Adult ADHD in private practice

Annemette Sorensen

Abstract

This article starts with a brief overview of research on ADHD, followed by issues in relation to assessing, diagnosing and treating adult ADHD in the writer's practice. The article concludes by briefly considering some key questions in relation to the recognition of adult ADHD, how ADHD may be implicated in other disorders or problematic behaviours, and whether subtypes other than the ones currently in use will emerge.

Brief review of research

ADHD is a neurodevelopmental disorder which has been found to afflict 3% to 10% of schoolchildren, and 1% to 5% of these individuals continue to be afflicted as adults (Asherson, 2005; Barkley, Murphy & Fischer, 2008; Kessler, 2006;). ADHD cannot be diagnosed in an adult if there is no evidence of impairment in childhood (Asherson, 2005). ADHD is a disorder characterised by significant and pervasive problems with focusing and sustaining and/or attention, hyperactivity/pervasive restlessness and impulsivity (American Psychological Association, 1994). It is also associated with mood instability, sleep problems forgetfulness (Asherson, 2005). difficulties, in turn, are likely to lead to goal-directed effective problems with behaviour, through mechanisms such as distractibility, procrastination and disorganisation. This, in turn, is likely to lead to problems with interpersonal interactions and task compliance at home with caregivers and at school with teachers (and later with managers, colleagues, partners and friends). Further, ADHD symptoms often result in ongoing conflict with teachers, parents and sometimes peers; and may predispose the child to develop poor self-esteem and selfefficacy.

Significant comorbidity has been found between ADHD and various psychiatric or learning disorders. Fifty percent of children with ADHD have been found to have conduct disorders/oppositional defiance disorders, 25% anxiety disorders, and 29% learning disorders (Spencer, Biederman & Wilens, 1999). Among adults with ADHD, 47% have been found to meet criteria for anxiety disorders, 38% for depression, 15% for substance disorders, and 19% for impulse control disorders (Kessler et al., 2006).

Scattered descriptions of ADHD-like symptoms have been found in clinical literature over the past couple of centuries, with diagnostic labels in the early 20th century such as 'minimal brain damage', and 'minimal brain dysfunction' (Barkley, 2006). It was included for the first time in the second edition of the Diagnostic and Statistical Manual where it was referred to as 'hyperkinetic reaction of childhood' (American Psychiatric Association, 1968). In the third edition of the DSM, it was changed to ADD with or without hyperactivity (American Psychiatric Association, 1980), and in subsequent editions is has been changed to ADHD (e.g., DSM-IV; American Psychiatric Association, 1994). Currently, significant revisions are proposed for the upcoming DSM-V, such as the inclusion of more adult-relevant criteria, a better weighting of the three types of symptoms, and a higher age of onset (American Psychiatric Association, 2010).

No adequate neuropsychological theory has as yet been developed that can account for all ADHD features (Biederman & Faraone, 2005). Such a task is likely to be complex due to heterogeneity in neuropsychological impairment, which in turn is likely to be due to causal heterogeneity (Nigg, Goldsmith,

Sachek, 2004; Sonuga-Barke, 2005). Research studies using structural and functional neuro-imaging have found evidence abnormalities for of brain activation in frontal-subcortical-cerebellar circuits (Biederman & Faraone, 2005). Within subcortical structures, areas rich in dopaminergic synapses, such as the striatum, have been singled out as being vulnerable to damage from trauma such as perinatal hypoxia (oxygen difficulties). Such trauma has been associated with symptoms of hyperactivity and poor inhibitory control in animal studies (Alexander, DeLong & Strick, 1986, in Biederman & Faraone, 2005). Other evidence which has been touted in support of dysregulation of dopamine, as well as norepinephrine, as a causal factor in ADHD is the beneficial effects stimulant medications such methylphenidate have been found to have on ADHD symptoms such as inability to focus and hyperactivity (Solanto, Arnsten & Castellanos, 2001).

Protocols for assessment and diagnosis have been established and become increasingly widespread over the past three to four decades – at least when it comes to children. However, it is of great concern that knowledge and recognition of ADHD in adults (unless they already have a diagnosis from childhood) appears to be poor. In a national comorbidity survey conducted by Kessler et al. (2006), it was found that of those adults with ADHD who had received MH/substance related treatment, only 25% also received recognition of/treatment for ADHD. There are a number of possible reasons for this including:

- There are no official sets of criteria on which to evaluate adults (Riccio et al., 2005).
- It can be difficult to make a retrograde diagnosis, either due to a client having problems with recollection, or due to insufficient collateral evidence, or inability to obtain such information from a parent, sibling or from school reports.

- A client or their parents may minimise any difficulties related to attention, hyperactivity or impulsivity experienced in their childhood.
- Other causal factors are at play, such as anxiety or trauma.
- Finally, it can be difficult to determine whether a client's reported symptoms, both as an adult as well as when they were younger, fall within the normal range or the clinical range.

On a positive note, there appears to have been a significant increase in interest in, and research on, adult ADHD over the past decade (e.g., Davidson, 2008) as well as research on gender differences in ADHD (Rucklidge, 2008).

In terms of treatment of children with ADHD, a combination of stimulant. medication and behavioural management strategies (primarily by parents and teachers) has been touted as the most effective (Barkley, 2006). The aim of such treatment is to help the child stabilise and optimise his/her ability to focus for sustained periods of time and to inhibit impulsive behaviours, and to develop/maintain self-esteem in the face of recurrent obstacles due to the chronic nature of ADHD. In terms of treatment of adults, a combination of (1) education about ADHD and its treatment (medication and behavioural management strategies), (2) medication, (3) coaching, and (4) psychotherapy for associated problems such as low self-esteem and self-efficacy has recommended (Barkley, 2010: Hallowell & Ratey, 1994).

I have provided a very brief review of key aspects of the great deal of research which has been carried out on ADHD in both children and adults over the past number of decades. Before I go on to describe my experiences with ADHD in my practice, I'd like to draw attention to the frustration of clinicians and researchers working with ADHD with regards to how the condition continues to get discredited by many in the

public arena, and that some medical and mental health practitioners also are resistant to the recognition and treatment of adult ADHD (Barkley, 2002; Goodman, Rostain & Weisler, 2009; McGough & McCracken, 2006). Barkley and 85 other leading researchers and clinicians in the field went to the extraordinary length of signing an 'International Consensus Statement on ADHD' where they had this to say: "We, the undersigned consortium of international scientists, are deeply concerned about the periodic inaccurate portrayal of attention deficit hyperactivity disorder (ADHD) in media reports. This is a disorder with which we are all very familiar and toward which many of us have dedicated scientific studies if not entire careers. We fear that inaccurate stories rendering ADHD as myth, fraud, or benign condition may cause thousands of sufferers not to seek treatment for their disorder. It also leaves the public with a general sense that this disorder is not valid or real or consists of a rather trivial affliction" (Barkley et al., 2002).

My practice

My experience working with adults with ADHD began during the four years that I worked in an adult community mental health clinic. For the past three years I have worked full-time in private practice. I do not consider myself as a clinician with particular interest or expertise in adult ADHD. Rather, I am interested in ADHD in the way that I am interested in all the various conditions, symptoms, and problems which clients present with. Also I am interested in the myriad complex and intertwined causative biological and social and psychological factors that underpin conditions, symptoms and problems - and ADHD is, in my opinion, one such neurobiological factor.

Six percent of my clients in the community team had ADHD (overall client sample 90). And, to date, six percent of my clients (overall client sample 330) in private practice have/had ADHD (I use 'had' if I no longer work with them). They have all been adults with the exception of one 13-year old boy,

who presented for some brief family therapy. Forty percent came specifically for an ADHD assessment, 5% already had a diagnosis, 5% came for an Asperger's assessment, and the remaining 50% presented with problems related to anxiety, depression. marital stress/interpersonal eating disturbed behaviour problems, and/or alcohol abuse. When, in the course of my general assessment of these people, I found significant reporting of ADHD-like difficulties and suggested that an ADHD assessment could be useful, they showed an interest in this and agreed to such an assessment.

A further 7% of clients described significant ADHD symptomatology, but had presented for different reasons and indicated that they were not interested in exploring ADHD further. I have had one client who came for an assessment for ADHD, who had been spurred on to do this through talking with a colleague who had recently been diagnosed with ADHD and found he had similar problems. However, while he did reveal a number of ADHD-symptoms, they did not appear to have led to significant impairment, and so I determined that he did not meet criteria. Fifty percent of the confirmed ADHD clients are females. Of unconfirmed ADHD group, 71% females. Overall, the gender ratio for my client sample of 330 is 63% female and 33% male (remaining 4% are couples or families).

Assessment

It goes without saying that I undertake a comprehensive psychological assessment of clients being assessed for ADHD, in addition to a specific assessment of ADHD. My ADHD assessment consists of an exploration of various DSM-IV symptoms of inattention/distractibility, hyperactivity/restlessness, impulsivity, arousal, and sleep, as well as from a more extensive list I have compiled. I also administer the Brown Adult ADD scale which has been found to have good validity (Kooij et al., 2008) – however it only measures symptoms of inattention, and I

explore a family history of ADHD, autistic spectrum syndrome, impulse and problems, other mental health conditions. I ask clients to write down examples of ADHD-related difficulties as they think about them between assessment sessions. I ask the client to supply me with their school reports (which they or their parents don't always have anymore), and, if possible, I talk to a parent about their childhood history in relation to ADHD.

As part of the assessment, I also need to consider whether there could be other explanations for symptoms of inattention, problems with concentration, restlessness, and so on. Could it be due to a generalized anxiety disorder or acute or post-traumatic stress disorder? Could symptoms of impulsivity, inconsistency, and starting a trail of things without finishing them off be due to a bipolar condition? Could abuse (past or present) of drugs be a primary factor?

So who are they, these people with ADHD?

They are, contrary to misconceptions in various quarters, people who have the ability to complete academic studies and achieve to a high level occupationally. They are people who are able to manage their lives and relationships in a seemingly similar manner to people without ADHD. They are often very feisty, vivacious, fun-loving and friendly people, albeit interspersed with bouts of irritability, anxiety, depressed feelings and withdrawal from others. They can function like non-ADHD people, yes, but it requires an ongoing mammoth effort that others may struggle to comprehend. Having to constantly make a forced conscious effort to pay attention to what is being said or read, to try and comprehend it and remember it, to manage distractions, to be somewhere on time, to look for lost keys, phones, eftpos-cards, diaries, etc, to manage impulsive urges, to self-monitor, to get activated and to stay on task, and to review the daily failures in these various domains, followed by self-generated pep-talks or resolutions to 'try harder'....is hard work. It can get very demoralising. It makes such people vulnerable to problems with anxiety, anger and depression. The daily frustrations and sense of failure, coupled with their often impulsive natures, coupled with what may be self-medicating neurotransmitter-regulating efforts also increases the risk of addictions to substances (Wilens, Faraone, Biederman & Gunawardene, 2003).

Charlotte (name changed) was 21 when she was referred to me by her GP via PHO for help with anxiety and depression. presented as charming, friendly, open, and trusting, and was very easy to engage with. She reported having been troubled by bouts of depression since she was 16 and that she had had impulsively overdosed on her antidepressant medication some months prior. She said she had no idea why she got depressed. She also said that suffered she from performance/evaluation anxiety, and that this had led her to drop out of university. Further, she herself categorised "impulsive emotional eater", which had led to weight problems. She was in a full-time clerical job with a catering company.

It became very clear in our first session that Charlotte struggled in a number of areas, which were indicative of ADHD. Because of academic difficulties at school. Charlotte said that she was tested in different ways and found to have mild dyslexia and ADHDtraits when she was around 8 years of age. Charlotte said that at school she found it very hard to sit still, that she was restless, a "chatterbox" and that constantly got told off for being distracting to others. She said that her mother's constant refrain had always been "where's Charlotte" as she'd always wander off in

search of adventures. At age 5 she crashed her father's car by fiddling with the gear stick while sitting in the passenger's seat. When she was 16 and upset about a boy, she said that she impulsively began to cut her hair off with a breadknife. Charlotte said that she regularly made careless mistakes in her work due to inattention, and that she had trouble with daydreaming or getting distracted by other things when her focus was required for a particular task in an occupational or social setting. She that she had trouble structuring her work and setting priorities and that she had to ask her manager for help to do this. She said that she would find it impossible to work on one project for, say, two hours. She said that she struggled to finish work projects to a satisfactory level as her attention and interest moved to other things. She said that she regularly lost things (pens, papers, and wallets) forgot (deadlines, appointments). said that she found it extremely difficult to concentrate in her office which was open-plan (about 8 other people). She said that she found that it was like she had got no direction, that she was messy and disorganised, that everything felt like such an effort. She said that she had to ask people to repeat themselves, because she struggled to take in what they were saying.

Charlotte said that she continued to be highly restless (as opposed to hyperactive). She found it hard to sit still and watch TV; she said she moved around in her seat a lot, or that she would fiddle with her hair or other objects. She said that sometimes it felt as if her restlessness would rise to a state of

agitation. She said that she continued to be highly talkative, frequently interrupting others or having trouble waiting her turn in conversation.

Charlotte said that she was in the regular habit of referring to herself as "stupid" (due to information processing difficulties) and "lazy" (due to difficulties with activation and sustained effort). She said that she was an impulsive spender of money, and that she had an overdraft. Her sister had "forbidden" her from using credit cards. Charlotte said she was emotionally reactive/impulsive. When she perceived that others might evaluate her negatively, she would readily burst into tears.

Perusing Charlotte's school reports, there were numerous references to Charlotte being cheerful, enthusiastic, considerate, determined and trying very hard, and, as a result, she was popular with teachers and peers. Overwhelmingly, her academic performance was described in the following terms throughout her school years:

'Charlotte herself gets distracted....she has difficulty sticking at and completing the job to a high standard...she finds it hard to complete assigned work systematically...she finds difficult to be organized...she must take greater care listen....she finds it hard focus....she has a tendency to daydream in class...she is talkative needs and to be focused...not always on task; a better effort is expected....her work needs to be approached with a more disciplined focus....she must make a determined effort to

stay on task....she has become distracted and a little disruptive...'. Charlotte said that she did not get any additional support with her learning throughout her school years.

Charlotte referred herself for psychological evaluations of her difficulties with attention and concentration while was studying university. She underwent an evaluation by an educational psychologist, administered a number of tests related to reading speed. comprehension and accuracy. The concluded psychologist that Charlotte's performance was variable and in support Charlotte's own observation of having "difficulty focusing and processing information". recommended that Charlotte be given a tutor to assist her with focusing on her work. She then underwent a brief neuropsychological assessment by a neuropsychologist who similarly concluded that concentration difficulties led to impairment of academic functioning. Charlotte provided me with copies of both of these reports; none of the reports made reference to whether ADHD had been considered.

Charlotte's mother wrote extensive letter during assessment outlining Charlotte's lifelong difficulties with attention, concentration, disorganization, hyperactivity, and problems with sleep and depression. She said that she believed that Charlotte's depression was, to a great extent, caused by her academic struggles due to her difficulties with attention and information processing.

Following an assessment of Charlotte, it was not hard to give her a diagnosis of ADHD, and to help her understand her emotional problems in this context, and to help her with strategies for managing such recurrent difficulties. Furthermore, Charlotte had grown up in a loving, stable and generally well-functioning family environment, which is likely to have contributed positively to her overall personality development. But what about those people with ADHD who grow challenging more up environment and/or who have suffered various traumas, which in their own right can lead a person to develop problems with attention/concentration, emotional difficulties and self-defeating behaviours?

> Jackie (name changed) was a 40vear old unemployed woman (middle-class background, parents separated when in her late teens, thev had a tumultuous relationship, and Jackie continued to have a somewhat immature attachment to both parents, but no history of significant trauma), who was referred by her GP for counselling for anxiety depression. She had an extensive psychiatric and counselling history since her late teens. She had, over the years, been given various diagnoses such as mood disorder NOS, depression with anxiety, dysthymia, and borderline personality disorder, and there was a history of alcohol impulsive overdoses and suicidal gestures. Some months prior to the referral to me, her GP had referred her to Community Mental Health Services requesting an assessment and medication review, noting that Jackie had complained of "difficulty leaving the house, getting motivated to exercise, etc." and that the GP suspected that "Jackie's diagnosis is somewhat complex but I also feel that something other than the

Paroxetine may be more suitable". A brief psychiatric review concluded that Jackie did not "currently have a psychiatric diagnosis to warrant Mental Health Service intervention" and it was recommended that she continue taking Paroxetine.

Jackie, like Charlotte, engaged in a friendly, open and trusting manner. She was very talkative, but did not present a coherent narrative of her difficulties and life history as she would frequently get distracted with talking about things which had popped into her mind. It was clear she was experienced with counselling, because she would 'dive' straight into talking about highly personal information in a familiar manner as if I had been her longstanding therapist. Whereas Charlotte might forget a scheduled appointment or worry about forgetting it or being late for it, Jackie would routinely be 30-40 minutes late for her appointments, or cancel at the last minute if she didn't feel in the mood.

Jackie complained that she lacked motivation and that she felt frustrated that she had not achieved to the level of her peers, despite being an intelligent person with a desire to succeed. She said that she had a long and chequered work history and a history of alcohol abuse, impulsivity (spending, occasional sexual promiscuity when younger, suicidal gestures, a significant problem with anger and angry behaviours) and she had a number of driving convictions.

Jackie reported a significant problem with time management (such as arriving on time for appointments) due to difficulty estimating or 'having a feel' for time/time periods. Jackie reported that she constantly got parking fines; it seemed that her poor sense of time (running late; estimating how long something is going to take) might have been a significant contributor to this. Another contributing factor to this might have been that Jackie was constantly short of money. Thus, she either had no money or she organising her difficulty money properly (planning to have the correct number of coins for a parking meter). She had inherited a considerable sum of money a few years back which had all been squandered. In terms of difficulties with time, Jackie also reported that she might get into an over-focused state (for example if on Facebook on a computer) for hours, and subsequently forget other tasks, such as eating, showering and dressing.

Jackie said that she had lots of ideas and good intentions (for example about getting work and achieving other goals) but that she had a major problem in following through with them or converting them into plans. Furthermore, she had a significant problem with sticking to plans, as her thoughts were very much in the here and now, and as her inclination was to act on (and/or talk about) whatever thoughts, impulses or emotions she was experiencing at a given time. Jackie further said that she had a problem with getting bored easily.

Jackie recalled that she would get distracted when studying, both as a child and as an adult. She described herself as highly sensitive, emotional and impulsive as a child. She said that she was

told she was "a chatter-box" at school, and that she would get teased by the boys or get into fights with other children ("I'd pull the hair of some of the girls, and hit others and then feel ashamed afterwards"). She recalled having been nervous at school and once or twice having wet her pants due to nerves. She recalled having liked sniffing Twink when she was around 10, having stood in a window at school and threatened to jump out, again when she was 10, and having had a panic attack on the school bus when she was around 11 years old. She said that she did not feel part of a group at school and that she had felt not good enough. She recalled that meandering home from school could take hours as she would get caught up in her own thoughts, daydreams or whatever might distract her on the way home.

Jackie said that she frequently experienced anxiety. She said that her anxiety got triggered thoughts about work (how she needed to find work, how she worried she would not successful at finding it, how she worried she would become stressed and overwhelmed and not be able to keep it up once working (as had been her previous experience), and she worried about finances as a result of not having work, as well as lack of finances in general. Jackie said that she recognized that when she felt and acted in angry ways it was driven by underlying stress and anxiety, which in turn appeared triggered by difficulties with sustained focus and concentration.

Jackie was "always writing lists" in order to try and get organised, and she would try to prioritise items on her lists, and to use diaries and alarms clocks to remind her of the time and appointments. At other times she would "hide in bed", or "go into [her] own little world, watch TV", when she felt overwhelmed, stressed, depressed and demoralised.

I was not able to have access to Jackie's school reports. When I talked with Jackie's mother on the phone (who has a diagnosis of bipolar disorder, as does Jackie's brother), I was informed that, in her recollection, Jackie had not had any undue problems attention, focus, concentration, impulsivity or hyperactivity. She recalled Jackie as a "very positive little girl, who did ballet and Girl Guides". She agreed that Jackie had significant problems with keeping down jobs, achieving to her potential, time management and distractibility, but put this down to Jackie having a bit of "an entitled attitude" and "a split personality".

As was the case with Charlotte, Jackie had a high score on the Brown ADD scale. But in a case like Jackie's, where there is no corroborating evidence from childhood of ADHD-symptoms (via school reports or parental report), where two close family members have a diagnosis of bipolar disorder (with other family history of mental illness) and where symptoms or behaviours which would fit into a borderline personality disorder diagnosis are present, what does one conclude? In my opinion, this is a case of undiagnosed and untreated ADHD first and foremost, where subsequent mental health disorders have emerged, likely due to combination of her ADHD difficulties in social environments.

Therapy

The approach which I take with my clients with regards to addressing ADHD-related

problems, is one advocated by Barkley (2010), Hallowell and Ratey (1994), and Ramsay and Rostain (2007). The reality of adult with ADHD, especially an undiagnosed ADHD, who comes into our practices is one of recurrent failures despite the best of intentions, and bewilderment, anxiety, frustration and demoralisation. There can be a lifetime of 'beating up' on themselves for being 'useless' or 'stupid'. The first (and, in my opinion, most important) step is therefore to educate the client about the nature of ADHD. I do this within the context of a biopsychosocial formulation. As part of this education, I strongly encourage them to go away and read up on/research adult ADHD. I talk with clients about how their ADHD-brains, in combination with social experiences and their evolving belief system, underlie their emotional and behavioural difficulties, and explain how to tackle such difficulties and unhelpful belief systems using CBTstrategies. The next step becomes to talk, in a fairly brief manner, about the option of medication, and what steps they can take if they want to pursue this option. I offer to write up an assessment report - for their own benefit, and for the benefit of their GP, psychiatrist or other specialists (or future visits to health professionals).

The next step would then be to work with the client on strategies combating/managing the classic problems distractibility, procrastination, disorganisation, forgetfulness, poor time and management, monev intolerance boredom/need for stimulation,, etc. A lot of my clients are intelligent people, who actually work out constructive strategies for themselves. However, they are still left with the problem of executing such strategies in a consistent manner. That's when they need a bit of a pep-talk to help boost their confidence in their own abilities now that they have a different understanding of their problems; that is, that their problems are due to neurological factors which can be managed with hard work/discipline as opposed to profound personality defects that cannot be overcome, such as having no self-control.

Research has found that the most useful therapeutic tool for adults with ADHD is meeting other adults with ADHD (Barkley, 2010). Support groups for adults with ADHD are increasingly appearing round the country, and can be accessed through www.adhd.org.nz.

Concluding thoughts

The biggest challenge I see for adults with ADHD currently is the lack of knowledge the condition by mental health professionals. I have seen a number of adult ADHD clients with a history of seeing mental health professionals for problems with anxiety, depression and/or problems with over-eating or abusing drugs and alcohol, who have said that the possibility of them having ADHD has not, as far as they remember, been suggested to them before. One psychiatrist who I referred a client to emailed me saying they did not consider themselves competent to work with adult ADHD (despite specialising in working with adults). I think as clinicians we owe it to our clients to have a very good understanding of the likely neurobiological factors and conditions which can underlie problematic behaviours and which can contribute to emotional distress, and that we can educate our clients of such once we have established through a thorough assessment that such factors are likely to be relevant, and in other ways provide relevant help/therapy.

Three aspects are of interest with regards to ADHD, and which, no doubt, an increasing amount of research will address. One is the question of how much of a role an underlying neurological condition such as ADHD plays where we see someone engage in recurrent problematic behaviours such as impulsive violent acts, binge eating, and/or drug and alcohol problems. It has for example, been found that crime rates are twice high in groups adolescent/adult ADHD compared with non-ADHD groups (Young, Gudjonsson &

Wells, 2009). Intuitively, it makes sense that if a person has a problem with executive functions such as thinking ahead, weighing up pros and cons, ability to inhibit unhelpful responses, and staying on track, it can lead to problems in the above-mentioned domains (Asherson, 2005; Goodman, Rostain & Weisler, 2009).

Secondly, will the ADHD terminology change again as research develops? Will a predominantly or purely inattentive constellation of symptoms become a disorder in its own right (Diamond 2005; Milich, Balentine & Lynam, 2001;), and will proposed sub-types such as sluggish cognitive tempo, emerge and become valid categories?

Finally, just what sort of relationship is there between ADHD and autism spectrum disorders, bipolar disorder, and personality disorders? Currently, the DSM-IV considers pervasive developmental ADHD and disorders mutually exclusive. However this criterion is likely to be eliminated from DSM-V as there appears to be no research evidence to validate such an exclusion (American Psychiatric Association, 2010). It appears that high comorbidity exists between autistic conditions and ADHD (Ronald, Simonoff, Kuntsi, Asherson & Plomin, 2008). Kent and Craddock (2003) have suggested that a relationship between ADHD and bipolar disorder exists. It also has been found that a relationship between ADHD and personality disorders exists (Anckarsater et al., 2006; Davids & Gastpar, 2005; Philipsen, 2006). It does, indeed, seem credible that the neurological difficulties seen in ADHD, especially if combined with being on the autistic spectrum, and if combined with a history of environmental dysfunction or invalidation or lack of support while growing up, might predispose to the development of personality disorders.

Exciting times are ahead as research in neuroscience develops in these fields.

References

- American Psychological Association (1968). *Diagnostic* and statistical manual of mental disorders (2nd ed.). Washington, DC: Author.
- American Psychological Association (1980). *Diagnostic* and statistical manual of mental disorders (3rd ed.). Washington, DC: Author.
- American Psychological Association. (1994).

 Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.
- American Psychiatric Association (2010).

 www.dsm5.org/proposedrevisions/pages/p
 roposedrevision.aspx?rid=383 (rationale).

 Viewed on 20 September 2010/last updated on 10 May 2010
- Anckarsater, H., Stahlberg, O., Larson, T., Hakansson, C., Jutblad, S., Niklasson, L., Nyden, A., Wentz, E., Westergren, S., Cloninger, R., Gillberg, C., & Rastam, M. (2006). The impact of ADHD and autism spectrum disorders on temperament, character and personality development. *American Journal of Psychiatry*, 163, 1239-1244.
- Asherson, P. (2005). Clinical assessment and treatment of ADHD in adults. Expert Review of Neurotherapeutics 5(4), 525-539
- Barkley, R. A. (2006). ADHD: A handbook for diagnosis and treatment (3rd Ed). New York: Guilford Press.
- Barkley, R. A., Murphy, K. R., & Fischer, M. (2008). ADHD in adults: What the science says. New York: Guilford Press.
- Barkley, R. A., & Benton, C. M. (2010). *Taking charge of adult ADHD*. New York: Guilford Press.
- Barkley, R. A., & consortium of international scientists. (2002). International consensus statement on ADHD. *Clinical Child and Family Psychology Review*, 5(2), 89-111.
- Biederman, J., & Faraone S. V. (2005). Attention deficit hyperactivity disorder. *Lancet*, *366*, 237-248.
- Davids, E., & Gastpar, M. (2005). ADHD and borderline personality disorder. *Progress in Neuro-psychopharmacology and Biological Psychiatry*, 29, 865-877.
- Davidson, M. (2008). ADHD in adults. *Journal of Attention Disorders*, 11(6), 628-641.
- Diamond, A (2005). Attention-deficit disorder (attention-deficit/ hyperactivity disorder without hyperactivity): A neurobiologically and behaviorally distinct disorder from attention-deficit/hyperactivity disorder (with hyperactivity). *Development and Psychopathology*, 17(3), 807-825.
- Goodman, D. W., Rostain, A. L., & Weisler, R. H. (2009). Adult ADHD and DSM-V. <u>nnw.medscape.com</u>, psychiatry and mental health, posted 29 June 2009.
- Hallowell, E. M., & Ratey, J. J. (1994). Recognizing and coping with attention deficit disorder from childhood through adulthood. USA: Touchstone.

- Kent, L., & Craddock, N. (2003). Is there a relationship between ADHD and bipolar disorder? *Journal of Affective Disorder*, 73(3), 211-221.
- Kessler, R. C., Adler, L., Barkley, R., Biederman, J. Conners, K., Demler, O., Faraone, S.V., Greenhill, L., Howes, M.J., Secnik, K., Spencer, T., Ustun T.B., Walters, E. E., & Zaslavsky, A. M. (2006). The prevalence and correlates of adult ADHD in the United States: Results from the national comorbidity survey replication. *American Journal of Psychiatry*, 163(4), 716-723.
- Kooij, S. J., Boonstra, M. A., Swinkels, S. H., Bekker, E. M., De Noord, I., & Buitelaar, J. K. (2008). Reliability, validity, and utility of instruments for self-report and informant report concerning symptoms of ADHD in adult patient. *Journal of Attention Disorders*, 11(4), 445-458.
- McGough, J. & McCracken, J. (2006). Moving beyond DSM-IV. *American Journal of Psychiatry*, 163, 1673-1675.
- Milich, R., Balentine, A. C., & Lynam, D.R. (2001). ADHD combined type and ADHD predominantly inattentive types are distinct and unrelated disorders. *Clinical Psychology*, 8(4), 463-488.
- Nigg, J. T., Goldsmith, H. H., & Sachek, J. (2004). Temperament and ADHD: The development of a multiple pathway model. *Journal of Clinical Child aned Adolescent Psychiatry*, 33, 42-53.
- Philipsen, A. (2006). Differential diagnosis and comorbidity of ADHD and borderline personality disorder in adults. *European Archives of Psychiatry and Clinical Neuroscience*, 256(1), 42-46.
- Ramsey, J. R. & Rostain, A. L. (2007). Psychosocial treatments for ADHD in adults: Current evidence and future directions. *Professional Psychology: Research and Practice, 38,* 338-346.
- Riccio, C. A., Wolfe, M., Davis, B., Romine, C., George, C., & Lee, D. (2005). ADHD: Manifestations in adulthood. *Archives of Clinical Neuropsychology*, 20, 249-269.
- Ronald, A., Simonoff, E., Kuntsi, J., Asherson, P., & Plomin, R. (2008). Evidence for overlapping genetic influences on autistic and ADHD behaviours in a community twin sample, *Journal of Child Psychology and Psychiatry, 49*, 535-542.
- Rucklidge, J. (2008). Gender differences in ADHD: Implications for psychosocial treatments. Expert Review of Neurotherapeutics, 8, 643-655.
- Spencer, T., Biederman, J., & Wilens, T. (1999). Attention deficit/hyperactivity disorder and comorbidity. *Pediatric Clinics of North America*, 46, 915-927.
- Solanto, M. V., Arnsten, A. F., & Castellanos, F. X. (Eds). (2001). *Stimulant drugs and ADHD:*

- Basic and clinical neuroscience. USA: Oxford University Press.
- Sonuga-Barke, E. J. S. (2005). Causal models of ADHD: From common simple deficits to multiple developmental pathways, *Biological Psychiatry*, *57*, 1231-1238.
- Spencer, T., Biederman, J., & Wilens, T. (1999). ADHD and comorbidity. *Pediatric Clinics of North America*, 46, 915-927.
- Wilens, T., Faraone, S. V., Biederman, J., & Gunawardene, S. (2003). Does stimulant therapy of ADHD beget later substance abuse? A meta-analytic review of the literature. *Pediatrics*, 111 (1), 179-185.
- Young, S., Gudjonsson G. H., & Wells, J. (2009). ADHD and critical incidents in a Scottish prison population. *Personality and Individual Differences*, 46, 265-269