

Study examines placebo effects in caregivers of children with ADHD

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Stimulant medications such as Ritalin and Adderall are the accepted treatment to stem hyperactivity in children with attention deficit-hyperactive disorder (ADHD) and improve their behavior.

Now a recent review of research by UB pediatric psychologists suggests that such medication, or the assumption of medication, may produce a placebo effect—not in the children, but in their teachers, parents or other adults who evaluate them.

A placebo effect is a positive change in symptoms or behavior after a patient receives a “fake” medication or procedure; in other words, the belief can become the medicine. In this case, the review suggested that when caregivers believed their ADHD patients were receiving ADHD medication, they tended to view those children more favorably and treat them more positively, whether or not medication was actually involved.

“The act of administering medication, or thinking a child has received medication, may induce positive expectancies in parents and teachers about the effects of that medication, which may, in turn, influence how parents and teachers evaluate and behave toward children with ADHD,” says UB researcher Daniel A. Waschbusch, lead author of the study.

“We speculate that the perception that a child is receiving ADHD medication may bring about a shift in attitude in a teacher or caregiver,” Waschbusch continues. “They may have a more positive view of the child, which could create a better relationship. They may praise the child more, which may induce better behavior.”

Such a placebo effect in caregivers could have both good and not-so-good results, Waschbusch adds. “If teachers treat children more positively if they think they are on medication, that is a good thing. But if the child’s medication is increased because caregivers think it is effective, that may not be a good thing.”

Waschbusch is an associate professor of psychology in the Department of Pediatrics at UB and conducts his research in UB’s Center for Children and Families. The study was published in the April 2009 issue of the *Journal of Developmental & Behavioral Pediatrics*.

Waschbusch and colleagues reviewed existing studies that evaluated whether placebos produce significant changes in children with ADHD and assessed four possible ways placebos could have an effect:

- Through the child’s expectations of a change—the analysis showed that any change in children’s behavior was a direct result of the medication, not the expectation.

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- By producing changes in how caregivers *perceive* children with ADHD when they think they are on medication—the researchers determined the studies suggested that this may be a viable mechanism for the placebo effect.
- By producing changes in how caregivers *behave* toward children with ADHD who they think are on medication, which in turn, could produce changes in the child—the analysis supported this hypothesis.
- Placebos may operate through classical conditioning. “For example,” explains Waschbusch, “if a parent routinely gives their child active medication in pill form and then sees their child’s behavior immediately improve, they will likely learn to connect administering a pill with improved child behavior. This learned connection could then be generalized to administering a placebo pill.”

According to Waschbusch, the next step in this investigation could be a study that observes parents and children interacting under three different conditions: after children received a pill with real medication, after children received a pill with fake medication (a placebo) and after children didn’t receive any pill.

“Comparing these conditions would provide information about the effects of actual medication relative to just getting a placebo,” he says.

William E. Pelham Jr. and James Waxmonsky from UB and Charlotte Johnston from the University of British Columbia are coauthors on the study.

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