

ADHD and co-morbid disorders: Are we seeing more mixed disorders?

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Definition:
Co-morbidity is a medical term used to name secondary or tertiary disorders that may appear alongside the primary diagnosis.

This is especially true of children with developmental disorders where many of them are also determined to have intellectual disabilities. Sometimes a child with a disability may develop psychiatric disorders.

There are 3 types of ADHD:

1. ADHD - Inattentive type

23% of kids (mainly girls) get worse with age

2. Hyperactive-Impulsive type

about 13% of kids - get better around young adulthood

3. Combined type

about 64% of kids - the inattentive element gets worse with age and the hyperactive-impulsive gets better with approaching young adulthood.

Studies have shown that two-thirds of U.S. children with attention deficit/hyperactivity disorder (ADHD) have comorbid learning disorders or neurodevelopmental conditions.

A survey of 5000 children and teens with ADHD by Kandyce Larson PhD and colleagues, of the University of California Los Angeles found that only 25-40% had ADHD alone or in its pure form. 33% had one comorbid disorder, 16% had two, and 18% had three or more comorbid disorders.

Research has shown that adults with ADHD have a higher rate of co-existing conditions than children with ADHD.

Comorbidity in adults with ADHD is very common. Here research has shown that only about 16% of adult ADHD is simple ADHD, meaning that 84% of adults with ADHD have a second or third disorder.

According to the 2004 National Comorbidity Survey, which studied the entire U.S. population between the ages of fifteen and forty-five, adults with ADHD had a high incidence of co-existing or comorbid conditions. This research found that 45% of adults with ADHD had mood disorders, including depression.

These rates were three times the instance of depression in the general population without ADHD. In addition, 59% suffered from anxiety disorders (3.2 times higher than the general population), 35% had issues with substance or alcohol abuse or dependency (2.8 times the general population), and 69% percent suffered from impulse control disorders (5.9 times the general population).

Other studies show that 69% of adults with the combined type of ADHD had some history of substance abuse and dependence. In addition, 63% had been treated for depression at some point in their lives, 35% for anxiety and 30% for conduct disorders.

Studies also show that more than a third of adults with ADHD suffered from opposition defiant disorder at some time in their life, and nearly a quarter suffered from social phobia.

Executive function impairments

Adults with ADHD are also highly likely to suffer from a wide variety of executive function impairments that can impact every area of their lives. Put another way, the brain of an adult with ADHD can be compared to a computer with an erratic operating system that interferes with the running of the essential software they need to succeed at work, at home, and in their relationships.

The cluster theory of adult ADHD

A factor that continues to puzzle scientists, is why 88% of adults with ADHD (six times the rate of the general population), suffer from some type of psychiatric condition. Some

experts attribute this to genetics and the fact that people simply inherit a particular form of psychiatric problems.

Others believe that the answer may stem from a theory holding that ADHD is not one disorder, but a complicated syndrome made up of a cluster of impairments that affects many different parts of the brain; and which causes or contributes to various different types of psychiatric illnesses.

Screening for ADHD

Along with poor communication with parents, school and social problems are significantly associated with ADHD.

Comprehensive screening for other problems that occur with ADHD is necessary, and treatment profiles should be tailored by comorbidity status and levels of functional impairment in home and school settings.

While many physicians already screen for common comorbidities among children with ADHD, few are adequately trained to treat such occurrences.

Comorbidity is a rule not an exception

ADHD prevalence is 8.2% to 10% in children. This correlates to more than 4 million cases in USA. Of which 70% goes on into adulthood i.e. 5.5% in adults and of which 84% develop comorbidity. Therefore comorbidity is the rule rather than the exception with age.

Prevalence was also higher among children from low income families and those headed by single mothers.

Overall, 67% of ADHD children had at least one other mental health or neurodevelopmental disorder compared with 11% in other children.

ADHD is associated with a substantially elevated prevalence of the following disorders:-

LEARNING DISABILITIES

The percentage of ADHD children with learning disabilities can be as high as 46% of children with ADHD versus 5% of other children.

It is very important to realise that these are separate disorders. ADHD does not cause learning disabilities and the learning disabilities do not cause ADHD. Therefore a child receiving treatment for their learning disability, but who has ADHD, will still have a problem. And vice versa for a child receiving treatment for their ADHD, but not receiving educational help for the learning disability.

RELATIONSHIP WITH IQ

While children with ADHD have a normal IQ, some also have difficulty with reading and dyslexia (mild to severe), writing, spelling and arithmetic. These children need psycho-educational testing, which besides picking up the comorbid problem and its severity will enable therapists and teachers to give remedial help.

If this not done and assistance is not available they might, thinking they are stupid, perform poorly at school and develop secondary low self-esteem, which is an impetus to treat. Feeling that that they are stupid (having a low IQ) can lead to further depression.

OPPOSITIONAL DEFIANT DISORDER

Occurs in up to 60% of children with ADD/ADHD (versus 8%). This is a behavioural disorder which interferes with school and home, can be mild or quite severe and is characterised by the child testing limits, disobeying and being defiant.

The main reason that these children are thrown out of school, is because the teachers are not equipped to deal with this eruptive stage. Here stimulants will not help much. Great results are obtained by “removing the vinegar and adding honey” with

honey being a combination of Epilim and Risperidone.

CONDUCT DISORDER

This is a more serious behaviour disorder, where individuals actually test limits to the point that they are crossing the line and can occur in up to 27% of children with ADHD versus 2%. This behaviour can be severe enough, that it would actually be considered criminal behaviour.

The symptoms include stealing, setting fires, hurting animals, starting physical fights, bullying others etc and leads to antisocial personality traits. In South African jails there are 60000 kids and teenagers, of whom 50% could be undiagnosed ADHD that got into trouble without diagnosis or treatment. So here in South Africa, it is imperative to diagnose and treat these kids earlier. In 2013 the DSM V will be released and then ADHD will be diagnosed as early as 4 years old and as late as 13 years in a spectrum.

ANXIETY

Anxiety disorders (generalised anxiety disorder, separation anxiety disorder, obsessive compulsive

disorder, social anxiety disorder) in ADHD children is 18% versus 2% and adults 40% versus 6%, with anxiety being more common in the Inattentive type of ADHD, which is more common in females. This is one of the main mode of presentation in our adult female patients

DEPRESSION

Mood disorders occur in 20 - 30% of individuals with ADHD, (children 14% versus 1% and adults 35% versus 8%), with depression being the more common than bipolar disorder which causes more difficulties. Children with bipolar disorder and ADHD, are among the most difficult to treat in all of child psychiatry.

OTHER COMORBIDITIES

A small percentage of kids with ADHD could also have Tourette’s (chronic vocal and motor tics), ASD (autistic spectrum disorder made up of Asperger’s Syndrome or autism) or PDD (pervasive developmental disorder). Speech problems occur in 12% versus 3% in general population. Substance abuse disorders occur in 55% versus 18%

Comparing ADHD comorbidities by age

Comorbidity	3-5 years	6-12 years	13-18 years	19 years+
Language Disorder	++	+	+/-	?
Learning Disorder	?	+++	+++	+++/?
Oppositional Defiant Disorder	+++	+++	++	+/-
Conduct Disorder	+++	+++	+++	Antisocial Personality Disorder
Dysthmic Disorder	-/+	++	+++	++++
Major Depression Disorder	-/+	++	+++	++++
Anxiety Disorder	+	+++	+++	++++
Substance Disorder	-	-/?	++	+++

Adapted from Turgay, Blanchard, Ansari: Gender Differences in comorbid disorders in adolescents with ADHD; Presented at APA 2004 Annual Meeting

and can vary from simple things like coffee, coke, Redbull, alcohol and/or drugs.

Comorbidities didn't vary by age or gender in children, but poor children with ADHD were 3.8 times more likely to have three or more comorbidities than the most affluent (30% versus 8%).

Over-diagnosis was unlikely to be the cause of this socio-economic link, according to the researchers.

Rather, there may be common etiologic factors, like maternal stress or prenatal smoke exposure or genetic

susceptibility, that are more prevalent in lower income families, they suggested.

Every measure of functioning showed a disadvantage with ADHD, including higher odds of the following:

- School problems (69% versus 27%)
- Grade repetition (29% versus 9%)
- High parent aggravation scores (53% versus 19%)
- Low social competence scores (43% versus 18%)
- Poor parent-child communication (8% versus 3%)

Poorer functioning increased with each step-wise increase in the number

of comorbidities, as did use of mental health and education services.

The high rate of grade repetition and school problems "indicates that existing management strategies are falling short of meeting the needs of these children,"

THE IMPORTANCE OF COMORBIDITY

The reason that comorbidity is so important in a person with ADHD is the fact, that often the comorbid condition can completely dominate or change the treatment for the whole condition.

For example, in a person with ADHD and an Anxiety disorder, research shows that the response to medication may be different. Some studies show that the use of stimulants (eg. Concerta, Ritalin) can actually worsen the anxiety. Other studies show that while they don't worsen the anxiety, they don't help it at all. Non-stimulants like Strattera have been shown to help the anxiety and the ADHD at the same time

Another example would be that if a child has ADHD and a Learning Disability one needs to treat both, in order to get a good effect. If you were to only treat the concentration, there could still be problems with processing information (i.e. the learning disability). Vice versa, if academic supports were in place for the learning disability, but there was no treatment for the ADHD, then the child could struggle to pay attention in order to benefit from the help in place for academics.

The bottom line is that a thorough assessment for ADHD will review whether there are any comorbid (or co-existing) conditions present. Knowing about these comorbid conditions is crucial, because it can affect the primary treatment of the ADHD.

Source reference:

Larson K, et al "Patterns of comorbidity, functioning, and service use for US children with ADHD, 2007" Paediatrics' 2011; DOI: 10.1542/peds.2010-0165.

Further references on request.

