UAMS

Psychiatric
Research Institute

The Challenges of High Functioning ADHD

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Disclosures

	Honoraria	Speaker	Consulting	Research
Shire	*		*	*
Purdue	*	*	*	*
Eli Lilly		*		
Rhodes	*		*	
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What is high functioning ADHD?

- “High functioning autism” has been used to variously describe:
  - Patients on the spectrum with normal or above IQ
  - Patients on the mild end of the spectrum
  - Patients with ASD with unique talents
- High functioning ADHD could be understood to mean:
  - Adults with severe ADHD symptoms who are nonetheless high functioning
  - Patients with mild symptoms who continue to function reasonably well while being relatively impaired compared to their potential
  - Patients who are highly symptomatic, and have significant functional impairment in some domains while being highly functional in some area

What is ’functioning’

- HRQL:
  - Perception of impact of a disease on health, functioning, emotional well being and satisfaction
- Functional impairment:
  - Limitations in a person’s ability to perform activities relevant to life
- Adaptive skills:
  - What you *do* do, not what you *can* do
- Disorder specific functional impairment or HRQL:
  - To what extent does this disorder impact on functioning or quality of life
- Development:
  - Depending on impairment and skills, the individual’s capacity to negotiate developmental transitions may change such that new developmental trajectories are put into place

How do we assess and measure functioning

- Measures such as the WFIRS S (www.caddra.ca) or Barkey's Functional Impairment Scale (guilford.com)
- Functional impairment is assessed by domains and settings: self-concept, risk, work, learning, family, social, life skills
- The intercorrelation between domains is moderate
- Cllinical assessment of functional impairment is not measured against absolute population norms (of which there are none) but by the perceived impact of symptoms on functioning in each domain

What is ‘functioning’?

- A functional map is highly individual
- Functional impairment varies with environmental demands and new developmental challenges
- Functional outcomes are relative to the individual’s potential
- Deficits are defined as specific to impairment from a disorder
- Not all types of impairment are relevant to all individuals or cultures

We don’t know

- How perceptions change with informant?
- Functional norms in clinical and control populatons
- Functioning may vary within and across domains
- We have not developed clinical or research paradigms for evaluation, scoring, or measurement of functional outcomes
- DSM has ’required’ functional impairment as part of the diagnostic criteria for a disorder without defining it

Maia

- 31 yo who was a forest fighter for 9 years
- Reason for referral: I believe I have ADHD.
- MD referral: “from my albeit somewhat limited Family Practice perspective, she doesn’t really quite fit [bipolar]”
- Law school wants to expel her but requests further assessment as they do not have grounds to dismiss her.
- She is fighting against the wrongful dismissal partly based on the diagnosis of bipolar disorder

Background

- Family: poor, rural family placed with the Ministry
- School: expelled in grade 4 but gets GED at 16yo. Takes the ACT and gets into engineering but does not complete the degree. Accepted to law school based on the LSAT
- Work: forest fighter earning large bonuses when called up, which she spends soon after she gets them.
- ”I was always smart”. I read classics and encyclopedias.

History

- First psychiatrist diagnosed her as PTSD with an attachment problem
- Current psychiatrist diagnosed her as bipolar (grandiose, talkative, spends money, needs very little sleep)
  - “It is only in the absence of other Axis I disorders that one can attribute problems with attention to ADHD”
- Did not respond to trials of citalopram, lamotrogine, venlafaxine, but excellent response to lisdexamfetamine
- Neuropsychological testing IQ very superior but GAI > CPI

Neuropsychological testing

- WAIS IV: very superior but processing speed average and WM high average (GAI > cognitive proficiency)
- Cognitive computerized test of sustained attention average and in the normal range but atypical rate of commission errors
- Fine motor, motor, learning, memory very superior
- MMPI elevated Internalizing and Externalizing
- No anxiety and mild depression
- Positive for executive dysfunction

Neuropsychology report

- “the severity of her symptoms (spending $75,000 in one year) suggests that ADHD does not fully explain her presentation”
- Diagnosis:
  - Mood disorder NOS
  - Bipolar
  - Cyclothymic
  - Caffeine intoxication
  - Amphetamine induced mood disorder (secondary to stimulant)
  - ADHD Combined
- Recommendations
  - Take medication as prescribed by psychiatrist
  - DBT
  - Decreae caffeine and increase sleep

Assessment

- Positive for 18 items on the DIVA, ASRS, CSS-other, WURS
- Negative GAD 7, HRSD
- Overall spends twice the time to complete a given task and although she procrastinates with considerable effort she ends up doing quite well
- Compensated for executive dysfunction by considerable skill in using and programming electronic tools
- Mood: “angry, sad, energetic, bored, excited” throughout the day
- Strengths: high academic achievement, creative electronic skills, resiliant, well liked

WFIRS S: Pretty much or very much

- Family: relying on others to do things
- Work: performing duties, efficiency, conflict with supervisors, quitting, being fired, attendance, late, working to potential
- School: notes, assignments, conflict with teachers, staying in school, attendance, late, underachieving, inconsistent grades
- Life skills: getting ready, going to bed, nutrition, appointments, money, chores
- Self concept: feels bad, frustrated, discouraged, incompetent
- Risk: driving, cigarettes (not firefighting)

Clinical assessment of functioning

- School: Working full time, not studying, getting good grades
- Life skills: Can’t manage money, poor ADL
- Self concept: She was perceived by her peers as a ‘bad ass’ and was unsure if this was a complement.
- Work: She could work 36 hours straight in 110 degrees for 14 days straight
- Family: She married a logger who became abusive and then left him

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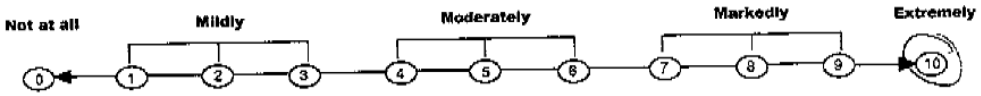
WORK* / SCHOOL

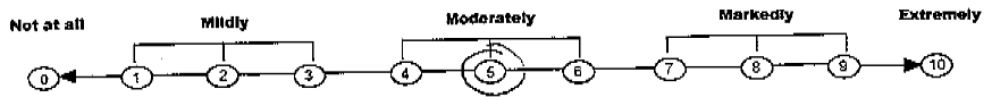
The symptoms have disrupted your work / school work:



☐ I have not worked /studied at all during the past week for reasons unrelated to the disorder.
* Work includes paid, unpaid volunteer work or training

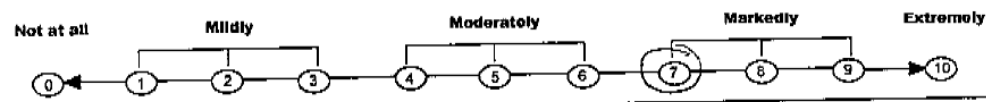
SOCIAL LIFE

The symptoms have disrupted your social life / leisure activities:



FAMILY LIFE / HOME RESPONSIBILITIES

The symptoms have disrupted your family life / home responsibilities:



DAYS LOST

On how many days in the last week did your symptoms cause you to miss school or work or leave you unable to carry out your normal daily responsibilities? 7/7

DAYS UNDERPRODUCTIVE

On how many days in the last week did you feel so impaired by your symptoms, that even though you went to school or work, your productivity was reduced? 7/7

Collateral Comments

- Since meeting Jennifer a few years ago, her behavior has remained the same. It has been interesting to meet someone so clever . I don't think I've ever met someone as driven as she is to achieve and has achieved more in her short life than most people accomplish in a lifetime. Hard to believe that she has come this far all on her own, with no assistance. We have tried to give her guidance in personal responsibilities.
- Incredibly smart and fast and never had to work hard and talked fast but she was always respectful, never psychotic, and good with clients
- Unlimited energy but easily distracted, spoke quickly and loud and very engaged with her computer program
- Frustrated dealing with social situations and wanted to be accepted which is what I so liked about her. I found her genuinely kind.

Treatment

- Medication trials of buproprion, citalopram, venlafaxine lamotrogine failed, but there is improvement when all drug cocktails are gradually tapered
- She is now requesting accommodations in law school but has been referred to see if she is fit to practice law if she is bipolar
- Family doctor gives her an ASRS and starts lisdexamfetamine with improvement
- Family doctor writes to the law school “that “she is eminently capable of completing law school and “we can accommodate individuals such as herself”

Outcome

- She took the law school to court and won
- Law school was forced to reinstate her, accommodate her and provide financial compensation
- She quickly made up lost classes and graduated
- She went on to a brilliant career developing software for the legal profession
- She has continued treatment for ADHD and continues to struggle despite stellar work success
- As a software developer she sets her hours, is remunerated on her programming success and has protected social contact

Challenges: Diagnosis

- There has never been a manic episode but diagnosed bipolar
- ADHD perceived as a diagnosis of exclusion
- Request for diagnosis is perceived as malingering
- Diagnosis occurred at her insistence after more than 10 years of treatment
- Despite being well liked, and ‘respectful’ when she runs into problems with a particular teacher her behavior is interpreted as wilful
- Sometimes it is hard to believe the patient is right

Challenges: Assessment

- High functioning indivduals may have compensated for their deficits with great effort, thus masking the disorder
- Developmental onset may be delayed as demands increase
- Clinicians may ‘dismiss’ high functioning patients
- Attention spectrum disorders including executive dysfunction can be debilitating but quite varied
- Lifetime disability or family history may lead to an aberrant perception of baseline

Challenges: Patient Characteristics

- Scatter on the cognitive profile
- Positive illusory bias: failure to accurately perceive deficits
- Negative illusory bias: failure to accurately perceive skills
- Profound, crushing low self esteem or lack of sense of self can be hard to recognize there is a strong disconnect
- Patients may have accurate insight, but still fail to see through their particular blindness (time blindness, social blindness)
- I have to try so hard: the presenting complaint is QoL

Challenges: Treatment

- Compromise between functioning in different areas
- Remission of symptoms does not always bring the expected improvement in functioning
- High risk activities or sports may be normative (a great stockbroker, hockey player, deep sea diver)
- Environmental restructuring is a social target
- Outcome obtained through treatment is ‘over functioning’

- Mapping symptoms/behaviors/functional outcomes is time consuming
- Patients often confront us with a risk benefit attribution regarding their functioning such as “I feel better and more creative off medication, but I can’t stay in the classroom without it.”
- Psychoeducation of patients has emphasized risk to the exclusion of addressing potential

- Patients may respond to treatment with a feeling of loss of authentication
- Patients struggle with attributions regarding what is me, what is my ADHD?
- Patients struggle with attributions around accommodations “it’s cheating”
- Twice exceptional children grow up to be twice exceptional adults – high functioning adults often have a complex mix of qualities

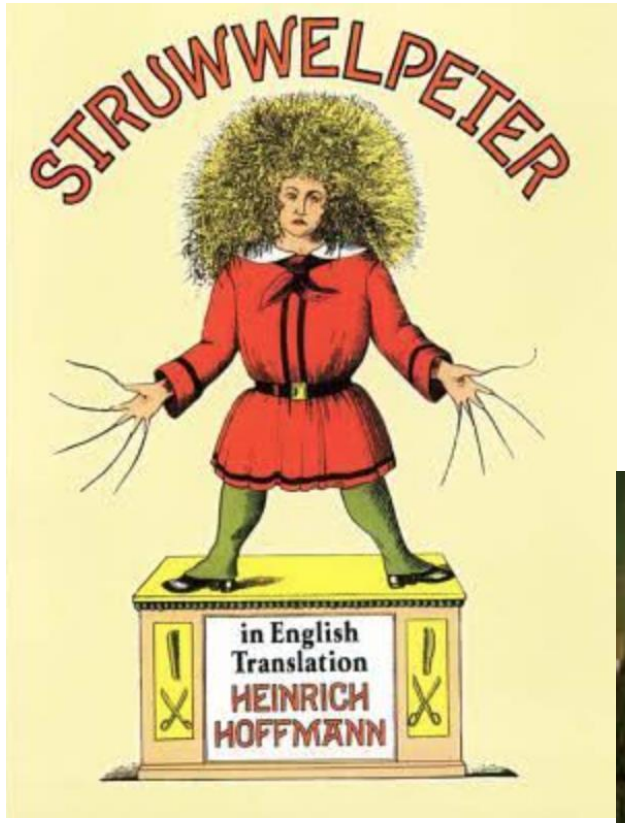
- Diagnostic screening without full evaluation by PCP
- Childhood trauma and family history of ADHD go hand in hand
- It was assumed that ADHD had to be low functioning
- Her resiliancy and resourcefulness was used to dismiss the very problems she is seeking to address
- Failure to diagnose ADHD was complemented by other psychiatric explanations such as personality, trauma, attachment, mood disorder

Challenges of ADHD: Treatment

- Polypharmacy: avoid harm
- Resistance to accommodations
- Treatment success only occurred with a combination of medication and changing her environment
- The targeted outcome was to provide her with the right to access her own well deserved achievement and to relieve the strain of the profound effort she had sustained

Moving forward

- High functioning attention spectrum disorders are varied and complex
- ADHD symptoms can be both impairing and adaptive
- Functional mapping is essential to diagnosis and treatment
- The culture of ADHD has shifted
- These high functioning patients fully met criteria for ADHD and their suffering is very real
- They met challenge with resiliance


STRUWWELPETER
in English
Translation
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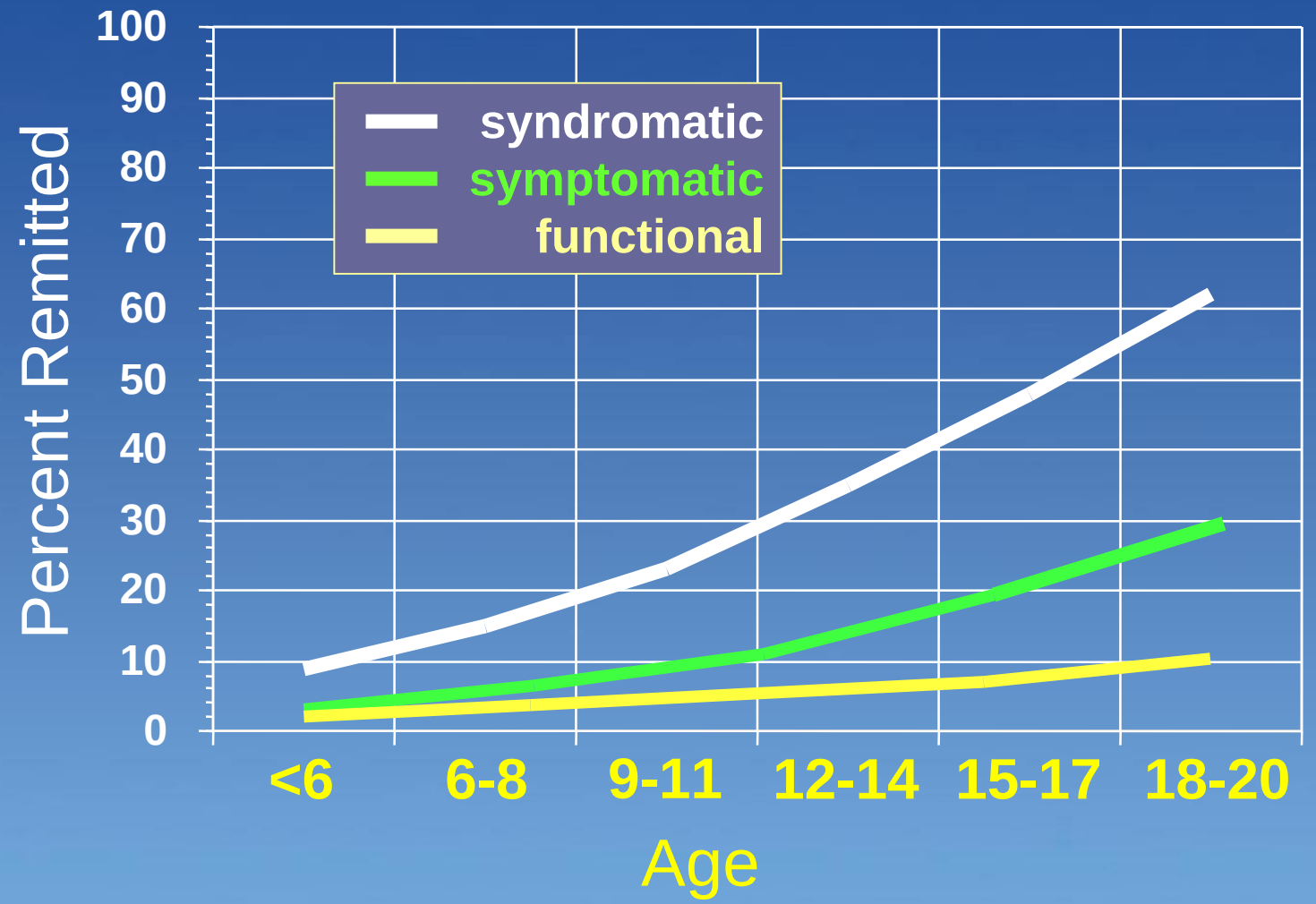
5 x 3 = ?
7 x 4 = ?

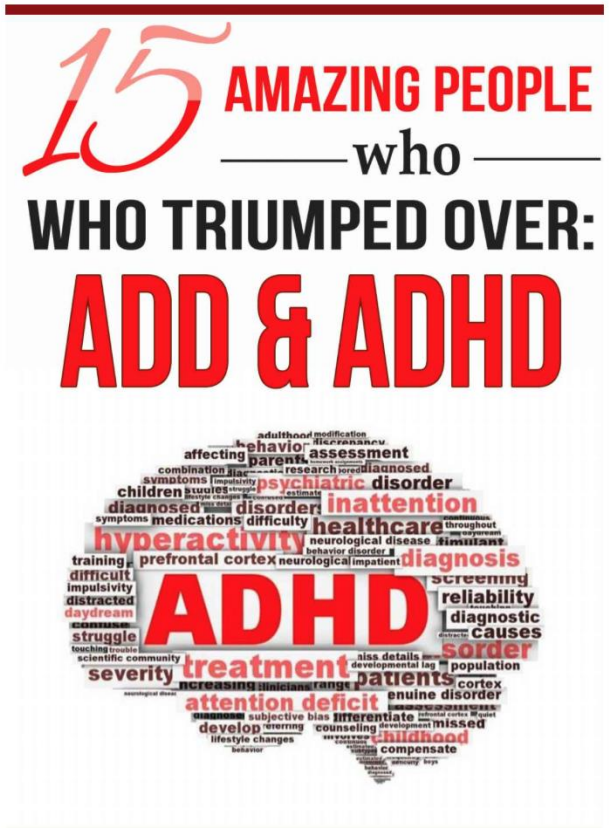
Age-specific Prevalence of ADHD Remission:
DSM-III-R ADHD



Faraone SV et al.

Functioning: Milwaukee FU

Barkley et al. *J Am Acad Child Adolesc Psychiatry.* 2006;45:192-202.



"if you have ADHD, you are in very good company with this list of famous people…."

From Risk to Resilience

- Attention spectrum disorders are real
- Risk is real
- Symptoms persist with significant functional impact
- The lives of all our patients, and the challenge of high functioning ADHD is to move individuals from risk to resilience
- To adequately treat the illness, we need to support the health