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Expert Interview

Understanding Adolescent ADHD: An Expert Interview With Sharon Wigal, PhD

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Editor's Note:
As many as 10% of school-aged children and 6% of adolescents have attention-deficit/hyperactivity disorder (ADHD). Although the prevalence of ADHD is higher in younger children, the problems encountered by adolescents with ADHD can have lasting significance well into adulthood. Medscape's Randall F. White, MD, FRCPC, interviewed Sharon Wigal, PhD, Associate Clinical Professor of Pediatrics and Director of Clinical Trials at the Child Development Center, University of California, Irvine, to discuss symptoms, comorbidities, and sequelae of ADHD in adolescents, and approaches to their management.

Medscape: It's well-established that ADHD is not an affliction of just young children. How many children with ADHD will continue to experience symptoms as adolescents? Is there any way to predict which children are more likely to have continued impairment?

Sharon Wigal, PhD: There are different estimates, but a middle-of-the-road one is that about 8% to 10% of school-aged children and about 6% of adolescents have ADHD. Of those adolescents, it's thought that between 40% and 60% will have symptoms that persist into adulthood.

It would be great if we could actually predict which children will continue with symptoms; we're better at understanding the kind of symptoms we see and the changes in the disorder with increased age. What we normally see are more hyperactive-impulsive symptoms in younger children and combined subtype of ADHD in school-aged childhood; in adolescence and adulthood, there's more inattentive subtype.

In moving from adolescence to adulthood, symptoms of excessive running and climbing translate into a kind of internal restlessness. It's not something readily observable; you have to interview individuals to find out if they're experiencing that.

Medscape: Can you say briefly how adolescents might describe it?

Dr. Wigal: They'll actually say that they feel somewhat restless inside, that they have a feeling that they don't like sitting still.

Medscape: Do they describe it as being uncomfortable?

Dr. Wigal: Yes.

Medscape: Do these young people have social impairments and difficulty with peer relations?

Dr. Wigal: They do tend to have problems with social interaction. That is something we see in them as young kids as well, but at an adolescent age they should be handling greater responsibility, and they certainly have more on their plate in terms of school work and the need to be organized. Difficulty with organizing isn't just within the school realm but with their peers as well. These kids have lower self-esteem and they look for a peer group that will accept them; the typical peer group will reject them.[1] And so they'll find a peer group that often is engaged in risky behavior. These kids tend to be impulsive, so they may be more inclined to engage in the risky behaviors.

Medscape: What comorbidities may emerge as the young person with ADHD undergoes the physical and psychological transformations of teenage years?

Dr. Wigal: We actually see a number that occur in other age groups as well, particularly anxiety disorders, depression, bipolar disorder, and disruptive behavior disorders such as oppositional defiant disorder.[2]

Medscape: One of the most disabling disorders in the long term is conduct disorder. Is there anything you'd like to say about that?

Dr. Wigal: In terms of conduct disorder, some kids will have brushes with the law, juvenile delinquency, and substance abuse. Problems with driving may or may not go along with that comorbidity, but are something not to forget in talking about adolescent ADHD.

Medscape: What do we know about the risk of auto accidents in this population?

Dr. Wigal: One fact that's significant is that car rental agencies won't even rent cars to anyone under 25 years old. Even though we've had that piece of information for years, it seems like our research is just catching up in terms of what we know about planning and prefrontal-lobe functions in normal adolescents, in which we see development continuing beyond the age of 21.[3] Certainly before that age, one has a concern about the effects of substance use on the healthy brain, let alone on the brain of someone with ADHD.

With that said, in terms of driving, we usually see that adolescents with ADHD have higher rates of moving violations in their first 3 to 5 years of driving as compared with those who don't have ADHD. That means everything you can think of: following too closely, passing, speeding tickets, difficulty with recognizing signs and signals, and dealing with roadway markings. These findings are not gender specific; in other words, we see this with adolescent males and females with ADHD. New research uses models for driving, and when people are treated with stimulants, their focus and ability to attend may improve, not just in everyday tasks in the classroom and at home, but on the road.[4]

Medscape: The risk for using tobacco is also elevated in youth with ADHD, is it not?[5]

Dr. Wigal: There is a growing area of research on nicotine use in ADHD, and certainly a lot of individuals start smoking in their adolescent years. There may actually be a neurobiological reason for this, which has to do with nicotinic receptors and biological displacement, and smoking may be a way to self-medicate just as using other drugs of abuse may be.[6] That's something we're waiting for more careful research on.

As far as substance abuse, it certainly is an area that gets a lot of media play. There's some work by McCabe looking at the fact that, in older adolescents and young adults, some individuals may be using drugs that they weren't prescribed.[7]

Medscape: In a recent issue of *The New England Journal of Medicine*, a physician who treats college students discussed the risk of abuse of stimulant medications.[8] What do you think about this concern?

Dr. Wigal: I guess that what Kadison gets correct is that there definitely are polarized views on medication. We see that every day in the clinic. There are families who totally embrace it as a way to treat their child's difficulties, and there are others who want to put it off and wait 4 or 5 years or longer. We do have a little bit of evidence that earlier medication treatment may actually serve some protective function for self medicating and going on to use illicit drugs.[9]

I think embracing the diagnosis and getting some treatment may actually help in terms of living up to one's potential. We otherwise see, in the untreated adolescent, difficulty with academic pressures, financial pressures, and even handling everyday life situations, and then eventually a need for treatment of binge drinking or depression.

Medscape: What do we know about the risk of unintentional injuries in teens with ADHD?

Dr. Wigal: In general, with ADHD we see more emergency-room visits because of accidents (not just related to driving), and increased costs of medical care.[10]

Medscape: Are there studies that give a picture of the academic impact of ADHD on high school and college students?

Dr. Wigal: Heiligenstein's paper looked at the presentation of ADHD in college students. It indicates that some students are evaluated for the very first time [in college] even though the symptoms of ADHD began before the age of 7 years, and it documents some of their educational underachievement and behavioral problems.[11]

Medscape: Why would someone in college present for evaluation for the first time?

Dr. Wigal: There are increased demands in college. There was a poster presentation by Joseph Horrigan at the American Academy of Child and Adolescent Psychiatry meeting about 5 years ago on age of initial diagnosis vs full IQ score in individuals diagnosed with ADHD (unpublished data). There was a curvilinear function showing that you're more likely to have the diagnosis of ADHD put off when you're a higher-caliber student or have a higher IQ.

Possibly, higher IQ can help you compensate for ADHD, but when you have greater demands in young adulthood, you're less likely to cope on your own. And it's not just in the classroom. These students who are away at college may have to handle for the first time all their day-to-day life tasks and prioritization, and they may lack social skills and have problems with friendships.

Medscape: What evidence exists that treatment can make a difference in these realms and improve long-term outcomes?

Dr. Wigal: The big Multimodal Treatment for ADHD study[12] looked at treatment for 14 months in school-age kids, but we're getting more studies in adolescents specifically, which aren't necessarily long-range but do demonstrate response to a variety of different agents. Especially in comparison with placebo or no medication, we're starting to be able to separate response among different treatments for ADHD.

This is an age group in which we definitely need management of symptoms, and I think key factors are education and physicians who are able to form an alliance not only with the adolescent but with the parents. At that age, the patients do not necessarily want to continue on medication, but the majority of these kids do not outgrow the symptoms when they get into adulthood.

Medscape: When you say "education," you mean educating the patients and parents about why treatment needs to continue?

Dr. Wigal: Right, because in most cases the disorder continues.

Medscape: Is there any particular treatment study among adolescents that comes to mind?

Dr. Wigal: There are several. One looked at *Concerta* vs placebo in adolescents,[13] and by Clinical Global Impression ratings certainly we see great improvement in kids in this age range, which would be from about 13 to 17 years of age. *Concerta* is a long-acting preparation, which is helpful because an adolescent's day is much longer [than a young child's] in terms of school and their other activities.

Medscape: Are there any particular psychosocial interventions that are helpful for adolescents?

Dr. Wigal: Although it's not empirically proven, there seems to be receptivity toward coaching rather than counseling, whether it's managing day-to-day activities or dealing with relationships.[14] A coach is someone who is skilled in working with a high school or college student in managing social skills, prioritizing their educational activities, and planning and organizing. It includes basic life skills such as how you face your desk to do your homework so you're not distracted by an open window, or dealing with clutter that will keep you from being able to work -- developing compensatory strategies for not only education, but relationships too.

Medscape: What kind of practitioner could provide such coaching?

Dr. Wigal: Typically a therapist or a psychologist.

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