and executed study with a more comprehensive diagnostic checklist such as the Connors ADHD Scale¹¹ and paired with vision therapy would be interesting.

A full-fledged study takes time and funding. Vision therapy practitioners could however, begin to add to our knowledge base. I suggest that a research group agree to track clinical records to identify similar trends. I suspect we would identify patients with binocular signs and symptoms and, if treated visually, reduce the use of stimulants for the treatment of ADD/ADHD. In the process we might also reduce the number of children who are losing weight and feel like zombies.

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STEELE continued

a more prepared individual to meet the challenges of society.

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