

Researchers Study Academic Effects of ADHD Drugs

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(PhysOrg.com) -- Stimulant medications used to treat Attention-Deficit/Hyperactivity Disorder, or ADHD, are often assumed to improve memory and make a person smarter, but experts have found that is not the case. Researchers in the Department of Psychology at LSU, including Professor Claire Advokat, are working to find out why.

With a recently funded grant from the Spencer Foundation, Advokat and her colleague, Associate Professor Sean Lane, are hoping to discover why drugs that are well-known to improve attention and concentration don't have more benefit for long-term, <u>academic achievement</u>.

In a recently published guest editorial in the *Journal of Attention Disorders*, Advokat outlined the evidence that ADHD medications don't appear to have the long-term effects that many people think they do.

"Given their well-established benefit for increasing attention and concentration, it seems counterintuitive that ADHD medications are not more effective in improving academic and occupational attainment," Advokat said. "It is time to address this question and clarify the cognitive effects, as opposed to the activating, arousing and energizing actions of these drugs."

According to studies, by adulthood, hyperactive children have been found to have less education, achieve lower grades, fail more of their courses and were more often retained in grade or failed to graduate than control groups. However, since stimulant drugs are effective in treating



adults with ADHD, there has been an increase in the pharmacological treatment of adults, including college students.

"Regardless of whether the stimulants are used legally or not, most students report that they use them to improve academic performance, specifically to improve concentration, organization and the ability to stay up longer and study," Advokat said. "However, in addition to the healthrelated concerns about stimulant diversion and misuse among undergraduates and other adults, there is growing debate about the ethical implications of using drugs to improve academic performance."

The discussion of the morality of "cognitive enhancement" has become the subject of several research editorials. According to Advokat's research, the assumption that stimulants truly are cognitive enhancers does not seem to be questioned. This is in spite of some evidence that college students with ADHD have lower grade point averages and are less likely to graduate than their non-ADHD peers, and medication does not seem to improve their academic experience.

Evidence shows that during a classroom period, students do sit still, pay attention and complete more problems or tasks with more accuracy when given ADHD medications. However long-term academic achievement hasn't been shown to be improved. Numerous studies on this area report that standardized scores aren't improved and "ultimate educational attainment" isn't shown.

"There is a paradox, then, in regard to the use of stimulants as ADHD medications, namely, the concern raised about the ethical quandary of using a <u>drug</u> to become 'smarter,' in the face of so much evidence that the currently available drugs don't make you 'smarter,'" Advokat said in the editorial. "Admittedly, much of the discussion in the literature specifically refers to the increased alertness and reduction of fatigue characteristic of the stimulants (and associated drugs, such as modafinil),



rather than improved cognition per se."

Advokat agrees that intuitively, it would seem logical that drugs that improve attention and concentration should also promote learning and academic achievement. But, as studies have shown, that isn't the case.

"This does not mean that the development of cognitive-enhancing drugs is impossible or undesirable. On the contrary, interest in designing such drugs is intense ... And there is every reason to believe that the search will be successful, with the focused efforts of numerous pharmaceutical firms exploring a variety of approaches. However, we will reach that goal faster, and perhaps more safely, if we remain clear about the efficacy of current drug options for ADHD," Advokat concluded.

Advokat's guest editorial appeared in the May 2009 edition of the *Journal of Attention Disorders* and can be found at jad.sagepub.com/content/vol12/issue6/.

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