ACTA SCIENTIFIC NEUROLOGY (ISSN: 2582-1121)

Volume 7 Issue 8 August 2024

Case Series

Rejection Sensitivity Dysphoria in Attention-Deficit/Hyperactivity Disorder: A Case Series

William W Dodson, Edward J Modestino*, Handan Titiz Ceritoğlu and Basel Zayed

Brain & Behavior Laboratory, Department of Psychology, Curry College, Milton, MA, USA

***Corresponding Author:** Edward Justin Modestino, Brain & Behavior Laboratory, Department of Psychology, Curry College, Milton, USA.

DOI: 10.31080/ASNE.2024.07.0762

Received: June 05, 2024

Published: July 15, 2024

Abstract

The authors of this publication describe herein a cluster of symptoms and behaviors in patients with ADHD. The authors have called this Rejection Sensitivity Dysphoria (RSD), as episodes begin with the experience of perceived rejection, demonstrating rejection sensitivity, that progresses into a nearly instantaneous dysphoric mood, which causes significant distress and impairment. We present a case series of four case studies from the first author's private practice in great detail. At present, the authors have seen hundreds of patients and clients with this same clinical profile (ADHD with RSD), which the authors have not been able to attribute to any other known comorbid psychopathology with ADHD (i.e., mood disorders, anxiety disorders, personality disorders, or other developmental disorders). Notably, clinicians worldwide have contacted the first author, confirming that they have seen ADHD patients and clients who have presented with this in their professional experience. Individuals with RSD have tended to respond favorably to alpha-2 agonists. We provide the details of RSD based on the larger group of individuals from our clinical experience. Research needs to be conducted to elucidate the underlying nature of RSD in ADHD. We are currently doing such research.

Keywords: ADHD; Emotional Dysregulation; Rejection Sensitivity Dysphoria

Introduction

Rejection Sensitive Dysphoria is a term first coined by Dr. Dodson (first author). We have changed Rejection Sensitive Dysphoria to Rejection Sensitivity Dysphoria (RSD) to be consistent with the scientific literature on rejection sensitivity [1] and the fact that the term "rejection sensitivity" is currently used in the DSM-5-TR [2]. *Anticipated* social rejection can trigger RSD, either as the *imagined* perception of being rejected, etc. or from self-criticism about falling short in these situations, both of which lead to a dysphoric mood. Every mention of rejection sensitivity (in relation to dysphoria) in scientific literature until recently had been the hallmark feature of another unofficial diagnosis of atypical or non-typical depression [3]. In 2019, the European Consensus Statement finally expanded the diagnostic criteria for Attention-Deficit/Hyperactivity Disorder based on elementary school children, which describes adults with ADHD more completely [4]. Adding Emotional Dysregulation (ED) as a fundamental diagnostic criterion broadened the scope of diagnostic criteria for ADHD to include an emotional component. Clinicians began to write in lay publications, websites, and multimedia formats about what was

presented as a specific subtype of ED in ADHD that was given the exact name of Rejection Sensitive Dysphoria because its defining features were almost identical to the condition described but not validated, as a separate condition in the affective disorder literature [5]; [6]. Notably, this concept of RSD got immediate acceptance in lay publications but has not been examined in scientific literature until this article. Here, we present four detailed case studies within a case series of individuals with RSD with ADHD.

Methods

Patients for the case series were drawn from the first author's private practice. Each case study presents information gathered at intake from clinical interviews, psychiatric consultations, and progress notes. Various psychological inventories/measures and their scores have been provided in cases where they were available to provide objective measures. Outcomes are presented in relation to the patients' reasons for initiating treatment and their goals for alleviating their distress.

Results

Patient 1

Patient 1 was a 29-year-old, single, white, right-handed, heterosexual male who was diagnosed with ADHD in the 5th grade and again in his first year of engineering school. He had an FSIQ of 125 and no learning disabilities, so his father forbade the use of medications for ADHD because he thought that the problem was that the patient was "just lazy and unmotivated." His father remains a highly critical and condemning person whom Patient 1 avoids if he can.

Patient 1 made adequate grades to get into engineering school. For his entire life, he viewed his main problem as his episodic "attacks" of physical and emotional pain, intense shame, and feeling ostracized any time he perceived that someone else had withdrawn their "love, approval, or respect." These episodes hit suddenly, without warning, and were always triggered by his experience of being rejected, criticized, or not meeting his own goals and standards. He became socially isolated because "having people know me just wasn't worth the pain." The periods following these episodes of inability to function could last into the next day. He had never asked a girl out on a date or applied for a job because the possibility that he might be turned down was so anxiety-provoking that "it just wasn't worth it."

He finally stopped going to class for fear of failing in public and soon after dropped out of college altogether to enter an intensive outpatient program with a diagnosis of social anxiety disorder but no identified mood disorder, autism, or personality disorder. He was started on a benzodiazepine and attended CBT and DBT groups for six hours every day for one month. He was not asked about possible ADHD and "did not divulge that flaw." He was finally discharged because he was making no progress in treatment nor getting any symptom relief of his diagnosed "social anxiety."

At this point, he was referred to a psychiatrist who specialized in "treatment-resistant" patients. He was re-diagnosed with ADHD inattentive subtype and was found to get significant benefit from time-released amphetamine. He did not, however, experience any relief from the episodes of sudden emotional and physical pain and feeling "in another dimension" from everything around him, which he pointed out had always been his chief complaint.

Due to the combination of this complaint and his history of ADHD, he was considered to have Rejection Sensitivity Dysphoria. He was started on guanfacine with a weekly increase of his dose of 1 mg. After he had been on a dose of 3 mg for one week, he reported that he had not had a single episode catastrophic levels of emotional pain that had been triggered by real or perceived rejection or criticism. He reported that he had identified dozens of occasions in which "I would have been knocked out" over the previous seven to ten days" but that he had felt as if he had "emotional armor" on that protected him from being "wounded."

At a two-year follow-up, he was doing well on Amphetamine XR and guanfacine 4 mg daily. He graduated from college, was working as an aerospace engineer, and had a steady girlfriend. He still had RSD episodes about once every six weeks, but he can now "talk myself down with the CBT I learned."

Patient 2

Patient 2 was a 17-year-old, single, white, right-handed, heterosexual female with a history of treatment-resistant migraine headaches that have multiple identified triggers such as changes in barometric pressure, hormonal triggers during menses, and "during the letdown following periods of stress" such as school tests and family social occasions. She was absent from school more often than she attended. She was found on testing to have

an FSIQ of 143 despite being also moderately dyslexic and having dysgraphia. Her brother and one parent had been diagnosed and treated for ADHD. Migraines ran in both genetic lines of her family.

Despite this, she was a straight-A student "because that's all I did with my life." After all, she felt she had to be "the perfect over-achiever who never made a mistake and was always the top of the class." This self-imposed pressure turned out to be her most common trigger for her migraines, that almost entirely went away when she was not in school during the summer.

At the intake psychiatric evaluation, she was found not to have an anxiety disorder [GAD 7 = 8 [7], mood disorder [PHQ-9 = 8 [8], Mood Disorder Questionnaire of 3/17 [9], Autism Spectrum Disorder [with a score of 4/17 on the Autism Spectrum Quotient [10]. Her PTSD Civilian Scale [11] was only 21 points out of a possible 85.

Patient 2 denied all features of ADHD on symptom checklists because she thought it was "a flaw that nobody could fix." Nonetheless, she had many behavioral signs of ADHD, such as initiation insomnia, chattering, and dominating conversations, losing track of what she was saying, procrastination, fidgeting in her chair, impulsive outbursts of temper, etc. She had previously been diagnosed with obsessive-compulsive traits, OCD-like perfectionism, and generalized anxiety disorder. Multiple anxiety and depression medication trials and two years of psychotherapy had produced no improvement in her psychological symptoms or her migraines. Her medications at this point in her life were sertraline for OC traits, valproic acid, and Tylenol with caffeine, although she reported no relief from any of the medications she had taken up to this point.

Finally, the patient came to a therapy session with "some research I found out on the Internet that describes me exactly!" She reported that she commonly cried whenever she read any new material she found on the web about Rejection Sensitivity Dysphoria. She especially identified with the character of an emotionally struggling adolescent girl protagonist in a recent novel, The Ink Black Heart, published under the pseudonym R. Galbraith by author J. K. Rowling [12], in which the character displays what appears to be RSD.

At her request, she was given a trial of clonidine, which made her dizzy and sedated even at the lowest available doses. A second trial on guanfacine produced profound benefits at low doses to her perfectionism, worry, performance anxiety, sleep initiation, and temper outbursts. Most significantly, the frequency of her migraine headaches decreased from three per week to just one every 3-4 weeks. She was able to acknowledge that she had ADHD and was able to start a stimulant medication without worsening her headaches or lifelong initiation insomnia.

At a six-month follow-up, she was taking methylphenidate ER 20 mg twice each day and guanfacine 2 mg at bedtime. She denied any side effects from these medications. She had stopped her SSRI because she no longer had OC-trait perfectionism. She had stopped the Depakote due to its lack of efficacy and future risk of birth defects should she decide to have children. Her sleep initiation was much improved.

Currently, Patient 2 is attending high school every day and experiencing only one migraine per month. She is trying to establish a circle of friends, which was impossible for her before due to her migraines and fear that she had to be perfect "or no one would like me." She is exploring several colleges in different states with the hope of ultimately becoming a neurologist.

Patient 3

Patient 3 was a 19-year-old, single, white, left-handed heterosexual female who had been homeless for the previous ten months. She dropped out of high school in the 11th grade (age 17 years /4 months) due to poor grades and her subjective feeling of being "bored to death" in class. She had been screened for learning disabilities when she was 12 years old due to academic performance that was thought to be well below her abilities. The LD testing found an FSIQ of 115 and no diagnosable learning disability. The LD assessment intentionally chose not to screen for ADHD because she was female and did not have a behavior problem.

She was first psychiatrically evaluated at the local community mental health center (CMHC) when she was 14 years old and was diagnosed as having "mixed anxiety and depression" despite not meeting diagnostic criteria for either condition [GAD-7 = 5 [7] PHQ-9 = 3 [8], PTSD Civilian screen = 2 [11]. She was compliant with five antidepressant trials (citalopram, fluoxetine, vortioxetine,

venlafaxine, and mirtazapine) over a period of four years without detectable benefits. She had sold drugs while homeless but denied using illicit substances "because I could see where that led." She acknowledged some use of alcohol and cannabis "about once a month."

She was referred to a clinician to evaluate her "treatment resistance." She was described as fidgety, restless, and "leaping from subject to subject." She described her anxiety as being a "constant sense of being restless and driven" and an inability to fall asleep at night due to "not being able to turn off my mind," "worrying about everything," and her "tossing and turning for several hours." She described her depression as coming and going for periods of less than three days, depending on whether she was "bored and down on myself for getting nothing done." She described herself as not being sad but rather hopeless and demoralized because she was "not successful at anything." Her ADHD diagnostic screening (Adult ADHD Self-Report Scale: [13]) was 9/9 inattentive criteria and 6 /9 hyperactive/impulsive criteria. She reported that no one had ever asked her about ADHD in any of her previous assessments in school or at the CMHC. No one in her family had been diagnosed with ADHD. She did not manifest features of Autistic Spectrum Disorder (ASD), with a score of only 3/17 on the Autism Spectrum Quotient [10]. Her PTSD Civilian Scale was relatively low for someone living on the streets at only 30 points out of a possible 85. She did not have a history consistent with Oppositional Defiant Disorder (ODD) or any personality disorder.

Due to the new diagnosis of ADHD, the patient was screened for Rejection Sensitivity Dysphoria. She reported being extremely vulnerable to criticism and teasing her entire life but had learned to hide it because "the teasing I got about being a head case just made it worse." She reported that the episodes of "feeling like my guts were on the floor" were always suddenly triggered by her perception that someone had withdrawn their "love and respect. I had to learn not to let it show to anyone by the time I started school." She often chose to fail tests by not doing them at all "rather than risk the possibility of failing in front of everybody." She did not meet the criteria for Social Anxiety Disorder (SAD) because her dysphoric episodes were not apprehensive prior to being in public but rather were an instantaneous response to her perception that she had been rejected and criticized.

Due to her possible substance use, she was started on an alpha-2 agonist, clonidine, in the hope that its sedative effects would help with her severe initiation insomnia. The clonidine produced intolerable side effects of sedation and headaches at a dose of just 0.1 mg, so she was tried on guanfacine, which was fine-tuned to 4 mg at bedtime. The dysphoric episodes ceased entirely, and she reported being able to fall asleep in less than 15 minutes. She recounted that "my thoughts have slowed down to where I can actually have a conversation with people." She was still "my own worst critic, but I think it is largely out of habit." At one year follow-up, she continued on guanfacine but now also took dexmethylphenidate ER 30 mg twice a day with very positive effects. She had attained a GED, lived in subsidized housing, and worked full-time as a clerk. She planned to go to a secretarial school in the following semester.

Patient 4

Patient 4 was a 42-year-old, married, white, right-handed, heterosexual female who initially sought marital therapy because she "couldn't take another day of being with" her second husband of 10 years. She reported that he had gradually become more and more critical, cold, distant, and "tormenting me by making fun of my struggle with taking care of the house and our two children." When he ridiculed her, she would either "lash out in a rage at him and give him the same he was doing to me," or she would "dissolve in tears it hurt me so bad." She often had to leave the house until her emotions were under her control.

She reported that she had always been "sensitive" and that this had severely interfered with her ability to sustain relationships and especially to date anyone when younger. She was estranged from her siblings because "they just wouldn't stop heckling me no matter how much I asked." Her first marriage had been "a disaster from the beginning, but we got married because I was afraid I'd never find anyone and I'd be left behind." She reported that her nine-year-old son, who had ADHD, was also "extremely sensitive to anything that people say because he thinks they are making fun of him." Her son also had a strained relationship with his father due to his frequent criticisms.

The psychiatric assessment and diagnostic scales did not find a mood disorder [PHQ 9 = 10 [8], Mood Disorder Questionnaire = 2 [9], anxiety disorder: [GAD 7 = 8 [7] Autism Spectrum Disorder

[2/17 on the Autism Spectrum Quotient/AQ [10], or personality disorder. Her ADHD diagnostic screening scale (Adult ADHD Self-Report Scale: [13] was 6/9 inattentive criteria, and 5 /9 hyperactive/impulsive criteria suggested ADHD.

She acknowledged that she was "highly cautious about discussing my emotional sensitivities" and "episodes of being totally out of control." She was afraid that she would be blamed for the failure of her marriage. She described the episodes as having little or no warning "unless I was really stressed out that day." She was almost always in an emotional dysphoric state, "went from zero to 110% instantly" and was "like somebody had just punched me in the chest." The duration of these episodes varied from 30 minutes or until she woke up the next day and usually resolved gradually over that time. When she is in one of these episodes, she reports fear that it will never end.

Patient 4's treatment, because her chief complaint was her severe sensitivity to rejection and criticism (Rejection Sensitivity Dysphoria), commenced with a trial on guanfacine, to which she had a "life-changing" response. While she continued to have mild, infrequent episodes, she was amazed at how much her mood and quality of life improved on just 2 mg of guanfacine, with which she had no side effects. She had a robust response to lis-dextroamfetamine 20 mg twice each day as well for ADHD. "I didn't realize how afraid I was of being hurt by people in general and my husband in particular." In therapy, she could view herself and her life in a totally different way. She could set appropriate limits for her husband "without falling apart." Her PCP now prescribes her medications while she continues in individual therapy. She also made sure her son was given a trial on guanfacine as well, stating that "I don't want him to go through life the way I did."

Discussion

Based on these case studies, hundreds more seen by the authors, and input from clinicians worldwide, we suggest the following tentative core features, associated features, episodic descriptions, impairment of functioning, and treatment of RSD.

Core Features of RSD

The core features of RSD are reported by the ADHD patients/clients in our practices at a greater than 90% frequency and appear to be focused on mood shifts triggered by perceived rejection. A clear antecedent always triggers these mood shifts. Although others may not see the trigger, the person was confident that they could not remember a single episode of mood dysregulation with no obvious trigger. The patients reported a limited number of triggers, including

- Rejection (withdrawal of love, approval, or respect);
- Teasing (perception of being belittled, ridiculed, made the butt of a joke); and
- Criticism (no matter how constructively it was intended);
- The person's rejection of themselves occurs because they believe they have failed or fallen short of their standards). The self-criticism and negative self-talk are often so relentless and attacking that they describe themselves as 'their own worst enemy.'

The new mood matches the person's perception of the nature of the trigger (*i.e.,* the trigger and the new mood are *congruent* as in the Diagnostic and Statistical Manual [14] terminology. The complete change from one mood to the other occurs instantaneously as opposed to a gradual, insidious worsening of symptoms and impairments over several weeks, as seen in a mood disorder. If these triggered emotions are internalized, the person can instantaneously appear to have a full major depressive disorder episode, complete with suicidal ideation. If the feelings are externalized, they are commonly expressed as rage at the person or situation that severely wounded them.

Associated Features of RSD

The associated features we have seen with RSD are essential for differentiating it from other causes of rejection sensitivity. The age of onset was commonly remembered as always being a part of their lives or present in their earliest memories. Clients/patients typically report being sensitive as a child, but few report that it developed suddenly in their mid-teens.

The pain was not usually describable in words by the individual. People could only describe the intensity of the pain (e.g., awful, terrible, catastrophic, or devastating) but not its quality (e.g., sad or frightening).

It is this *intensity* that defines RSD and separates it from everyday rejections. No one likes being rejected, criticized, or

seen as a failure. Nevertheless, it is unpleasant, and people avoid the situation if they can. RSD is distinguished by its extreme, unbearable *intensity* that usually stops the person from functioning for a highly variable period. This overwhelming intensity sets RSD apart from normal emotional responses familiar to neurotypical people. The severity of the pain gives the condition a part of its name. Dysphoric is Greek for "unbearable." People who experience this dysphoria describe it as physically and emotionally painful, as if being hit with great force in the chest. They often describe the pain as a "wound', even extreme enough to result in suicidal ideation. Commonly, people hunch over, grimace, and clutch their chests when describing their RSD experiences.

The lifelong presence of RSD, paired with experiencing emotional rejection as physical pain, the intensity not experienced by most during typical rejection, and the ensuing dysphoria, all make this experience unique. Furthermore, these are experienced as episodic and based on clear triggers.

Episodes of RSD

An event or perception triggers each episode; this clear causation is one of the main distinguishing features of RSD from mood or affective disorders. The change in mood is instantaneous, which may appear to an observer who does see the internal trigger to misidentify the mood shift as rapid cycling bipolar disorder. An episode of RSD can also be triggered if a sufferer perceives themselves as not living up to their expectations or the perceived expectations of others, or even in anticipation of rejection. Thus, it can be triggered by a self-imposed fear of being discovered as being inadequate in the near future.

While in an RSD episode, most people report feeling cut off from other people and their physical surroundings. They variously describe feelings of profound loneliness "as if cast out," "outside the realm of other people," "isolated," and being disconnected from the world around them.

Once the episodes start, the person has little control over it. As a result, the incidents usually must run their course. Some things that people with ADHD have found that can sometimes end an episode include getting interested in something new and fascinating, where hyperfocus shifts the person's mood. If people can hyperfocus on something else, they report that the episode often ends just as abruptly as it started. Alternatively, gentle humor from another person who knows what episodes of RSD are like can also help. This humor is often remembered as a gentle "invitation" to return from an RSD episode to an accepting and non-judgmental relationship. After the episode, the person is ashamed and humiliated for being a "head case," a "weakling', "being too sensitive", or being unable to control themselves like adults. They tend to hide this vulnerability from others out of shame and fear that others will reject and criticize them even more in a never-ending cycle. Based on all of this, it is clear that RSD can severely impair the sufferer's functioning during and after an episode.

Impaired functioning in RSD

RSD appears to be related to the emotional dysregulation commonly seen in ADHD, which has only recently been published and recognized in the clinical literature about ADHD [15]. As clinicians, we see RSD in most adults and adolescents diagnosed with ADHD. Interestingly enough, although many clinicians have seen RSD in their adolescent and adult clients and patients with ADHD, this specific perceived rejection sensitivity leading to dysphoria has not yet been published in the clinical literature of ADHD until now with this publication.

Although RSD in ADHD is quite common among various websites and lay publications, many of these are written by clinicians for a general audience.

Clinicians often report that the efforts exerted by people who experience episodes of RSD can profoundly influence their development and interpersonal relationships. For example, some people become perfectionistic so that they will be protected by being above criticism or reproach. On the other hand, some people become "people pleasers" to avoid potential rejection. Still, others give up on trying anything that is not guaranteed quick and complete success because the possibility of failing or falling short makes trying new things too frightening and painful, to the point of being disabled. However, it is necessary to differentiate based on the motive between activating a personality trait, an unprocessed attachment complication, unfinished grief, a traumatic past, etc. These can, accordingly, influence the qualities and presentation of people-pleasing behavior.

Treatment of RSD

Treatment of RSD is based only on clinical cases at this point. The current pharmacological treatment for RSD in ADHD that Dr.

Dodson, the first author of this paper, has used in his practice has consisted of alpha-$_{2a}$ autoreceptor agonists initially used to treat hypertension (e.g., clonidine, guanfacine), which are FDA-approved for the treatment of hyperactivity and impulsivity caused by ADHD [16], or monoamine oxidase inhibitors (MAOIs) commonly used to treat atypical depression and dysphoria (e.g., tranylcypromine). In the early days of experimentation with medications for ADHD, [17] found MAOIs to be particularly effective for treating adults with ADHD. MAOIs have many advantages; they are not controlled substances, cover the entire waking day, and provide benefits from coexisting anxiety and depressive disorders. However, Wender only used the MAOIs to treat adults because children could not reliably follow the required dietary restrictions and avoid interactions with many other medications.

For guanfacine, Dr. Dodson (the first author) has seen improvement in his patients using a dosage range of 0.5 -7 mg. guanfacine daily and 0.01-0.05 mg clonidine daily. Dosages for MAOIs are in the typical range used to treat clinical depression. These medications appear effective in most patients with RSD associated with ADHD. However, we have not run any clinical trials with these medications for RSD. Interestingly, some of the authors of this paper have used cognitive-behavioral therapy (CBT) and mindfulness with clients with RSD (as part of their ADHD), and clients have reported and shown a significant reduction in RSD symptomatology. We are planning clinical trial stages using CBT and mindfulness for this in the near future. Interestingly, ED is frequently treated with CBT and mindfulness.

Conclusion

In this case series, we presented four case studies of adults with ADHD who also experienced significant and distressful RSD. We have not been able to attribute these brief and extreme episodes of rejection sensitivity leading to dysphoria to a mood disorder (i.e., bipolar disorder, major depressive disorder), an anxiety disorder (i.e., social anxiety disorder), a personality disorder (i.e., avoidant personality disorder, borderline personality disorder, dependent personality disorder) or other developmental disorders (i.e., autism spectrum disorder). Furthermore, the first author has seen well over 300 patients that fit this same clinical profile, as have the other authors and various clinicians worldwide in the ADHD community who have sought out and confirmed this with the first author. Most of the patients with RSD respond to alpha-2 agonists (i.e., clonidine, guanfacine), which, notably, are FDA-approved for use in ADHD [16]. Further research needs to be conducted to elucidate the true nature of RSD within those with ADHD. We are currently doing this research now.

Conflict of Interest Statement

The authors disclose that there are no conflicts of interest with regard to this work.

Funding

There was no funding for this publication.

Acknowledgments

The authors have no acknowledgments about this work.

Bibliography

1. London B., *et al*. "Social causes and consequences of rejection sensitivity". *Journal of Research on Adolescence* 17.3 (2007): 481-506.

2. American Psychiatric Association (APA). "Diagnostic and statistical manual of mental disorders (5th edition., text rev.) (2022).

3. Singh T and Williams K. "Atypical Depression". *Psychiatry* 3.4 (2006): 33-39.

4. Kooij JJS., *et al*. "Updated European consensus statement on diagnosis and treatment of adult ADHD". *European Psychiatry* 56.1 (2019):14-34.

5. Dodson WW. "Emotional regulation and rejection sensitivity". *Attention Magazine* (2016): 8-11.

6. Wong CL. "A case review of a young adult with low-functioning autistic disorder transitioning from school to work". *Asian Journal of Interdisciplinary Research* 3.1 (2020): 1-31.

7. Spitzer RL., *et al*. "Generalized Anxiety Disorder 7 (GAD-7) [Database record]". *APA PsycTests* (2006).

8. Kroenke K., *et al*. "Patient Health Questionnaire-9 (PHQ-9) *[Database record]". APA* PsycTests (1999).

9. Hirschfeld RM. "The mood disorder questionnaire". *The Primary Care Companion for CNS Disorders* 4.1 (2002).

10. Baron-Cohen S., *et al*. "The Autism-Spectrum Quotient (AQ): Evidence from Asperger Syndrome/High Functioning Autism, Males and Females, Scientists and Mathematicians". *Journal of Autism and Developmental Disorders* 31.1 (2001): 5-17.

11. Conybeare D., *et al*. "The PTSD Checklist-Civilian Version: Reliability, validity, and factor structure in a nonclinical sample". *Journal of Clinical Psychology* 68.6 (2012): 699-713.

12. Galbraith R. "*The Ink Black Heart*". Sphere (2022).

13. Castagna PJ., *et al*. "Adult ADHD self-report scale--Modified version. *PsycTESTS Dataset* (2019).

14. American Psychiatric Association (APA). (2013). *Diagnostic and statistical manual of mental disorders* (5th edition.). Arlington, VA: Author (2013).

15. Reimherr FW., *et al*. "Types of adult attention-deficit hyperactivity disorder (ADHD): A replication analysis. *SSRN Electronic Journal* (2019).

16. Neuchat EE., *et al.* "The Role of Alpha-2 Agonists for Attention Deficit Hyperactivity Disorder in Children: A Review". *Neurology International* 15.2 (2023): 697-707.

17. Wender PH. "The hyperactive child, adolescent, and adult: Attention deficit disorder through the lifespan". Oxford University Press (1987).