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Dr. Daniel Biddle
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ADHD Assessment

Client Name:	Anne Unwin
Date of Birth:	13/1/1986
Age at Assessment:	37 years 10 months
Clinical Presentation:	Attentional Difficulties
Date(s) of Assessment:	5/12/2023
Date of Report:	14/12/2023

Anne self-referred to The Harbour Clinic for assessment of potential ADHD. Please find enclosed the requested report.

Qualifications and Experience

I am a registered Psychologist with the Australian Health Practitioner Regulation Agency (AHPRA) with an endorsement in Clinical Psychology. I hold the degree of Master of Psychology (Clinical) from the University of Wollongong, and PhD in Medicine (Psychological Medicine) from the University of Sydney. I completed a PhD thesis on the impact of sleep disturbance on cognitive function in mood disorders. I am a full member of the Australian Psychological Society. I have worked across multiple positions as a psychologist, have postgraduate-level experience and training in neuropsychological assessment, and am currently a clinical psychologist with The Harbour Clinic.

CONTENTS

1. Data

Tests Administered

- Diagnostic Interview for ADHD in Adults (DIVA) 5/12/2023
- QbCheck ADHD Assessment 8/12/2023
- Series of Assessments to Guide Evaluation (SAGE) 30/11/2023
- Ritvo Autism and Asperger Diagnostic Scale Screen (RAADS-14, 5 items) 29/11/2023

Collateral Information

- Correspondence – Mitchell Unwin, Anne's friend and ex-partner 6/12/2023
- Correspondence – Toni Arlt, Anne's sister 7/12/2023
- Correspondence – Anke Arlt-Wolff, Anne's mother 30/11/2023

2. Presentation

Anne is a 37-year-old female who was seen on one occasion via videoconference for the purpose of an assessment of potential ADHD symptoms. She completed the assessment independently. Anne appeared to be oriented to time, place and person. Anne engaged well with the process of assessment and provided specific examples of reported adulthood symptoms. She had limited recollection of childhood experiences.

3. Diagnostic Interview

The Diagnostic Interview for ADHD in Adults (DIVA) is a structured interview which assesses symptoms of ADHD relative to the DSM-5 diagnostic criteria. According to the DSM-5, diagnosis of ADHD in adults involves determining the presence of ADHD symptoms during both childhood and adulthood. The main requirements for the diagnosis are the childhood onset of ADHD symptoms and the subsequent persistence of characteristic symptoms to the time of the current evaluation. The symptoms need to be associated with significant clinical or psychosocial impairments in two or more life situations. Because ADHD starts in childhood, it is necessary to evaluate the symptoms, course and level of associated impairment using a retrospective interview for childhood behaviours. Whenever possible the information should be gathered from the patient and supplemented by information from informants that knew the person as a child. Supporting information was obtained from Anne's friend/ex-partner and her sister-in-law regarding adulthood behaviour, and Anne's mother and sister regarding her childhood behaviour. In order to respond to the dual problems of false positive and false negatives, the process outlined by Sibley (2021)* was followed. In this process, false negatives are avoided by applying a liberal "or" rule to tabulating symptoms, where individual symptoms endorsed by either a client *or* a collateral informant are summed to yield a symptom total. Resulting risks of false positives are addressed through careful measurement of functional impairment and effective differential diagnosis. See Table 1 below for a summary of responses.

Table 1. Self and informant-reported DSM-5 ADHD symptoms

DSM-5 Symptom	Adult (self)	Adult (friend)	Adult (sister-in-law)	Childhood (self)	Childhood (mother)	Childhood (sister)	Symptom Present
A1	X			X			X
A2	X			Unsure			X
A3	X		X	Unsure		Unsure	X
A4				Unsure			
A5	X		X	Unsure	X		X
A6			Unsure	X			
A7			Unsure	Unsure			
A8	X		X	Unsure	X	Unsure	X
A9	X			Unsure			X
H1	X		Unsure	Unsure	X		X
H2			Unsure				
H3	X		X	Unsure		Unsure	X
H4		Unsure	X				X
H5		X	X	Unsure		X	X
H6			X	Unsure			X
H7	X	X	X	Unsure			X
H8		X	X	Unsure	X		X
H9			X	Unsure	X		X
						Total Inattentive Symptoms	6/9
						Total Hyperactive/Impulsive Symptoms	8/9

X = symptom present

* Sibley, M. H. (2021). Empirically-informed guidelines for first-time adult ADHD diagnosis. *Journal of clinical and experimental neuropsychology*, *43*(4), 340-351.

Collateral Information

Anne's friend/ex-partner reported observing nil adulthood symptoms of inattention, but several symptoms of hyperactivity/impulsivity.

Anne's sister-in-law report fewer (but still multiple) symptoms inattention and more symptoms of hyperactivity/impulsivity than Anne self-reported.

Anne's mother reported observing several ADHD-like symptoms in childhood. She also reported that associated impairment was limited by external structure. Also, Anne reported that since childhood and until relatively recently she has been very rule-focused and eager to please others/fulfill expectations. This may have to some degree mitigated expression of ADHD-like symptoms.

Anne's sister reported observing fewer ADHD-like symptoms than Anne self-reported. This may reflect the fact that Anne's sister was herself reported to experience more childhood ADHD-like symptoms than Anne.

Anne's school report cards were unavailable.

For symptoms of **Inattention** Anne and/or an informant reported symptoms that have persisted for at least 6 months in 6 of the 9 criteria required for a DSM-5 diagnosis of ADHD: Predominantly Inattentive Presentation. These were:

A1. Often fails to pay close attention to details, or makes careless mistakes in schoolwork, work or during other activities.
A2. Often has difficulty sustaining attention in tasks or play.
A3. Often does not seem to listen when spoken to directly.
A5. Often has difficulty organizing tasks and activities.
A8. Often easily distracted by extraneous stimuli.
A9. Often forgetful in daily activities.

Anne and/or an informant also reported that several symptoms of inattention were present prior to age 12 years (see Table 1).

For symptoms of **Hyperactivity/Impulsivity**, Anne and/or an informant reported symptoms that have persisted for at least 6 months in 8 of the 9 criteria required for a DSM-5 diagnosis of ADHD: Predominantly Hyperactive/Impulsive Presentation. These were:

H1. Often fidgets with hands or feet or squirms in seat.
H3. Often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults this may be limited to subjective feelings of restlessness).
H4. Often has difficulty playing or engaging in leisure activities quietly.
H5. Is often on the go or often acts as if 'driven by a motor'.
H6. Often talks excessively.
H7. Often blurts out answers before questions have been completed.
H8. Often has difficulty awaiting turn.
H9. Often interrupts or intrudes on others.

Anne and/or an informant also reported that several symptoms of hyperactivity/impulsivity were present prior to age 12 years (see Table 1).

Subjective Functioning

Anne reported that these symptoms interfere with or reduce the quality of several life domains, including:

- Occupational functioning (employed as data and finance administrator/project co-ordinator since September 2023; impulsivity and forgetfulness impacts interpersonal interactions at work; previously less occupational impact as roles were more physically intensive e.g. working in retail)
- Leisure Time (Unable to relax properly during free time, Unable to finish a book or watch a film all the way through, Being continually busy and therefore becoming overtired, Tire quickly of hobbies, Binge eating)
- Self-confidence / self-image

The DIVA supports a diagnosis of ADHD: Combined Presentation.

4. Neuropsychological Measures

QbCheck is a computer-administered test that objectively measures cognitive performance and activity levels. The test provides data for the core signs of ADHD, that is, hyperactivity, impulsivity and inattention. QbCheck combines a Continuous Performance Test (CPT) with a motion tracking system by use of a web camera. Stimuli comprised of two possible shapes in two possible colours are presented one at a time. Participants are required to respond (press a button) when two stimuli of the same shape and colour are presented in succession.

Measures of inattention, impulsivity, and activity from continuous performance tests (CPTs) have been found to increase the specificity of the diagnostic process (the ability to correctly identify those without ADHD) by 10% (Petterson et al. 2018)*.

Please see Appendix A following the report for QbCheck output.

Validity

In terms of her approach to assessment, Anne returned many more correct responses than incorrect during the 1st quarter of the test, suggesting she understood the task instructions.

* Pettersson, R., Söderström, S., & Nilsson, K. W. (2018). Diagnosing ADHD in adults: an examination of the discriminative validity of neuropsychological tests and diagnostic assessment instruments. *Journal of attention disorders*, *22*(11), 1019-1031.

ADHD Total Symptom Score

The ADHD Total Symptom Score predicts an individual's likelihood of having typical ADHD symptoms. The score is based on a comparison between a group of normally developing individuals and individuals with a clinical diagnosis of ADHD. The likelihood is expressed as a value from 0 to 100. A value below 10 indicates a low risk for the test taker to belong to the clinical group. A value between 10 and 50 indicates an elevated risk to belong to the clinical group and a value of 50 and above indicates a high risk to belong to the clinical group with increasing risk at higher values.

- **Anne's score of 89 represents a high risk of ADHD-like symptoms.**

Activity

MicroEventsX occurs when the tracking algorithm detects a position change of the test taker head larger than one millimetre on the x-axis since the last MicroEventsX. A large number of MicroEventsX indicate a high degree of activity. MicroEventsX quantifies how active the participant is (i.e., the amplitude).

- **Anne was more active during the task than 99 percent of the normative population.**

Impulsivity

A Commission Error occurs when a response is registered when the stimulus was a Non-Target stimulus (i.e., the spacebar is pressed when it should not have been pressed). Commission Errors measures impulsive behavior and are believed to result from the anticipatory or incomplete processing of the stimulus.

- **Anne made more Commission Errors than 97 percent of the normative population.**

Inattention

An Omission Error occurs when no response was registered for a Target stimulus (i.e., the spacebar was not pressed when it should have been). Omission Errors reflect inattention and inability to remain focused on the task. A high level of Omission Errors has been associated with selective attention and deficient arousal.

- **Anne made more Omission Errors than 98 percent of the normative population.**

Reaction Time is the average time it takes for the test taker to press the spacebar after the stimuli have been presented. The Reaction Time is measured only when a correct button press is registered. Reaction Time reflects processing and execution. Average response latency is thought to measure the response preparation component of executive functions.

- **Anne's average Reaction Time was slower than 90 percent of the normative population.**

Reaction Time Variation is the standard deviation of the Reaction Time. Reaction Time Variation provides a measure of the consistency (or inconsistency) of the Reaction Time. A high degree of Reaction Time Variation may reflect clinical difficulties with sustaining attention, forgetfulness, disorganization, and careless errors.

- **Anne's Reaction Time Variation was greater than 91 percent of the normative population.**

5. Differential Diagnosis

5.1 Family History

Anne reported that while she is not aware of any relatives in her immediate or extended family with diagnoses of ADHD, her daughter, sister and mother each display ADHD-like symptoms.

5.2 Developmental, Educational, and Occupational History

Regarding her developmental history, Anne's mother indicated that there were no complications with her birth and all milestones were normal. Anne was born in Germany.

Anne lived with her parents and younger sister till she was approximately two years of age. Her parents then separated. Anne recalled memories from that time of her parents yelling at each other.

Anne's mother was then in another relationship for several years and had another child (Anne's younger brother).

Anne's mother then started her current relationship (with Anne's stepfather) when Anne was approximately 11 years of age. When she was 10-11 years of age Anne found out that seeral years before her mother had been sexually assaulted by her brother's father.

Anne reported that she has little memory of her experiences before she was 15 years old, but in primary school she had a couple of friends she would spend time with. In high school she was known for being very unemotional (she was known as "the rock") and was generally well-liked, with a couple of peers she felt closer to throughout high school.

She had one boyfriend from 16-19 years of age. She then moved to Australia, met and married her now ex-husband in her mid-20's, and had two children. This relationship ended after 10 years (in 2019), but they have remained friends and each work to support their children. Since separating from her husband Anne was in a two-year relationship with a female partner. She has currently been single for over one year and lives with her two children. She is still close with her ex-husband's sister (who provided information about Anne's adulthood ADHD-like symptoms).

Academically Anne reported that in primary school she had no difficulties with learning reading, writing and mathematics. Her ADHD-like symptoms seem unlikely to be better-explained by specific learning disorders.

Since high school Anne completed a traineeship with a biotech and production planning company. After moving to Australia she worked in retail for ~10 years. A few years ago she completed a certificate 3 in community services (she found initiating and completing academic tasks was difficult). She then working as a support worker for 3 months and found the administrative requirements (e.g. report-writing) somewhat difficult. She then worked for a couple of years in a paint shop. Since September 2023 she has been working as a data and finance administrator and project coordinator and been having some difficulty with focus, remembering, and impulsivity in communication at work.

5.3 Autism Screen

The Ritvo Autism and Asperger Diagnostic Scale Screen (RAADS-14) is a 14-item screening questionnaire used to assess potential traits of Autism Spectrum Disorder (ASD). Administering only the first 5 items of this questionnaire has been found to be associated with a minimal loss of sensitivity and specificity relative to the full RAADS-14, with a cut-point of 4 or greater from a maximum of 15 points yielding a sensitivity of 93% and a specificity of 45% in a sample of patients with ADHD*. The tool is thus significantly better at ruling *out* than ruling *in* traits of autism.

Anne completed the first 5 items of the RAADS-14 and obtained a total score of 2, suggesting that meeting criteria for a diagnosis of Autism Spectrum Disorder is unlikely.

However, she did endorse symptoms such as:

- Sensory sensitivities e.g. hypersensitivity to auditory stimuli, uses earbuds in public. As a child would try and find quiet/less public spaces with the bistro her mother ran.
- Is able to recognise social cues and has empathy, but has difficulty with small-talk and saying inappropriate things. Feels she can manage this but it takes effort.

While it was beyond the scope of this interview to assess for autism, at interview Anne clarified that ADHD-like symptoms are present even in situations unrelated to potential autistic traits. Her ADHD-like symptoms therefore seem unlikely to be better-explained by autism.

*Eriksson, J. M., Andersen, M. J., Bejerot, S. (2013). RAADS-14 Screen: validity of a screening tool for Autism Spectrum Disorder in an adult psychiatric population, *Molecular Autism, 4(49)*.

5.4 Series of Assessments to Guide Evaluation (SAGE) and Follow-up Interview

The Series of Assessments to Guide Evaluation (SAGE) is a series of 13 self-report tests used to assist with diagnosis of 30 of the most common DSM-5 disorders.

Anne's responses indicated considering diagnosis and treatment of:

- Agoraphobia
- Cannabis Use Disorder

Anne's responses indicated some symptoms, but not enough to suggest a diagnosis is likely, of:

- Panic Disorder
- Social Anxiety Disorder
- Post-Traumatic Stress Disorder
- Attention-Deficit Hyperactivity Disorder

Anne's responses indicated absent or minimal symptoms of:

- Current Major Depressive Episode
- Other Specified Depressive Disorder
- Past Hypomanic Episode
- Major Depressive Disorder
- Past Major Depressive Episode
- Persistent Depressive Disorder
- Bipolar I Disorder
- Bipolar II Disorder
- Other Specified Bipolar Disorder
- Manic Episode
- Hypomanic Episode
- Past Manic Episode
- Generalised Anxiety Disorder
- Obsessive Compulsive Disorder
- Schizophrenia
- Schizophreniform Disorder
- Schizoaffective Disorder
- Delusional Disorder
- Brief Psychotic Disorder
- Other Specified Psychotic Disorder
- Uncertain Psychotic Disorder
- Alcohol Use Disorder
- Sedative, Hypnotic, or Anxiolytic Use Disorder
- Stimulant Use Disorder – Amphetamine
- Stimulant Use Disorder – Cocaine

- Opioid Use Disorder
- PCP Use Disorder
- Other Hallucinogen Use Disorder
- Inhalant Use Disorder
- Other Drug Use Disorder

Attention-Deficit Hyperactivity Disorder

While Anne did not screen positive for ADHD in the SAGE self-report questionnaire, during the clinical interview it was clarified that she does meet the criteria for a diagnosis (see Section 3 'Diagnostic Interview' above).

Mood Symptoms

With regard to depressive symptoms, Anne reported that she experienced multiple periods of depression from 15-20 years of age, with symptoms including self-harm (though never requiring medical attention).

She was also diagnosed with prenatal depression ~10 years ago during her first pregnancy.

She also experienced additional periods of depression in 2017 and 2019 against a background of a separation. Symptoms have been managed with sertraline since 2019.

She also experienced premenstrual dysphoric symptoms from 2021 and was managing this via contraceptive pill for most of the past two years, though she ceased this two months ago and potential PMDD symptoms have not returned.

Anne has also engaged with therapy on multiple occasions over the years to manage depression and anxiety.

Anne reported that ADHD-like symptoms preceded and are present regardless of depressive symptoms. Her ADHD-like symptoms therefore seem unlikely to be better-explained by depression.

Anxiety Symptoms

With regard to anxiety symptoms, Anne reported the following:

- Onset of clinically significant anxiety since motherhood. Feels she may have experienced anxiety symptoms before this but was less aware.
- Social anxiety since motherhood. Often avoids social situations.
- Potential agoraphobic concerns appear to reflect sensory processing issues (e.g. hypersensitivity to noise) rather than fear of panic symptoms or becoming stuck.
- Some panic symptoms since motherhood but not had a panic attack in approximately two years.

She also has many periods without worry/anxiety but during which ADHD-like symptoms persist. Furthermore, ADHD-like symptoms preceded anxiety symptoms. Her ADHD-like symptoms therefore seem unlikely to be better-explained by anxiety.

Posttraumatic Stress Symptoms

Anne reported that she has experienced inappropriate, nonconsensual physical contact on several occasions (e.g. at 11, 15, and 21 years of age). She experiences occasional memories of these events but denied hypervigilance or impact on functioning. Her ADHD-like symptoms seems unlikely to be better-explained by PTSD.

Substance Use

With regard to substance use, Anne reported the following:

- Cannabis use at 15-16 years of age. Commenced use again ~2 years ago for 6-12 months. Ceased as was starting to experience migraines.
- Caffeine – previously 2-3 cups of coffee per day, now 2-3 cups per week.
- Nil smoking.

Anne's ADHD-like symptoms preceded and persist in the absence of substance use. Her ADHD-like symptoms therefore seem unlikely to be better-explained by substance use.

Sleep Disturbance

Anne also reported that sleep onset usually occurs without difficulty but she experiences intermittent middle insomnia. She wears a mouthguard during sleep due to bruxism and does snore during sleep. However, she still often wakes in the morning feeling energised. Her ADHD-like symptoms seem unlikely to be better-explained by sleep disturbance.

5.5 Physical Health

Anne reported the following regarding her physical health:

- Previously assessed as euthyroid.
- Frequent low iron since adolescence. Takes iron tablets on-and-off. Generally not low in energy or fatigued until the end of the day. ADHD-like symptoms preceded low iron.
- Nil cardiovascular issues in family.
- Nil history of seizures or loss of consciousness.

5.6 Medication

- Sertraline 50mg, commenced in 2017

6. Summary and Recommendations

Anne self-referred to The Harbour Clinic for assessment of potential ADHD.

Based on a clinical interview, neuropsychological measures, and third-party reports, **Anne appears to meet the DSM-5 criteria for an Attention-Deficit/Hyperactivity Disorder: Combined Presentation**, in that:

A. She exhibits a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development as characterised by:
    1. Inattention (6 of the 9 DSM-5 symptoms of inattention).
    2. Hyperactivity and Impulsivity (8 of the 9 DSM-5 symptoms of hyperactivity and impulsivity).
    3. The symptoms are not solely a manifestation of oppositional behaviour, defiance, hostility, or a failure to understand tasks or instructions.
B. Several inattentive or hyperactive symptoms were reportedly present prior to age 12 years.
C. Several inattentive or hyperactive-impulsive symptoms are present in two or more settings (i.e. home, school, or work; with friends or relatives; in other activities).
D. There is clear evidence that the symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning.
E. The symptoms do not exclusively occur during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder (e.g. mood disorder, anxiety disorder, dissociative disorder, personality disorder, substance intoxication or withdrawal).

Recommendations

- Anne may benefit from consultation with a psychiatrist regarding the potential utility of medication for addressing her symptoms.
- Anne may benefit from behavioural strategies to manage her symptoms.

If you have any further queries please contact me.

Kind regards,

Dr. Daniel Biddle (MACPA)
Clinical Psychologist
The Harbour Clinic Psychology Services

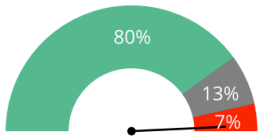
QbCheck

QbCheck is a registered medical device
according to the European Medical Device Directive.

CE

Objective QbCheck Result

The test taker had a **QbCheck ADHD Total Symptom Score of 89**. A score above 50 represents a **high** likelihood for having ADHD-like symptoms.



QbCheck ADHD Total Symptom Level

The test taker's Total Symptom Score equals a **high** ADHD Total Symptom Level. About 7% of the general population display a similar level of ADHD-like symptoms.

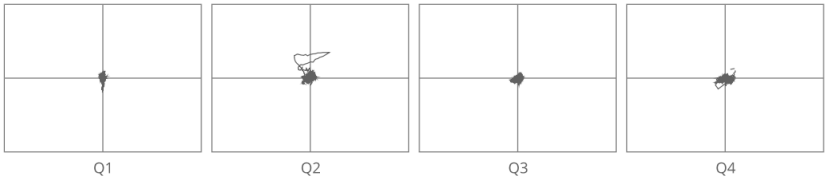
Objective Measures

The objective measures add valuable information to your interpretation and are expressed in Q-scores and percentiles. The Q-Scores allow for comparison with the performance of an age and gender adjusted norm group. The percentile expresses (in percent) the probability of a normative person to score lower than the test person.

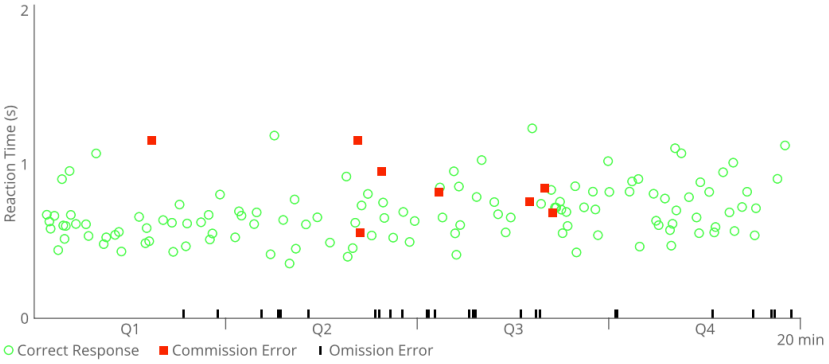
		-3 0 +3	Q-Score	Percentile
Activity	MicroEventsX		2.5	99
Impulsivity	Commission Errors		1.9	97
Inattention	Omission Errors		2.1	98
	Reaction Time		1.3	90
	Reaction Time Variation		1.4	91

Detailed QbCheck Result

Activity Graph

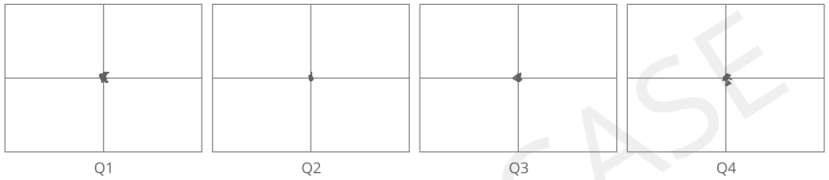


Attention and Impulse Control Graph

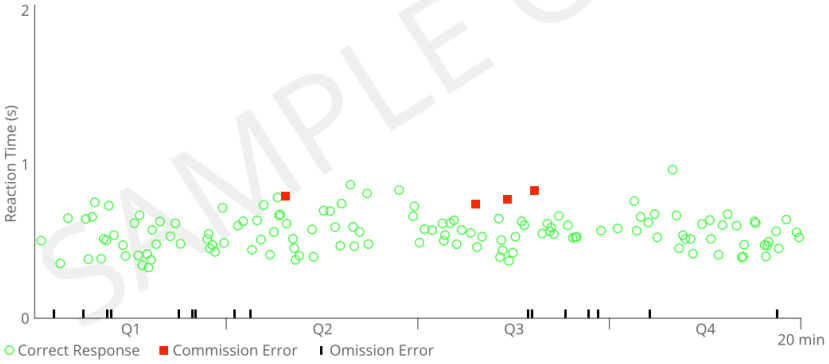


Sample Case

Activity Graph - Sample Case



Attention and Impulse Control Graph - Sample Case



Test Taker ID: zBN3aOdqNd **Date of Birth:** 13/1/86 **Gender:** Female **Test Details:** 8/12/23, 4:07 pm **Age:** 37y. 10m.