ADHD: Helping Children with Unconventional Behaviors Succeed in a Changing World

John Baker
Lecturer,
Department of Applied English
Jinwen University of Science and Technology

Abstract

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摘　要

注意力缺失過動症：協助異常行為的孩童在這個常規世界裡成功，本文提供了一個不同於以往的樂觀角度來觀看注意力缺失過動症。本文從過去醫療診斷標準與療效可能選擇的療法的史料開始，且這些療法皆已應用於ADHD上。其後由一些父母、老師與醫療專業團體組成的支持小組，合作協助了那些參與並顯示有這些行為的年輕人，就如同其他成功的ADHD患者，如今皆可為此引證。為了協助團隊工合作，文件也列出了現今診斷標準以及三種選擇的療法；藥物治療、無藥物療法以及綜合療法。
Introduction

Children who exhibit unconventional ADHD like behaviors in today’s classrooms are often thought to be disadvantaged, but it was not always this way. Traditionally in evolutionary history, these behaviors were quite successful attributes for our prehistoric ancestors. More recently, however, in today’s classrooms, these behaviors have received quite a lot of negative attention. To complicate matters further, the labels we use to identify these behaviors as unacceptable and how we address them keep changing. To guide parents and teachers through this confusing and continually changing maze as they help young people to become successful, this paper provides a concise and easy to read review of the history, our current diagnostic criteria, the ways we currently address the behaviors, and an optimistic future direction.

A Historical Examination of ADHD

Approximately 10,000 to 40,000 years ago, very successful human beings—quick-reflexed hunters, possessing some highly adaptive active and attentive adaptive evolutionary traits—stopped searching for prey and began farming (Ding, et al., 2002; Grady et al, 2003). As evolution continued, these highly qualified beings went from hunters, to farmers, to children in our classrooms, where teachers quickly point out unconventional behaviors are considered anything but an asset and can be found in anywhere from three to five percent of our children (Hartman & Palladino, 2005).

As we entered the industrial age and mass education became more formalized in America, these unconventional behaviors became less and less acceptable in conventional classrooms. Researchers first responded by describing the behaviors: In 1798, Alexander Crichton, a Scottish born physician, described these highly active and attentive behaviors as a “range of attention problems in otherwise healthy young people,” which he labeled as the inability to “focus on one thing while excluding others” (as cited in Palmer & Finger, 2001, p. 67). Dr. Heinrich Hoffman (1995) offered a similar, yet more condemning description of the behaviors when he wrote The Story of Fidgety Phillip for his 3-year old son in 1845, a poem about a naughty little boy who could not sit still. Together, these descriptions labeled the once successful unconventional behaviors as unacceptable.

Soon, the now unacceptable time-displaced behaviors received even more attention. Researchers, in addition to describing the behaviors, began looking for a cause: By 1902, the behaviors were considered anything but a protagonist’s musings in a child’s fairy tale: Sir George
F. Still’s series of lectures to the Royal College of Physicians in England claimed they were an organic disorder caused by “lesions in the brain” and affecting the “imbeciles” who failed to “meet the demands of conventional institutions” (Rafolovich, 2001, p. 95). Research opinion soon changed focus again. Shortly after being labeled an organic disorder, the now unwelcome behaviors were relabeled biological in nature due to the similarity of the symptoms produced by a deadly outbreak of “encephalitis lethargica, presumably viral in origin, following the influenza epidemic of 1914-1918” (Ebaugh, 1923, p. 90):

A ‘total change in the patient’s character and disposition’ of what were at one time completely normal children—children who were well-adjusted, happily involved with conventions like school, family life, friendships, and so forth. After the onslaught of the formidable illness of encephalitis, these children exhibited behaviors which not only fell outside the parameters of appropriate behavior within these contexts, but also, at times, went directly against them. (pp. 96-97)

The earlier highly attentive hunter behaviors, being very similar to the results of the epidemic, were now melded under the same biologic umbrella, minimal brain dysfunction; thus, allowing “medical professionals to problematize” (Conrad, 1976, p. 5) and “label childhood deviance... as a specific disease category for kids who demonstrated unconventional behavior in a variety of social contexts” (Rafalovich, 2001, p 94). It also allowed researchers (because researchers and doctors agreed biological disorders could be treated with medication) to begin to attempt a cure.

Having decided that the unconventional behaviors were both identifiable and curable, the first treatment was soon proposed. In 1937, Bradley discovered that psychostimulant amphetamines could reduce hyperactivity and behavioral problems (Chu, 2003) and by 1957 the methylphenidate Ritalin was introduced. Shortly thereafter, the CibaGeneva Company, the producer of Ritalin, directed a large-scale advertising campaign towards medical and educational sectors espousing Ritalin’s treatment properties; the US Public Health Service formally labeled the behaviors as a minimal brain dysfunction; and soon there was a steady increase in diagnoses. Critics claim the combination of labeling the behaviors as a disorder and supplying a treatment created a domino effect of research and steady increases of diagnoses (Conrad, 1975; Conrad 1976; Degrandpre, 2000; Pozzi, 2000; Shute, 2000).

Evidence began to mount in support of the critics’ claims. By 1968 the next research domino reshaped opinions about the source of the behaviors: The American Psychiatric
Association (APA), feeling evidence was lacking for a biological cause, coined and cited a new term hyperkinetic reaction of childhood as the cause; published the second edition of the *Diagnostic and Statistical Manual of Mental Disorders* DSM-II; presented a list of identifiable behaviors which they could treat; and the earlier steady increase of diagnoses now mushroomed.

By 1972, opinion changed again: Douglas noted that these afflicted hyperactive children had enormous amounts of attention, but “they had difficulty focusing it” (Douglas, 1972, p. 260). In 1980, this was incorporated into the next DSM, the DSM-III, which coined and cited another new term as the cause—attention deficit disorder (ADD)—and again the cited occurrences increased: the mushrooming of diagnoses had now become an outbreak. Opinions changed once again in 1987: The DSM-III was revised to the DSM-III-R, two more types were included, one with hyperactivity and one without, and once again the diagnoses increased, turning the outbreak into an epidemic. In 1994, the DSM-IV opinion changed yet again: A new term was coined ADHD, a third category impulsivity was included, and once again cited occurrences increased and the epidemic spread further.

Today, we use the DSM-IV-TR, and the epidemic is completely out of control: 3-5% of all children in US schools are being labeled with *ADHD*, about one in every twenty students (NIMH, 2008).

**How ADHD is Diagnosed Today**

The Diagnosis of ADHD is complicated because it too has changed with each labeling theory. Currently, diagnosing what has most recently been labeled as ADHD is designed to be a step-by-step process completed by a diagnosis team, consisting of parents, teachers, and medical professionals.

Parents and teachers are often the first to observe the child’s unconventional behaviors and thus are important contributors to the diagnosis team, but neither can legally make a formal diagnosis. They may feel they have identified the problem, believe they have made the best decision about the most recently available medication, and want to attempt to cure the child right away, but they cannot, and fortunately so many critics argue, acquire or dispense medication without the third part of the team, medical professionals. Thus, they must contact a medical professional who is then faced with a difficult task:

A detailed evaluation can be a challenge for the family physician who first learns of a child's difficulties during a routine office visit when parents are intent on
obtaining stimulant medication for a child who has already been diagnosed with ADHD by parents or teachers: This initial office visit may only allow time to listen to the parents' concerns, explain the need for a thorough evaluation and arrange for further data collection. A systematic approach to diagnosis can help the physician avoid the tempting (and seemingly time-efficient) urge to forego a comprehensive evaluation, write a prescription, and "monitor progress" at a subsequent visit. (Smucker & Heydayat, 2001, p. 818)

This may seem daunting at first for parents who are looking to cure their children's behaviors, but, for the best interests of the children, the APA suggests a slower approach:

Parents and teachers should understand that a careful and complete evaluation will span several office visits and may require special testing or consultation. Parents and teachers can better accept the postponement of immediate treatment if the physician communicates an understanding of the behaviors that concern them, indicates a shared commitment to doing what is best for the child, and explains the elements of a stepwise, comprehensive approach to the proper diagnosis of the child's problem behaviors. (p. 819)

Parents and Teachers' Roles

As part of the research team, parents and teachers, working through the step-by-step process, help medical professionals to make a careful diagnosis of the child's unconventional behaviors by providing information through rating scales that the physician collects and incorporates using one of two diagnostic models, the DC-10 and the DSM-IV-TR. The former is most commonly used in Europe and the latter is more common in North America. For our purposes, we will examine the DSM-IV-TR, but teachers wishing to teach abroad should become aware of both because each is used globally.

The Medical Professional's Role

Medical professionals use the information supplied by parents and teachers via rating scales to categorize the child's behaviors using the DSM-IV-TR criteria (Table 1). The core symptoms differ enormously from one individual to another, but the APA has currently decided upon three basic symptom types--inattention, hyperactivity, and impulsivity--which are used to indicate three patterns of behavior: inattentive, hyperactive, or a combination of the two (APA,
2004). It is important to note that children diagnosed with ADHD can display the three symptom classifications, and so can just about every other child. On any given day, a child might attentively daydream, hypermotivatedly be on the run, or impulsively act without thinking. The difference between a kid being a kid and a cause for further observation is the duration of behaviors: If a child engages in some of the behaviors repeatedly, or many only for a short time, ADHD probably is not an applicable diagnosis. If, however, the child displays behaviors listed in the DSM-IV-TR (Table 1) for up to six months, a physician may consider ADHD as an appropriate diagnosis.

Table 1. Symptom Behaviors

Diagnostic Criteria
A. Either (1) or (2):

1. Six (or more) of the following symptoms of inattention have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

- Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities.
- Often does not give close attention to details or makes careless mistakes in schoolwork, work, or other activities.
- Often has trouble keeping attention on tasks or play activities.
- Often does not seem to listen when spoken to directly.
- Often does not follow instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions).
- Often has trouble organizing activities.
- Often avoids, dislikes, or doesn’t want to do things that take a lot of mental effort for a long period of time (such as schoolwork or homework).
- Often loses things needed for tasks and activities (e.g. toys, school assignments, pencils, books, or tools).
- Is often easily distracted.
• Is often forgetful in daily activities.

2. Six or more of the following symptoms of hyperactivity-impulsivity have been present for at least 6 months to an extent that is disruptive and inappropriate for developmental level:

**Hyperactivity**
- Often fidgets with hands or feet or squirms in seat.
- Often gets up from seat when remaining in seat is expected.
- Often runs about or climbs when and where it is not appropriate (adolescents or adults may feel very restless).
- Often has trouble playing or enjoying leisure activities quietly.
- Is often "on the go" or often acts as if "driven by a motor".
- Often talks excessively.

**Impulsivity**
- Often blurts out answers before questions have been finished.
- Often has trouble waiting one's turn.
- Often interrupts or intrudes on others (e.g., butts into conversations or games).

(American Psychological Association, 2004)

The second diagnostic step requires the physician to identify what type of pattern behavior applies to the symptoms: inattentive, hyperactive, or a combination of the two (Table 2).

**Table 2. Patterns of Behavior: Inattentive, Hyperactive, or a Combination of the Two**

- Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type: if Criterion A1 is met but Criterion A2 is not met for the past 6 months.
- Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type: if Criterion A2 is met but Criterion A1 is not met for the past 6 months.
- Attention-Deficit/Hyperactivity Disorder, Combined Type: if both Criteria A1 and A2 are met for the past 6 months.

(American Psychological Association, 2004)
If the symptom conditions (Table 1) and pattern behaviors (Table 2) are met, ADHD may still not be an appropriate diagnosis. Before labeling a child’s behaviors as ADHD, other criteria need to be considered: The behaviors must appear early in life, usually before seven years of age; the behaviors must be inappropriate for conventional behavior expected at their age level; and the behaviors must create formidable challenges in at least two of the following areas: in the schoolroom, on the playground, at home, in the community, or in social settings. Someone who is not performing to conventional expectations in only one area would not be classified with ADHD (DSM-IV-TR, 2004).

If all of the aforementioned criteria have been met, still more variables need to be examined before labeling a child with ADHD. There are a host of other conditions that produce symptoms similar to ADHD that can make the child seem inattentive, hyperactive, or impulsive (Table 3) such as environmental conditions (e.g., family dysfunction or stressful home environment), general medical conditions (e.g., visual or hearing impairment), and neurological disorders (e.g., learning disability or sleep disorder) (Smucker & Hedayat, 2001). Because these and other conditions can be misinterpreted as ADHD, medical professionals must also do a thorough physical, educational, psychological, and family assessment to avoid misdiagnosis.

**Table 3. Conditions that Produce Symptoms Similar to ADHD**

<table>
<thead>
<tr>
<th>Environmental conditions</th>
<th>General medical conditions</th>
<th>Neurologic conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improper learning</td>
<td>Hearing impairment</td>
<td>Learning disability</td>
</tr>
<tr>
<td>environment (e.g.,</td>
<td>Visual impairment</td>
<td>Tic disorder</td>
</tr>
<tr>
<td>unsafe, disruptive)</td>
<td>Medication effects</td>
<td>Seizure disorder</td>
</tr>
<tr>
<td>Mismatch of school</td>
<td>(e.g., antihistamine</td>
<td>Mental retardation</td>
</tr>
<tr>
<td>curriculum with child's</td>
<td>decongestants, beta</td>
<td>(e.g., fetal alcohol</td>
</tr>
<tr>
<td>ability (e.g., gifted,</td>
<td>agonists, anticonvulsants)</td>
<td>syndrome, fragile X</td>
</tr>
<tr>
<td>learning-disabled)</td>
<td></td>
<td>syndrome, phenylketonuria)</td>
</tr>
<tr>
<td>Family dysfunction or</td>
<td>Asthma</td>
<td>Developmental delays</td>
</tr>
<tr>
<td>stressful home</td>
<td>Allergic rhinitis</td>
<td>Brain injury</td>
</tr>
<tr>
<td>environment</td>
<td>Eczema</td>
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<tr>
<td>Poor parenting (e.g.,</td>
<td>Enuresis</td>
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inappropriate, inconsistent, punitive)
- Child neglect or abuse
- Parental psychopathology
- Encopresis
- Malnutrition (e.g., vitamin deficiency)
- Hypothyroidism
- Lead toxicity

(Smucker & Hedayat, 2001)

If all the symptoms and pattern criteria have been met and all the contributing factors have been examined, the medical professional then needs to consider comorbid conditions, conditions that occur concurrently because over 50% of children who display ADHD behaviors also meet the diagnostic criteria for one or more other psychiatric and developmental disorders (Brown Univ., 2000) (Table 4).

Table 4. Comorbid Conditions

- Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type: if Criterion A1 is met but Criterion A2 is not met for the past 6 months.
- Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type: if Criterion A2 is met but Criterion A1 is not met for the past 6 months.
- Attention-Deficit/Hyperactivity Disorder, Combined Type: if both Criteria A1 and A2 are met for the past 6 months.
- Anxiety disorders--up to 25%
- Conduct and Oppositional Defiance Disorder--40-70%
- Developmental Coordination Disorder and other developmental coordination disorders--25-65
- Expressing defiance, stubbornness, non-compliance, outbursts of temper, or belligerence; anxiety/mood/affective disorders to include depressive disorders--up to 28%
- Obsessive/compulsive disorder--10%-30%
- Torette Syndrome--25-85%
- Specific learning disability with reading, spelling, language, mathematics

(Brown Univ., 2000)
Different Ways to Address the Behaviors

Once a medical professional has diagnosed and labeled the child's unconventional behaviors as ADHD and all of the comorbid conditions have been considered, the diagnostic team--teachers, parents, and medical professionals--can address the behaviors.

Medication

There are currently three approaches available to address the behaviors: medication, treatments without medication, and a combination of the two. Medications undeniably reduce unconventional behaviors in a large percentage of children: They repress unconventional behaviors so children can perform in conventional classrooms. Many critics, however, feel there is more to the issue.

Physicians presently have four main types of medications to choose from--psychostimulants, antidepressants, antipsychotics, and antihypertensives--depending on the desired effect. Some work quickly, some work for a long time, some work all day, and some are stronger than others. Proponents of medication report that it can be highly effective at suppressing unconventional behaviors, up to 70-75%. Critics, however, claim that despite the success of suppressing the behaviors, the medications have two things in common: First, at best, they suppress the unconventional behaviors while the child is medicated, only for the behaviors to reemerge when the pills wear off. Second, they all produce side effects, ranging from skin reactions, nausea, stomachache, dizziness, decreased appetite, weight loss, insomnia, headaches, nervousness, irritability (Hartwell, 2002), and for one drug, Celart, even liver cancer and hepatic failure (Smucker & Hedayat, 2001).

Approaches without Medication

Critics claim that the boom of sales of Ritalin--a 700% increase since 1990 (Diller, 1998)--and other drugs raise ethical issues. They argue, “Ritalin and other drugs treat the needs of health professionals, parents, and teachers rather than the needs of children” (Kolata, 1996, p. C8) who must suffer the health risks and side effects. They conclude medication should be abandoned in favor of a range of therapies.

There are currently a number of approaches that do not include medication. There are approaches for the individual, the family, and even education for teachers. Proponents of each claim a wide range of successes and many encourage combining approaches. Indications of the
effectiveness of therapy tailored to specific behavioral deficits are promising, but they also present a challenge to all those who work with these children for two reasons: First, nonmedication approaches are very time consuming (Marks, 2004), and second, “great care must be taken in the tailoring of individual programs” because such “therapy depends much more than medication therapy on the competence and cooperation of the teachers or parents who must implement the treatment on a consistent basis, without which any behavioral intervention has little chance of being effective” (p. 949).

*Psychotherapy.* Psychotherapy helps individuals—older children and adolescents—to accept both the behaviors and themselves by exploring the uncomfortable issues and emotions that often arise as a result of the expression of unconventional behavioral patterns (NIMH, 2008; Mayo Clinic 2009).

*Family therapy.* Family therapy through group counseling helps both the individual and the family to deal with the stress of living with the behaviors and to explore the behaviors’ roles within the social dynamics of the family (Brown Univ., 1995; NIMH, 2008).

*Social skills training.* Social skills training through recreation, peer modeling and coaching (Cowart, Saylor, Dingle, & Mainor, 2004; Harvey, Fagan & Kassis, 2003) helps children learn adaptive behaviors to “include verbal and nonverbal communication, self-control, assertion, and cooperation” in order to participate in conventional social contacts through “goal-oriented, rule-governed behaviors that are situation-specific behaviors” (Chadsey-Rusch, 1992, p. 25).

*Parenting skills training.* Parent skills training focusing on the belief that how parents deal with parenting stress resulting from parenting a child who exhibits unconventional behaviors can positively or negatively affect the child’s ability to deal with the challenges associated with unconventional behaviors helps parents in two ways: It helps them develop skills to understand and guide their child’s behavior (Chronis, Chacko, Fabiano, Wymb, & Pelham, 2004), and it focuses on the unique challenges and stressors parents face such as extra-familial stressors, interpersonal stressors, and child stressors, (McCleary, 2002).

*Behavior therapy.* Behavior therapy helps parents and teachers learn strategies to help children self regulate their own behavior in controlled mainstream environments in order to
become their own behavior change agents (Mayo Clinic, 2009) in areas of impulsivity, rules and instructions, organization and tasks, and social skills, all of which they can later generalize to contexts outside of school.

_Support groups._ Support groups offering children, adults, and their families a network of social support, information, and education in over 615 cities worldwide connect people with similar unconventional behaviors, potentials, and successes (NIMH, 2008; ADD CARE, 2009).

**A Combined Approach**

For some children, medication is the answer, for some therapy, and for others a combination approach is more relevant. Proponents of a combined approach argue that children who experience long-term combination treatments take less medication (Pelham, Bender, Caddell, Booth, & Moor) than those who use medication alone treatments and that combined treatments are superior to therapy alone treatments (Smith, Waschbusch, Willoughby, Evans, 2000).

**Responsibly Responding to Individuals**

Today, there are many ways to address what medical professionals currently label as ADHD behaviors, and there will certainly be more as the research opinion base changes. What we can be sure of, however, is that “no single treatment is the answer for every child” (NIMH, 2008). For some children, medication may help adjust to the requirements of the conventional classroom; for some, only therapy may be needed; for others, a combination treatment of medication and therapy may be an appropriate approach; and for still others, something entirely different may provide the child with the tools needed to succeed. Each child is different. Parents, teachers, and medical professionals need to work together, carefully consider all the options, and make the best decision with the information available to help each child succeed.

When considering all of the options, it is important for parents and teachers to understand that they need to positively respond to the behaviors rather than attempting to cure them. Believing we could cure such behaviors would be a very shaky claim for a diagnosis about a set of evolutionary behaviors that we have spent over two hundred years describing and still have yet to adequately diagnose, treat, or cure, especially since they do not go away. About 10 to 60% of children continue to retain the ability to produce unconventional behaviors into adulthood.
(Searight, 2000; Marks, 2004), and many have become notably successful. The author of Independence Day and Pulitzer Prize Winner Richard Ford, Actress Whoopi Goldberg, Olympic Gold Medalist Bruce Jenner, founder and chairperson of Charles Schwab Inc., (Schwablleaning, 2004), and countless teachers like Peggy Jorgenson, a second grade teacher, all find the behaviors in their own day-to-day lives. And Jorgenson has a goal: She “wants to make all of her students feel good about themselves because she remembers what it was like when all of her teachers yelled at her for her LD (learning differences)” (Lauren, 2004, p. 26). Jorgenson also knows something each teacher should know: Children labeled as ADHD can become successful if responsible parents, teachers and medical professionals work as a team to help them along the way.

Future Directions

The research base that has agreed unconventional behaviors need to be labeled and treated has been evolving for the last three centuries. Its most recent system has created the label ADHD. “The research base is still fragmentary and suggestive, not complete or definitive . . ., and much work, both theoretical and empirical remains to be [and is being done]” (Ding, et al 2002, p. 310). Discussions are already underway to discard DSM-IV-TR in favor of DSM-V; and with it more opinions, new directions, and hopefully, though not likely, fewer cited cases. The best concerned parents and teachers can do is stay informed; continue to show encouraging support; make decisions with the best information available; and remind both the children and themselves that these hunter behaviors, although oftentimes trying in the classroom, can and do, as many successful people have done, produce extremely positive and successful adults.

References


