

ADHD AND ACQUIRED BRAIN INJURY

RARE UNICORNS OR THE MISSING PIECE?



Challenges, barriers, and
considerations for supporting these
unique injured brains

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The unicorn ADHD injured brain must be treated with a relatively unknown glittered approach, often delivered through a golden teapot!

In this document you will discover the incidence and demographic of these unique neurodiverse individuals, learning how to observe, adjust and modify tools and approaches to mitigate the additional challenges of an injured brain, and why, despite repeated approached and methodology, why they seem to make little inroads.

1. Identify the impact of an injured ADHD brain
2. Describe Functional ABI/ADHD presentation.
3. Discuss why previously successful approached fail
4. Distinguish the key barrier in maintaining change
5. Learn the strategies and implmentation techniques required in empowering the ABI individual

This resource is an introduction to the complexities of ADHD and ABI, and touches upon the most important elements, further reading is encouraged and suggested.

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TBI could result in psycho-neurological changes that increase the chances of ADHD developing. Others have hypothesized that having ADHD could increase an individual's risk of falling or having an accident that could cause a TBI.

Due to the positive associations observed in the study between lifetime TBI and both current and past ADHD, more research is required in order to broaden understanding of this association and how it affects the development and treatment of ADHD and TBI.

Lack of evidence

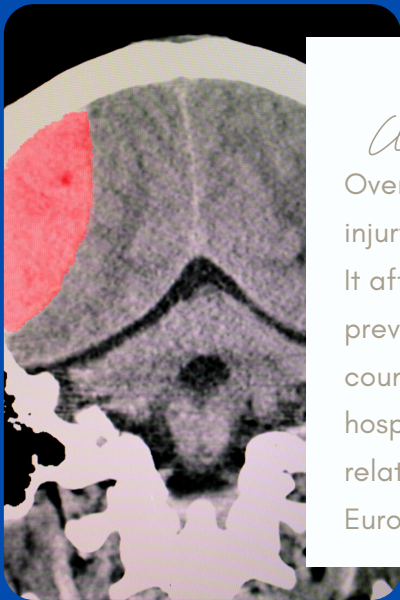
When one embarks upon a research drive regarding the prevalence of ABI and ADHD, one is met with a very swiftly delivered list of search results that state things along the lines of “Brain injury as a cause of ADHD” or “ADHD increases risk of brain injury” or similar. What we do not find much of, if anything, without extensive research, is the impact of a brain injury on a pre existing ADHD diagnoses and vice versa. Any incidence seems to get mixed together in one big muddle, with an even more troubling medley of reasons of why the risk taking behaviour of ADHD results being a precursor for brain injury.



But what about before?

As a Cognitive Rehabilitation Therapist that has worked in brain injury rehabilitation for nearly 20 years, there is a pattern I have observed emerging over the past few years. What has been somewhat perturbing about this pattern is not the prevalence of ADHD in a demographic of mid 20 males who still tip the balance in terms of ABI proportion but the distinct lack of clarity, noted history or exploration of pre morbid diagnoses or even any post injury psychiatric evaluation of a diagnoses post injury.

As we see the incidences of ADHD diagnoses increasing, there is a parallel trend within brain injury prevalence across the globe. As we delve into the reasons for the correlations, there are a number of questions raised as to the impact of each on one another. There is a significant impact of any injury on the ADHD brain, and subsequent challenges for managing the effects of ADHD on daily function. There is a niche approach to supporting and empowering the injured ADHD brain. A toolbox of executive functioning tools is only the beginning, the methodology and adaptability of using those tools is even more paramount. It is key for anyone involved in supporting both adults and children with ADHD to understand the impact of aquired brain injury on the ADHD brain and behaviours, and vice versa.

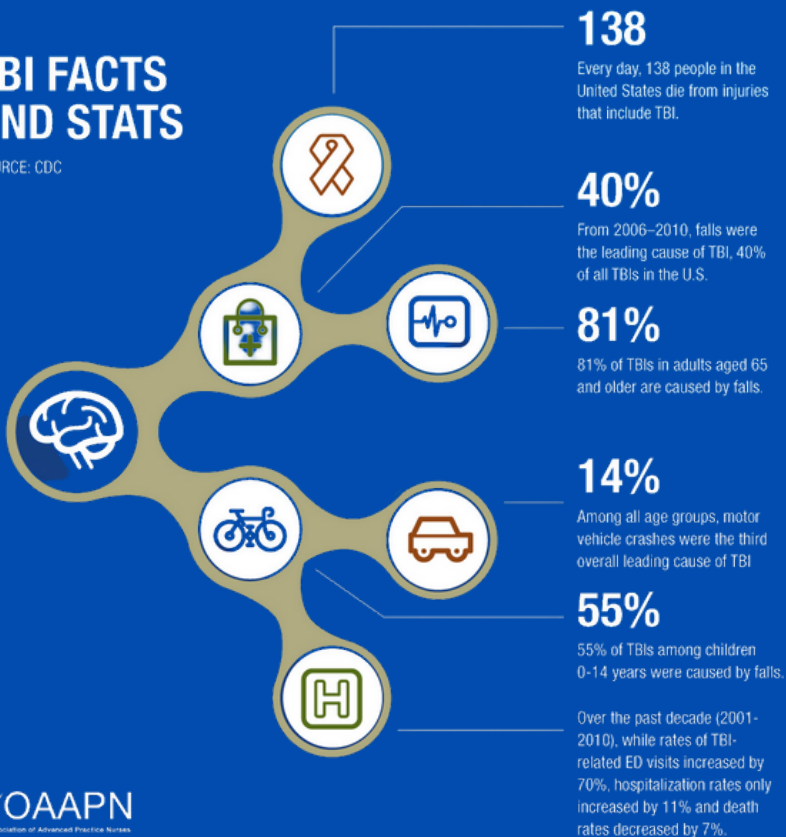


Worldwide number

Over 69 million cases of traumatic brain injury are reported worldwide each year. It affects people of all ages and is prevalent in both high and low-income countries. Each year, around 1.5 million hospital admissions are registered solely related to traumatic brain injury in European countries.

TBI FACTS AND STATS

SOURCE: CDC



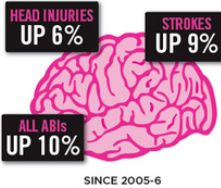
ACQUIRED BRAIN INJURY



the brain injury association

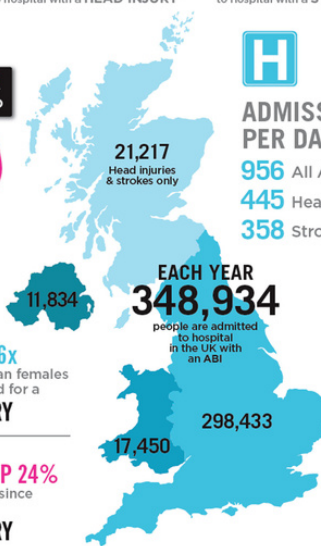
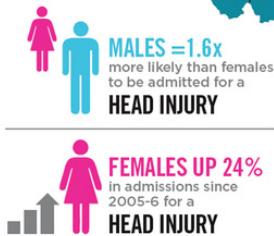
2013-2014

STATISTICS BASED ON UK ADMISSIONS



ADMISSIONS PER DAY

956 All ABIs
445 Head injuries
358 Strokes



Approximately 1 in 5 children experience a mild traumatic brain injury at some point during childhood.

Total ABI admissions include head injuries, strokes, brain tumours, and other conditions such as meningitis, encephalitis and hydrocephalus. Not all these people will be left with a long-term disability, so ABI is used as short-hand for 'ABI-related diagnosis'. Admissions do not equate to individuals as one person can have multiple admissions. Overall, individual patients make up approximately 85% of all admissions and over 90% of head injury admissions.

Children who have had a serious head injury are more likely to develop attention ADHD – but new research suggests that symptoms may not develop for up to a decade later.

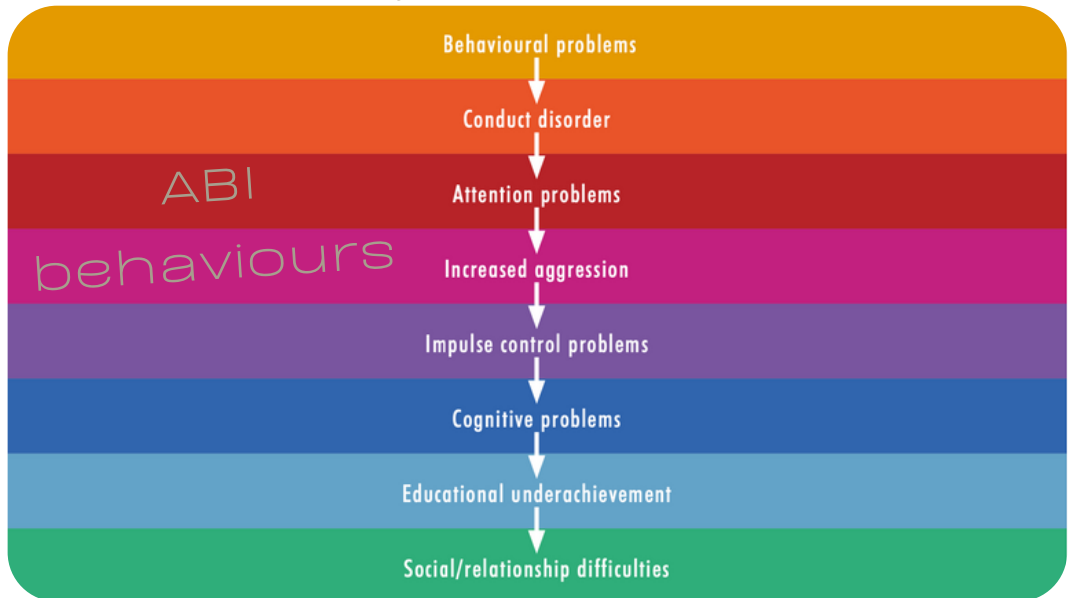
Narad's research looked at 187 children with no prior history of ADHD who were hospitalized due to either TBI or other accidents. Of the 187 children, 48 eventually met the definition for secondary ADHD, roughly 25 percent of the group.

The risk for developing the disorder was, in cases of severe TBI, four times higher than the rest of the children. even children with less severe head injuries were also at risk of developing symptoms many years later.

The impact of acquired brain injury

- Memory Difficulties
- Executive functioning deficits
- Attentional deficits
- Speed of processing decline
- Depression and mood disturbance
- Fatigue and physiological symptoms
- Poor impulse control
- Poor self monitoring and judgement

See anything familiar?



Attention-deficit/hyperactivity disorder secondary to traumatic brain injury (ADHD/TBI) is one of the most common neurobehavioral consequences of TBI, occurring in 20% to 50% of individuals post-injury.

Experts have previously suggested that TBI could result in psycho-neurological changes that increase the chances of ADHD developing.

Others have hypothesized that having ADHD could increase an individual's risk of falling or having an accident that could cause a TBI.

Why?

- Increased impulsivity leading to increased risk taking
- Poor decision making
- Overstimulation and overwhelm increase risk
- Impact on mood and coping strategies
- Time misperceptions may lead to careless behaviours

Therefore, it may be useful to assess brain injury history during screening and assessment of ADHD in the adult population.

Secondary ADHD

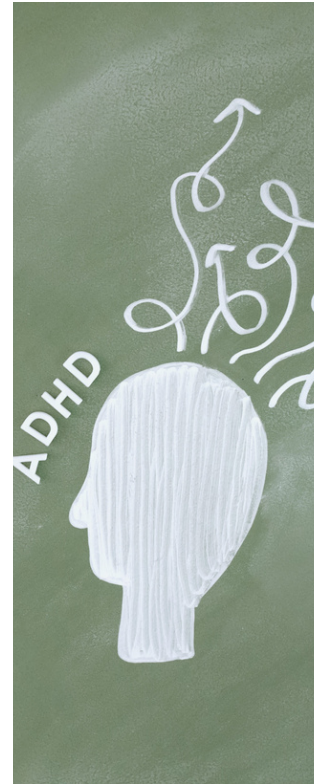
Secondary ADHD relates to symptoms that fall out of the three core ADHD symptoms of hyperactivity, impulsivity and attention-deficit disorder.

The following are secondary symptoms of ADHD:

- Irritability
- Forgetfulness
- Disorganization
- Low frustration tolerance
- Emotional lability
- Temper tantrums and aggressive, defiant behavior
- Problems with visual and/or auditory perception
- Learning difficulties
- Impaired social relationships with parents, teachers, friends

Studies show that children who sustained a severe traumatic brain injury are three times more likely to develop ADHD by the time they begin middle school.

This type of brain injury is more severe than a concussion, and one that prompted at least one night spent in the hospital. Just imagine how many numbers that is! How many types of these head injuries do we see in children, and adults? Countless.



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There is an excess prevalence of premorbid ADHD among children who present with moderate and severe closed head injury. Children with high psychosocial adversity are more likely to develop Secondary ADHD after head injury. S-ADHD has criteria in common with personality change due to closed head injury. A deficit in behavioural inhibition being the major overlapping feature.



SADHD is significantly associated with TBI severity recorded by categorical and dimensional measures, intellectual and adaptive functioning deficits, and personality change due to TBI, but not with lesion area or location. Results suggest that SADHD is a clinically important syndrome after severe TBI in children and adolescents.

Individuals with premorbid ADHD performed significantly worse than their matched counterparts on several tests of attention, processing speed, and working memory, and were significantly more likely to produce profiles later rated as impaired by independent, board-certified clinical neuropsychologists. In addition, time from traumatic injury to testing was found to be negatively correlated with neurocognitive performance.

Key findings

Closed head injury predicted the development of SADHD symptoms and anxiety with more severe injury predicting more severe outcomes.

Closed head injury in children leads to SADHD symptoms and anxiety even after taking preinjury disturbance into account. Poor response inhibition is a consequence of head injury.

SADHD was significantly ($p < .05$) comorbid with personality change due to TBI and new-onset disruptive behavior disorders.

Preinjury adaptive function was a consistent predictor of SADHD.

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Findings argue for the utility of a brief assessment of premorbid ADHD in the acute care of individuals with mTBIs and provide clinicians with a barometer for gauging the relative contributions of premorbid ADHD to neuropsychological impairments in the neurocognitive profiles of individuals with mTBIs.

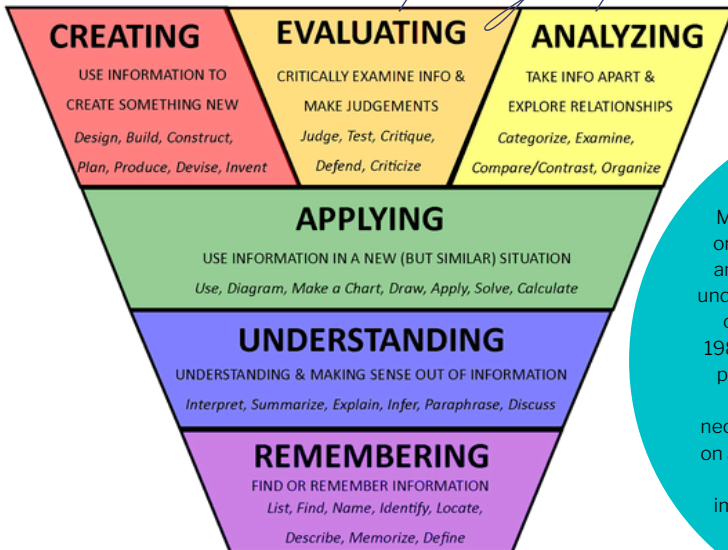
The missing piece

So, if there are so many similar symptoms presenting for those with ADHD and Acquired Brain Injury individually, surely one could simply apply the same processes when working with clients with the dual diagnosis?

Quite simply, no.

These same applications will simply not suffice. Clients will often be written off as non complaint, unmotivated or disengaged. When they are often quite the opposite, but unable to communicate such.

Metacognition



Metacognition refers to awareness of one's own knowledge—what one does and doesn't know—and one's ability to understand, control, and manipulate one's cognitive processes (Meichenbaum, 1985). Metacognition is the ability to use prior knowledge to plan a strategy for approaching a learning task, take necessary steps to problem solve, reflect on and evaluate results, and modify one's approach as needed. This is often impaired in individual with brain injury.

Lack of insight as a barrier

Anosognosia is a lack of ability to perceive the realities of one's own condition. It's a person's inability to accept that they have a condition that matches up with their symptoms or a formal diagnosis.

This lack of motivation, also called adynamia, is common with injury to the frontal lobes that occurs after a traumatic brain injury.

This coupled with impairments of metacognitive skills, as well as diagnoses of ADHD results in a tricky equation! This is why I refer to them as the rare unicorns of ADHD. Or are they? Given the statistics presented here, the prevalence of these individuals is actually quite a significant proportion.

By simply reading this here, you are already armed with a new understanding of these individuals, and their presentation. There is no more mystery or mystical spell needed, other than an increased understanding of why things seem to be taking longer, why your usual tools aren't quite the right fit, or why information is not being retained as you would expect.

How you understand your unicorn is the key. Your biggest challenge will be how your unicorn is able to communicate and understand their own needs. This next explanation will be one of your most important learnings; that is the phenomenon of the frontal lobe paradox.



Self-awareness deficits in brain injury have been reported as occurring in up to 97% of patients with TBI.

Traumatic Brain Injury. Sherer, M, et al, 1998



The Frontal Lobe Paradox

The Frontal Lobe paradox (Walsh, 1985), otherwise known as the 'knowing doing dissociation' (Teuber, 1964) is a fascinating and puzzling phenomenon that can affect anyone who has sustained damage to the frontal lobes of their brain.

This is a huge region, making up a third of the surface area of the brain, which is involved in regulating our thinking skills and decision-making. Think about the impact of this in a Neurodiverse brain.

Although some individuals with frontal lobe injuries may have significant difficulties with everyday tasks, such as cooking, organising their paperwork or remembering to take their medication, they show little awareness of this and moreover, strenuously deny that they need any help or support. This will often be in stark contrast to a singular ADHD presentation where insight is intact, and support is actively sought.

The person should not be seen as knowingly or consciously denying their difficulties or even lying.

Their presentation reflects the fact that the areas of the frontal lobes that are responsible for self-monitoring and developing insight have been affected by their brain injury. Once again, think of the impact of this in an ADHD brain.

This is referred to as a 'paradox' because certain individuals can appear entirely unimpaired in an office-based assessment, yet have significant functional difficulties in everyday life. Not to sound repetitive, but consider the presentation of this during a classic ADHD assessment.

Without specialist expertise in acquired brain injuries, it can be almost impossible to spot the presence of the Frontal Lobe Paradox because, in many cases, people will have preserved language skills and therefore appear remarkably unimpaired during a short one-to-one conversation.

If you do not explore the history of any injuries to the head sustained in childhood or adulthood, you will likely miss the first indications that your tools will need to be adjusted for the job ahead. Do not assume that an individual with such a history has insight and awareness into their cognition; it is unlikely that they do not.

Putting your unicorn puzzle together

1. Always consider even the most minor report of a head injury as a significant marker requiring adjustment to working practices.
2. Childhood brain injury is likely to have a significant impact on executive functioning and ADHD presentation
3. Secondary ADHD presentation will mimic more classic presentation, but with increased lack of motivation, increased executive dysfunction and decreased attentional skills. Do not write these individuals off in their desire to maintain change.
4. Pre diagnosed ADHD symptoms and traits will be markedly exacerbated by an acquired brain injury. Your client may not have awareness of this.
5. No matter the timeline of diagnoses, the approach will require adaption from you as the professional, and increased education regarding the complexities of aquired brain injury and its variability.



What do you and your client need?


- More time
- More history
- More education
- More repetition
- More scaffolding
- More strategy implementation planning
- More accountability practices
- More multi disciplinary team working
- More understanding of variability of symptoms in brain injury recovery over time
- More insight and awareness education

The perfect equation

ACQUIRED BRAIN INJURY + ADHD + AN EDUCATED ADHD PROFESSIONAL




THE COMPLETED JIGSAW



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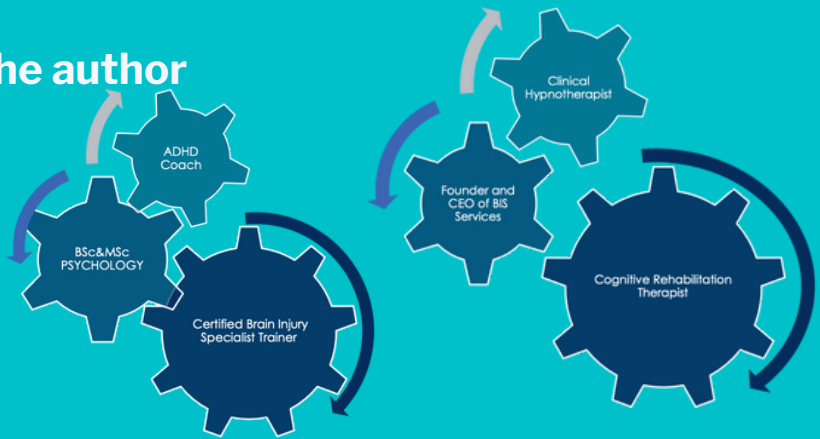




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About the author



Natalie has worked in the field of Neuro Rehabilitation for nearly 20 years. As a Cognitive Rehabilitation Therapist and Certified Brain Injury Trainer, she has worked with hundreds of families and clients as Director of a Community Rehabilitation service.

She is also known as The Cognitive Rehab Coach, providing online support and education, blog writing, and contributions to the industry magazine, The NR Times. Natalie has trained a huge number of employees, as well as other industry professionals and spoken at conferences, whilst holding board positions for charities.

Natalie holds a BSc in Psychology and MSc in Cognitive Neuropsychology, and completed her ADHD Coaching qualification with IACT. Natalie has a wealth of experience and training in the field both with adults and children. In her experience a number of clients, both covering all ages have a diagnoses of ADHD or concerns around symptoms. Clients or family members will approach Natalie for support when there are concerns or questions regarding a possible ADHD presence, or indeed for any other behavioural challenges they are experiencing. The executive functioning challenges of those with ADHD are similar to her clients with brain injuries and the tools required for support are closely linked.

Natalie works closely with families to educate and provide support with understanding the challenges of living with a hidden disability and neurodiversity. Strategies, insights and training is provided to help navigate the pathway, with a holistic approach. As a qualified Clinical Hypnotherapist, Natalie also provides sessions to deal with anxiety, stress, adjustment and general relaxation to all ages.

Areas of expertise and interest include fatigue management, insight and awareness, adjustment and formation of self and strategy implementation. Natalie is also the author of the Brain Injury Fatigue Management journal with the new ADHD Planner in editing stages..

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