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The Wender Utah Rating Scale - 25 item version (WURS-25): Norms, Percentile Rankings, and Differential Diagnosis

The Wender Utah Rating Scale - 25 item version (WURS-25), developed by Ward et al. (1993), is a 25-item self-report measure designed to retrospectively assess childhood symptoms and behaviours associated with the persistence of ADHD into adulthood. This technical review synthesises current literature on the WURS-25's psychometric properties and provides clinicians with comprehensive scoring frameworks, enhanced interpretive guidelines, and qualitative descriptors. We present an advanced interpretive system that significantly enhances the clinical utility of the WURS-25 through evidence-based logistic regression analysis, differential diagnosis capabilities, and practical implementation strategies. The document outlines the three-factor dimensional structure of childhood ADHD symptomatology and its relationship with diagnostic outcomes, whilst addressing important considerations for retrospective assessment and differential diagnosis in adult populations. This framework enables clinicians to effectively incorporate WURS-25 findings into case conceptualisation and treatment planning for adults seeking evaluation for ADHD, where establishing childhood onset patterns is essential for diagnostic accuracy.

View the WURS-25 on NovoPsych.com

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Developer & Author

The Wender Utah Rating Scale - 25 item version (WURS-25) was developed by Ward and colleagues (1993):

> Ward, M. F., Wender, P. H., & Reimherr, F. W. (1993). The Wender Utah Rating Scale: an aid in the retrospective diagnosis of childhood attention deficit hyperactivity disorder. *The American Journal of Psychiatry*, 150(6), 885–890. https://doi.org/10.1176/ajp.150.6.885

This document was developed by NovoPsych to review contemporary literature and to describe original scoring methodologies and to provide interpretation material, enhance normative data and provide qualitative descriptors.

Authors of Technical Review

(not in authorship order)

Ben Buchanan DPsych

CEO, NovoPsych

Adjunct Research Fellow, Monash University, Melbourne, Australia

David Hegarty PhD*

Head of Psychometrics, NovoPsych

Adjunct Professional Fellow, Southern Cross University, Coffs Harbour, Australia

Simon Baker PhD

Research Fellow, NovoPsych

Carla Smyth PhD

Research Fellow and Clinical Liaison, NovoPsych

Emerson Bartholomew MHealthPsych

Research Fellow and Psychometrician, NovoPsych

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Description

The Wender Utah Rating Scale - 25 item version (WURS-25) is a 25-item self-report measure designed to retrospectively assess childhood symptoms and behaviours associated with the persistence of ADHD into adulthood (Ward et al., 1993). The WURS-25 can be used with adults (ages 18+) seeking evaluation for ADHD, where establishing a pattern of childhood symptomatology is essential for diagnostic accuracy. Developed within a comprehensive framework that recognises the multifaceted nature of childhood ADHD presentations, the WURS-25 evaluates three distinct but interrelated dimensions of childhood difficulties:

1. Disruptive Mood/Behaviour (11 items) - assesses childhood patterns of temper dysregulation, mood instability, oppositional behaviour, and conduct difficulties, including items addressing irritability, angry outbursts, defiance, and trouble with authorities.
2. Inattentive/Hyperactive (9 items) - measures core ADHD symptoms during childhood, including concentration difficulties, distractibility, fidgetiness, impulsivity, academic underachievement, and problems with task completion and follow-through.
3. Depression/Anxiety (4 items) - evaluates childhood emotional difficulties including worry, sadness, negative self-perception, and feelings of guilt or regret that may co-occur with or complicate ADHD presentations.

For clinicians working with adults suspected of having ADHD, the WURS-25 offers several distinct advantages, particularly in addressing the diagnostic requirement for childhood onset of symptoms. Research demonstrates that retrospective assessment of childhood ADHD symptoms is crucial for accurate adult diagnosis, as many adults seeking evaluation may have limited access to childhood records or reliable informant reports. The WURS-25 provides a standardised, psychometrically sound approach to gathering this essential historical information and works well with the Adult ADHD Self-Report Scale (ASRS) which measures current symptomatology .

The WURS-25 aids significantly in assessment, differential diagnosis, and case conceptualisation. As an assessment tool, it helps identify specific patterns of childhood difficulties that may inform current presentations, facilitating a more comprehensive understanding of the client's developmental trajectory. The enhanced scoring methodology, utilising logistic regression fitted values, enables clinicians to differentiate between ADHD and other conditions, particularly mood and anxiety disorders that may present with similar symptom profiles. The differential diagnosis capabilities calculate probabilities for ADHD versus non-clinical populations and ADHD versus depression/anxiety presentations. This statistical approach moves beyond simple cut-off scores to provide nuanced clinical information about the likelihood of childhood ADHD.

The scale's retrospective nature requires consideration of memory limitations and potential reporting biases, but extensive validation research supports the clinical utility of the WURS-25 as a reliable and valid instrument for retrospective assessment of childhood ADHD symptoms in adult populations (Reimherr et al., 2022).

Psychometric Properties

The WURS-25 was developed through systematic item reduction from the original 61-item Wender Utah Rating Scale, selecting items that demonstrated the greatest discriminative power between adults with ADHD and control groups whilst maintaining clinical utility (Ward et al., 1993).

Confirmatory factor analysis has consistently supported a three-factor structure across multiple populations and cultural contexts. Brevik et al. (2020) confirmed the dimensional validity established by Caci et al. (2010), McCann et al. (2000), and Stanton and Watson (2016). The three factors represent: (1) Disruptive Mood/Behaviour, assessing childhood patterns of temper dysregulation and oppositional behaviour; (2) Inattentive/Hyperactive, measuring core ADHD symptoms including concentration difficulties and academic underachievement; and (3) Depression/Anxiety, evaluating childhood emotional difficulties including worry and negative self-perception. Recent factor analytic work by Reimherr et al. (2021) using both the WURS-25 and full WURS confirmed this structure with substantial variance explained by the three factors.

The internal consistency of the WURS-25 has been demonstrated to be excellent across multiple studies. Kouros, et al. (2018) reported Cronbach's alpha coefficients of 0.94 for the total scale in their Swedish validation study, with individual factor reliabilities ranging from 0.81 to 0.94. Similarly, Brevik et al. (2020) found excellent internal consistency with Cronbach's alpha of 0.952 for the full WURS and adequate to good reliabilities for individual factors.

Construct validity is supported by theoretically consistent relationships with objective measures of attention and cognitive performance. Mackin and Horner (2005) demonstrated that higher WURS-25 scores were significantly associated with poorer performance on the WAIS-R Digit Symbol subtest ($r = -0.691$, $p < 0.05$), with digit symbol performance accounting for 59% of the variance in WURS scores. This relationship between retrospective symptom reports and objective performance measures strengthens confidence in the scale's validity for identifying individuals with genuine childhood ADHD histories.

The discriminant validity of the WURS-25 has been extensively examined through its ability to differentiate between diagnostic groups. Reimherr et al. (2021) demonstrated clear separation between ADHD samples ($M = 51.47$, $SD = 15.7$), non-clinical controls ($M = 14.51$, $SD = 9.99$), and clinical controls with depression/anxiety ($M = 29.2$, $SD = 18.0$). The WURS-25 can provide diagnostic sophistication from its use of logistic regression analysis to generate fitted values that calculate the probability of ADHD membership relative to comparison groups. Two distinct equations have been validated:

1. ADHD vs Non-Clinical Comparison: Fitted Value (Non-Clinical) = -5.84 + (Disruptive Mood/Behaviour × 1.83) + (Inattentive/Hyperactive × 2.44) + (Depression/Anxiety × 0.16), where the large coefficient for the Inattentive/Hyperactive factor (2.44) indicates its primary importance in distinguishing ADHD from typical development; and
2. ADHD vs Depression/Anxiety Comparison: Fitted Value (Clinical) = -3.90 + (Disruptive Mood/Behaviour × 0.73) + (Inattentive/Hyperactive × 2.51) - (Depression/Anxiety × 1.24), where the Depression/Anxiety factor is subtracted, reflecting that high scores on this dimension reduce the probability of ADHD when differentiating from mood/anxiety disorders.

The fitted values represent log odds and are converted to probabilities using the logistic function, yielding percentage probabilities indicating the likelihood of ADHD group membership. This methodology achieved area under the curve (AUC) values of 0.924 for ADHD versus depression/anxiety and 0.982 for ADHD versus non-clinical controls, with sensitivity improved by 10% compared to using total scores alone.

Cross-cultural validation studies have supported the generalisability of the WURS-25's psychometric properties across diverse populations. The scale has been translated into multiple languages and validated in Swedish (Kouros et al., 2018), French (Caci et al., 2010), Italian (Fossati et al., 2001), Spanish (Rodríguez-Jiménez et al., 2001), German (Retz-Junginger et al., 2003), Finnish (Kivisaari et al., 2012), and Turkish (Oncü & Sentürk, 2005) populations, consistently demonstrating robust construct validity across cultural boundaries.

Normative data for percentile conversion have been established from the Reimherr et al. (2021) study involving 485 participants, including 137 adults with ADHD, 228 with depression/anxiety disorders, and 120 non-clinical controls. The established total score cut-offs of 30 and 46 correspond to the 94th and 99.9th normative percentiles respectively, providing the foundation for consistent percentile-based interpretation. Using the means and standard deviations outlined in Table 1 of the manual (Reimherr et al., 2022), raw scores are converted to z-scores and percentiles using normative tables outlined below, enabling standardised classification of childhood symptom severity across both normative and clinical populations.

Scoring & Interpretation

The Wender Utah Rating Scale - 25 item version (WURS-25) provides a total score and subscale scores where a higher score indicates higher reported childhood symptom severity. The normative percentile and clinical percentile are based upon the total raw score and average score (for subscales) and derived from a comprehensive study

involving 485 participants (137 adults with ADHD, 228 with depression/anxiety disorders, and 120 non-clinical controls) (Reimherr et al., 2021).

Cutoff Scores

There are two established total score cutoffs: (i) a score of 30 that best differentiates between ADHD and non-clinical controls, and (ii) a score of 46 that best differentiates between ADHD and depression/anxiety groups (Reimherr et al., 2022). Both cutoff scores are useful as clients with a valid ADHD diagnosis and primarily childhood inattentive ADHD symptoms are those most likely to be misclassified with scores below 46 (Reimherr et al., 2022), and so these cutoff scores should be used in conjunction with other information available (see the sophisticated logistic regression scoring approach outlined below).

Childhood Symptom Severity

These two cutoff scores correspond to the 94th and 99.9th normative percentiles respectively, providing an anchor for consistent percentile-based interpretation for childhood symptom severity across WURS-25 subscales:

- ≥99.9th percentile: Very High childhood symptom severity
- ≥94th percentile: High childhood symptom severity
- <94th percentile: Normal Range relative to population expectations

Subscales

The WURS-25 comprises three factors that reflect distinct but interrelated dimensions of childhood symptomatology:

1. Disruptive Mood/Behaviour (items 5, 6, 8, 10, 12, 13, 14, 18, 19, 21, 22): This subscale assesses childhood patterns of emotional dysregulation, oppositional behaviour, and conduct difficulties. This factor captures the emotional and behavioural dysregulation that often characterises childhood ADHD presentations, including difficulties with anger management, defiant behaviour, and problems with authority figures.
2. Inattentive/Hyperactive (items 1, 3, 4, 7, 15, 16, 23, 24, 25): This subscale measures core ADHD symptoms during childhood, focusing on attention difficulties, hyperactivity, and academic underachievement. This factor represents the classic ADHD symptom domains of inattention, hyperactivity, and academic difficulties that are central to diagnostic criteria.
3. Depression/Anxiety (items 2, 9, 11, 17): This subscale evaluates childhood emotional difficulties including worry, sadness, and negative self-perception that may co-occur with ADHD. This factor captures the internalising symptoms that frequently accompany childhood ADHD and are crucial for differential diagnosis.

Differential Diagnosis

The WURS-25 employs a sophisticated logistic regression scoring approach that extends beyond traditional total score interpretation to provide nuanced diagnostic information and aid in differential diagnosis. This approach generates fitted values that calculate the probability of ADHD membership relative to comparison groups. These are then converted to probabilities for presentation (although the raw fitted values are presented in a table at the end of the report for reference). This transformation yields percentage probabilities indicating the likelihood of ADHD group membership relative to the comparison population. Two distinct equations have been validated through extensive research:

1. ADHD vs Non-Clinical Comparison. This equation differentiates individuals with ADHD from non-clinical populations. A high probability indicates a higher likelihood that the client belongs to the ADHD group as opposed to the non-clinical group.
2. ADHD vs Depression/Anxiety Comparison. This equation differentiates ADHD from mood and anxiety disorders. A high probability indicates a higher likelihood that the client belongs to the ADHD group as opposed to the depression / anxiety group.

Overall Descriptor

The WURS-25 generates an Overall Descriptor through a sophisticated decision matrix (see Table 3 below) that integrates total scores and probability estimates. This system moves beyond simple cutoff scores to provide clinically meaningful descriptors:

- Very Likely ADHD: High total scores (≥46) combined with high probabilities (≥80%) for both comparisons indicate very strong evidence of childhood ADHD with clear differentiation from both non-clinical individuals and mood/anxiety disorders.
- Likely ADHD: Various combinations of elevated scores and probabilities suggesting good evidence of childhood ADHD, including high total scores with moderate clinical probabilities or moderate total scores with high probabilities across comparisons.
- Clinically Undifferentiated from Mood/Anxiety Disorders: This descriptor indicates that whilst childhood symptoms differ significantly from non-clinical individuals, they cannot be reliably distinguished from individuals with depression or anxiety disorders. This pattern suggests elevated childhood symptomatology that requires additional clinical information for differential diagnosis.
- Unlikely ADHD: Patterns suggesting limited evidence for childhood ADHD, typically involving moderate total scores with low clinical probabilities or other combinations indicating minimal ADHD likelihood.
- Very Unlikely ADHD: Low total scores combined with weak probabilities across comparisons, indicating minimal evidence of childhood ADHD symptomatology.
- Inconsistent Results: Contradictory or unusual patterns that do not fit typical profiles, such as low total scores with high clinical probabilities, requiring careful clinical interpretation and possible reassessment.

Plots

Several visualisations display the client's scores relative to normative expectations. The Stacked Bar Chart presents the proportional contribution of each factor to the total percentile score, enabling identification of which symptom domains primarily drive elevated scores, using colour coding with elevated ranges in orange (High) and very elevated ranges in red (Very High). The Horizontal Distribution Chart overlays the client's total score on bell curve distributions representing different populations: non-clinical (blue curves) and ADHD (red curves). The separation between distributions illustrates the degree of differentiation possible, whilst the client's position relative to each curve provides intuitive understanding of their symptom pattern. Percentile markers (25th, 75th) and mean lines help contextualise the client's position within each distribution. Individual horizontal charts for each subscale follow the same format, enabling detailed analysis of specific symptom domains and helping identify whether elevations are broad-based or concentrated in particular areas. When multiple administrations are available, the WURS-25 generates a line graph displaying total scores across assessment points, enabling tracking of symptom reporting consistency over time.

Supporting Information

Percentile Calculations

The percentile rankings for the Wender Utah Rating Scale - 25 item version (WURS-25) are derived from the the Reimherr et al. (2021) study involving 485 participants, including 137 adults with ADHD, 228 with depression/anxiety disorders, and 120 non-clinical controls. The percentile rankings represent the position of a given raw/average score relative to the distribution of scores in the normative (non-clinical) and clinical (ADHD) samples.

The distribution of average scores in the normative sample was used to establish percentile rankings. For each subscale, the mean (μ) and standard deviation (σ) from the normative sample were:

Normative (Non-Clinical):

Total Score: M = 14.51, SD = 9.99

Disruptive Mood / Behaviour: M = 0.54, SD = 0.44

Inattentive / Hyperactive: M = 0.74, SD = 0.63

Depression / Anxiety: M = 0.66, SD = 0.69

Clinical (ADHD):

Total Score: M = 51.47, SD = 15.7

Disruptive Mood / Behaviour: M = 1.85, SD = 0.84

Inattentive / Hyperactive: M = 2.52, SD = 0.70

Depression / Anxiety: M = 1.8, SD = 0.98

Note. The subscales are based upon the average score whereas the total WURS-25 is based upon the total raw score.

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Table 1. Total score percentile table

	Score	Total ADHD	Non-Clinical
Normal Range	0	0.05	7
	1	0.07	9
	2	0.08	11
	3	0.1	12
	4	0.12	15
	5	0.15	17
	6	0.2	20
	7	0.23	23
	8	0.3	26
	9	0.34	29
	10	0.4	33
	11	0.5	36
	12	0.6	40
	13	0.7	44
	14	0.9	48
	15	1	52
	16	1.2	56
	17	1.4	60
	18	1.7	64
	19	2	67
	20	2.3	71
	21	2.6	74
	22	3	77
	23	3.5	80
	24	4	83
	25	4.6	85
	26	5	87
	27	6	89
	28	7	91
	29	8	93
High	30	9	94
	31	10	95
	32	11	96
	33	12	97
	34	13	97.4
	35	15	98
	36	16	98.4
	37	18	99
	38	20	99.1
	39	21	99.3
	40	23	99.5
	41	25	99.6
	42	27	99.7
	43	29	99.8
	44	32	99.8
	45	34	99.9
Very High	46	36	99.92
	47	39	99.94
	48	41	99.96
	49	44	99.97
	50	46	99.98
	51	49	99.99
	52	51	
	53	54	
	54	56	
	55	59	
	56	61	
	57	64	
	58	66	
	59	68	
	60	71	
	61	73	
	62	75	
	63	77	
	64	79	
	65	81	
	66	82	
	67	84	
	68	85	
	69	87	
	70	88	
	71	89	
	72	90	
	73	91	
	74	92	
	75	93	
	76	94	
	77	95	
	78	95.4	
	79	96	
	80	96.5	
	81	97	
	82	97.4	
	83	98	
	84	98.1	
	85	98.4	
	86	98.6	
	87	98.8	
	88	99	
	89	99.2	
	90	99.3	
	91	99.4	
	92	99.5	
	93	99.6	
	94	99.66	
	95	99.72	
	96	99.77	
	97	99.8	
	98	99.85	
	99	99.88	
	100	99.9	

Table 2. Subscale average score percentile tables

	Disruptive Mood / Behaviour		
	Avge	ADHD	Non-Clinical
Normal Range	0	1	11
	0.09	1.8	15
	0.18	2	21
	0.27	3	27
	0.36	4	34
	0.45	5	42
	0.55	6	50
	0.64	7	59
	0.73	9	66
	0.82	11	74
	0.91	13	80
	1	16	85
	1.09	18	89
	1.18	21	93
High	1.27	25	95
	1.36	28	97
	1.45	32	98
	1.55	36	99
	1.64	40	99.4
	1.73	44	99.7
	1.82	48	99.8
Very High	1.91	53	99.9
	2	57	99.95
	2.09	61	99.98
	2.18	65	99.99
	2.27	69	
	2.36	73	
	2.45	76	
	2.55	80	
	2.64	83	
	2.73	85	
	2.82	88	
	2.91	90	
	3	91	
	3.09	93	
	3.18	94	
	3.27	95	
	3.36	96	
	3.45	97	
	3.55	98	
	3.64	98.3	
	3.73	98.7	
	3.82	99	
	3.91	99.3	
	4	99.5	

	Inattentive/Hyperactive		
	Avge	ADHD	Non-Clinical
Normal Range	0	0.02	12
	0.1	0.03	17
	0.3	0.1	24
	0.4	0.1	31
	0.6	0.3	39
	0.7	0.5	48
	0.9	0.9	57
	1	1	66
	1.1	2	74
	1.3	4	81
	1.4	6	86
	1.6	9	91
High	1.7	12	94
	1.9	17	96
	2	23	98
	2.1	30	99
	2.3	37	99.3
	2.4	45	99.6
	2.6	53	99.8
Very High	2.7	61	99.9
	2.9	68	99.96
	3	75	99.98
	3.1	81	99.99
	3.3	86	
	3.4	90	
	3.6	93	
	3.7	96	
	3.9	97	
	4	98	

	Depression/Anxiety		
	Avge	ADHD	Non-Clinical
Normal Range	0	3	17
	0.3	6	28
	0.5	9	41
	0.8	14	55
	1	21	69
	1.3	29	80
	1.5	38	89
High	1.8	48	94
	2	58	97
	2.3	68	99
	2.5	76	99.6
Very High	2.8	83	99.9
	3	89	99.97
	3.3	93	99.99
	3.5	96	
	3.8	98	
	4	99	

Note. Non-clinical scores where the percentile is blank (i.e., higher scores) are allocated the maximum percentile (i.e., 99.99).

Decision Matrix

Table 3. Decision matrix demonstrating how the overall descriptor is determined and the proportion of NovoPsych data that were categorised within each category

Score	Likelihood of belonging to ADHD group relative to comparison group		Overall Descriptor	NovoPsych Data	
	ADHD vs Non-Clinical Probability$_{community}$	ADHD vs Depression / Anxiety Probability$_{clinical}$		Count	%
≥46	High (≥80%)	High (≥80%)	Very Likely	12574	27.4
≥46	High (≥80%)	Moderate (60-79%)	Likely	5378	11.7
≥46	High (≥80%)	Weak-Moderate (50-59%)	Likely	1980	4.3
30-45	High (≥80%)	High (≥80%)	Likely	1135	2.5
30-45	High (≥80%)	Moderate (60-79%)	Likely	907	2.0
30-45	Moderate (60-79%)	High (≥80%)	Likely	94	0.2
30-45	Moderate (60-79%)	Moderate (60-79%)	Likely	332	0.7
≥46	High (≥80%)	Weak (<50%)	Clinically undifferentiated from mood/anxiety disorders	7855	17.1
30-45	High (≥80%)	Weak-Moderate (50-59%)	Clinically undifferentiated from mood/anxiety disorders	429	0.9
30-45	Moderate (60-79%)	Weak (<50%)	Clinically undifferentiated from mood/anxiety disorders	2614	5.7
30-45	High (≥80%)	Weak (<50%)	Clinically undifferentiated from mood/anxiety disorders	1490	3.2
30-45	Weak-Moderate (50-59%)	Weak (<50%)	Clinically undifferentiated from mood/anxiety disorders	1157	2.5
≥46	Moderate (60-79%)	Weak (<50%)	Clinically undifferentiated from mood/anxiety disorders	241	0.5
≥46	Weak-Moderate (50-59%)	Weak (<50%)	Clinically undifferentiated from mood/anxiety disorders	11	0.02
30-45	Moderate (60-79%)	Weak-Moderate (50-59%)	Unlikely	206	0.4
<30	Moderate (60-79%)	Moderate (60-79%)	Unlikely	52	0.1
30-45	Weak-Moderate (50-59%)	Weak-Moderate (50-59%)	Unlikely	31	0.1
30-45	Weak-Moderate (50-59%)	Moderate (60-79%)	Unlikely	3	0.007
30-45	Weak (<50%)	Weak-Moderate (50-59%)	Unlikely	1	0.002
<30	Weak (<50%)	Weak (<50%)	Very Unlikely	6596	14.4

30-45	Weak (<50%)	Weak (<50%)	Very Unlikely	2341	5.1
<30	Weak (<50%)	Moderate (60-79%)	Very Unlikely	138	0.3
<30	Weak (<50%)	Weak-Moderate (50-59%)	Very Unlikely	114	0.2
<30	Weak-Moderate (50-59%)	Moderate (60-79%)	Very Unlikely	74	0.2
<30	Weak-Moderate (50-59%)	Weak (<50%)	Very Unlikely	43	0.1
<30	Weak-Moderate (50-59%)	Weak-Moderate (50-59%)	Very Unlikely	42	0.09
<30	Moderate (60-79%)	Weak-Moderate (50-59%)	Very Unlikely	1	0.002
<30	Moderate (60-79%)	High (≥80%)	Inconsistent	65	0.1
<30	Weak-Moderate (50-59%)	High (≥80%)	Inconsistent	13	0.03
<30	Weak (<50%)	High (≥80%)	Inconsistent	9	0.02
<30	High (≥80%)	High (≥80%)	Inconsistent	2	0.004
≥46	Weak (<50%)	Weak (<50%)	Inconsistent	2	0.004

Interpretive Text

The interpretive report for the Wender Utah Rating Scale - 25 item version (WURS-25) is constructed from several components that are conditionally displayed based on the client's scores and assessment history. The report follows a structured format designed to provide clinicians with meaningful insights into the client's retrospective childhood ADHD symptom profile.

Opening Interpretation

The report begins with a comprehensive opening interpretation that integrates the client's total score, overall likelihood category, and subscale analysis:

The interpretation starts with the assessment date and total score:

- "The client's results on the WURS-25, as assessed on [date], indicate a total score of [score], which falls in the [Very High/High/Normal Range] range for childhood symptom severity."

The content then varies based on the Overall Likelihood descriptor:

- For Very Likely ADHD and Likely ADHD:
  - "This elevated score suggests a pattern of childhood difficulties consistent with ADHD symptomatology. The comprehensive symptom profile provides [very strong/good] evidence of childhood ADHD presentations."
- For Clinically Undifferentiated from Mood/Anxiety Disorders:
  - "Whilst this score indicates significant childhood difficulties that differ from typical development, the specific pattern of symptoms requires careful clinical interpretation as it shares features common to both ADHD and early presentations of mood or anxiety difficulties."
- For Unlikely ADHD:
  - "This score suggests limited childhood difficulties characteristic of ADHD symptomatology."
- For Very Unlikely ADHD:
  - "This score suggests minimal childhood difficulties characteristic of ADHD symptomatology."
- For Inconsistent Results:

    - "However, the pattern of responses shows some inconsistencies that require careful clinical consideration."

The opening interpretation includes dynamic subscale analysis:

- When subscales are elevated:
    - "The subscale analysis reveals elevated scores in [factor names with descriptors], indicating a [broad spectrum/specific pattern] of childhood difficulties."
- When all subscales are normal:
    - "All subscale scores fell within the normal range, suggesting minimal retrospectively reported childhood difficulties across the assessed domains."
- For Unlikely and Very Unlikely ADHD cases, the opening interpretation concludes with:
    - "These findings suggest that childhood ADHD symptomatology was not a prominent feature of the client's developmental history."

Differential Diagnosis Summary

This section appears **only** when the Overall Likelihood is **not** "Unlikely ADHD" or "Very Unlikely ADHD":

- Very Likely ADHD:
    - "The client's pattern of responding indicates that childhood ADHD symptoms are 'Very Likely ADHD'. This indicates very strong evidence that the reported childhood symptoms are consistent with ADHD, with the retrospective symptom pattern clearly distinguishing from both non-clinical individuals and those with mood/anxiety disorders."
- Likely ADHD:
    - "The client's pattern of responding indicates that childhood ADHD symptoms are 'Likely ADHD'. This suggests good evidence that the reported childhood symptoms are consistent with ADHD, with the retrospective symptom pattern showing clear differentiation from comparison groups."
- Clinically undifferentiated from mood/anxiety disorders:
    - "The client's pattern of responding indicates that childhood symptoms are 'Clinically undifferentiated from mood/anxiety disorders' and additional clinical information is needed to differentiate childhood ADHD symptoms from early mood/anxiety presentations. This indicates that whilst the reported childhood symptoms differ from non-clinical individuals, they cannot be reliably distinguished from the childhood patterns of individuals with depression or anxiety disorders."
- Inconsistent Results:
    - "The client's pattern of responding indicates that childhood ADHD symptoms are 'Inconsistent Results'. This indicates contradictory or unusual patterns in the retrospective reporting that do not fit typical childhood ADHD profiles. The results should be interpreted with caution and may require reassessment or additional historical information."

Developer

Ward, M. F., Wender, P. H., & Reimherr, F. W. (1993). The Wender Utah Rating Scale: an aid in the retrospective diagnosis of childhood attention deficit hyperactivity disorder. The American Journal of Psychiatry, 150(6), 885–890. https://doi.org/10.1176/ajp.150.6.885

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Assessment Questions

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Wender Utah Rating Scale - 25 item version (WURS-25)

Instructions:

As a child I was (or had):

		Not at all or very slightly	Mildly	Moderately	Quite a bit	Very much
1	concentration problems, easily distracted	0	1	2	3	4
2	anxious, worrying	0	1	2	3	4
3	nervous, fidgety	0	1	2	3	4
4	inattentive, daydreaming	0	1	2	3	4
5	hot- or short-tempered, low boiling point	0	1	2	3	4
6	temper outbursts, tantrums	0	1	2	3	4
7	trouble with stick-to-it-tiveness, not following through, failing to finish things started	0	1	2	3	4
8	stubborn, strong-willed	0	1	2	3	4
9	sad or blue, depressed, unhappy	0	1	2	3	4
10	disobedient with parents, rebellious, sassy	0	1	2	3	4
11	low opinion of myself	0	1	2	3	4
12	irritable	0	1	2	3	4
13	moody, ups and downs	0	1	2	3	4
14	angry	0	1	2	3	4
15	acting without thinking, impulsive	0	1	2	3	4
16	tendency to be immature	0	1	2	3	4
17	guilty feelings, regretful	0	1	2	3	4

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		Not at all or very slightly	Mildly	Moderately	Quite a bit	Very much
18	losing control of myself	0	1	2	3	4
19	tendency to be or act irrational	0	1	2	3	4
20	unpopular with other children, didn't keep friends for long, didn't get along with other children	0	1	2	3	4
21	trouble seeing things from someone else's point of view	0	1	2	3	4
22	trouble with authorities, trouble with school, visits to principal's office	0	1	2	3	4
23	As a child in school I was overall a poor student, slow learner	0	1	2	3	4
24	As a child in school I had trouble with mathematics or numbers	0	1	2	3	4
25	As a child in school I was not achieving up to potential	0	1	2	3	4

Developer Reference:

Ward, M. F., Wender, P. H., & Reimherr, F. W. (1993). The Wender Utah Rating Scale: an aid in the retrospective diagnosis of childhood attention deficit hyperactivity disorder. The American Journal of Psychiatry, 150(6), 885–890. https://doi.org/10.1176/ajp.150.6.885

Administer Now

Sample Result

Assessment powered by NovoPsych

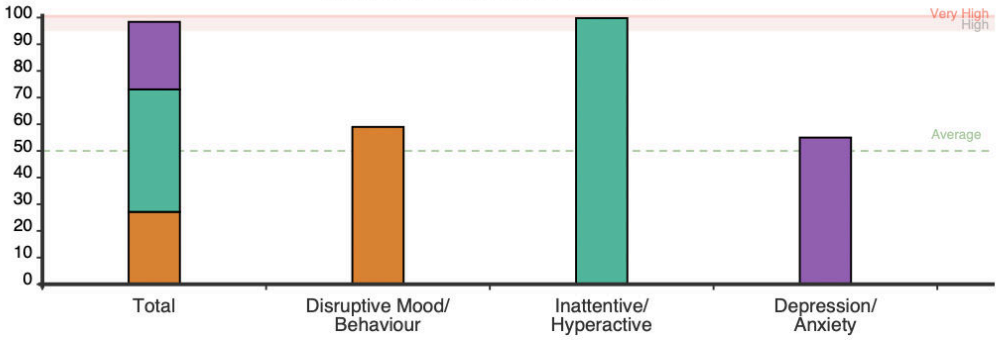
Wender Utah Rating Scale - 25 item version (WURS-25)

Client Name	Generic Client	*Date administered*	28 Jul 2025
Date of birth (age)	14 Dec 2015 (9)	*Time taken*	1 min 27s
Assessor	Dr David Hegarty		

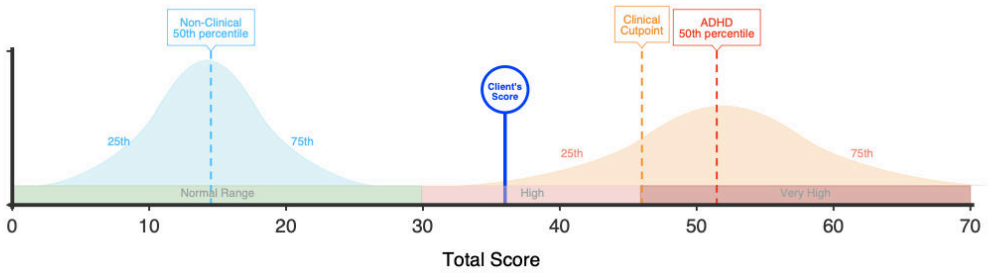
Results

	Raw Score	Average Score	Normative Percentile	Clinical Percentile	Childhood Symptom Severity
Total	36	1.4	98.4	16	High
Disruptive Mood/Behavior	7	0.64	59	7	Normal Range
Inattentive/Hyperactive	23	2.6	99.8	53	High
Depression/Anxiety	3	0.8	55	14	Normal Range

WURS-25 Normative Percentiles



WURS-25 Total Score in Comparison to Non-Clinical and ADHD Distributions



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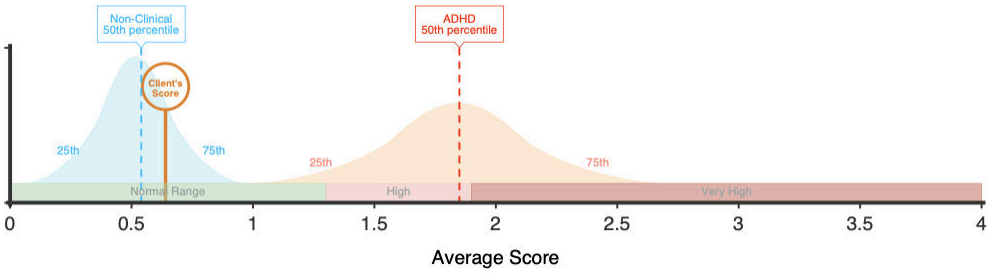
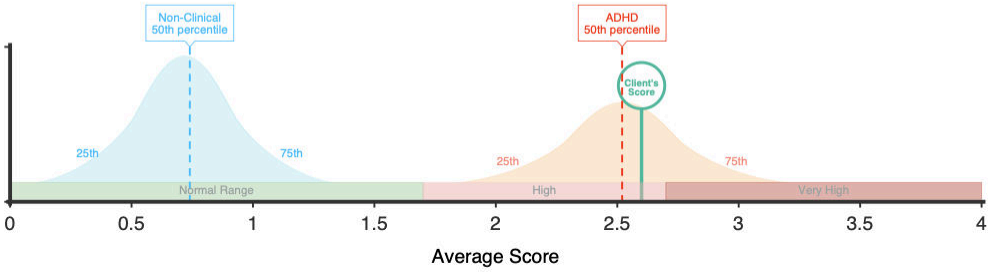
Client Name	Generic Client

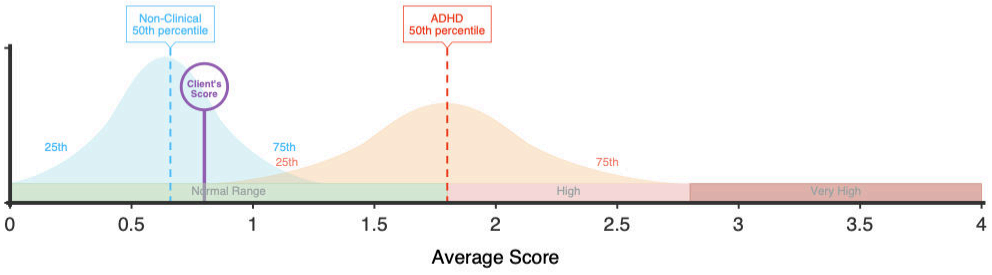
Disruptive Mood/Behavior Subscale in Comparison to Non-Clinical and ADHD Distributions



Inattentive/Hyperactive Subscale



Depression/Anxiety Subscale



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Client Name	Generic Client

Differential Diagnosis

	ADHD vs Non-Clinical	ADHD vs Depression/Anxiety	Overall Descriptor
Likelihood	86%	89%	Likely ADHD

Interpretation

The client's results on the WURS-25, as assessed on 28 July 2025, indicate a total score of 36, which falls in the **High** range for childhood symptom severity. This elevated score suggests a pattern of childhood difficulties consistent with ADHD symptomatology. The symptom profile provides good evidence of childhood ADHD presentations. The subscale analysis reveals elevated scores in inattentive/hyperactive (High), indicating a broad spectrum of childhood difficulties.

Differential Diagnosis Summary
The client's pattern of responding indicates that childhood ADHD symptoms are **'Likely ADHD'**. This suggests good evidence that the reported childhood symptoms are consistent with ADHD, with the retrospective symptom pattern showing clear differentiation from comparison groups.

Scoring and Interpretation Information

For comprehensive information on the WURS-25, see here.

The Wender Utah Rating Scale - 25 item version (WURS-25) provides a total score and subscale scores where a higher score indicates higher reported childhood symptom severity. The normative percentile and clinical percentile are based upon the total raw score and average score (for subscales) and derived from a comprehensive study involving 485 participants (137 adults with ADHD, 228 with depression/anxiety disorders, and 120 non-clinical controls) (Reimherr et al., 2021).

*** Cutoff Scores ***
There are two established total score cutoffs: (i) a score of 30 that best differentiates between ADHD and non-clinical controls, and (ii) a score of 46 that best differentiates between ADHD and depression/anxiety groups (Reimherr et al., 2022). Both cutoff scores are useful as clients with a valid ADHD diagnosis and primarily childhood inattentive ADHD symptoms are those most likely to be misclassified with scores below 46 (Reimherr et al., 2022), and so these cutoff scores should be used in conjunction with other information available (see the sophisticated logistic regression scoring approach outlined below).

*** Childhood Symptom Severity ***
These two cutoff scores correspond to the 94th and 99.9th normative percentiles respectively, providing an anchor for consistent percentile-based interpretation for childhood symptom severity across WURS-25 subscales:
- greater than or equal to 99.9th percentile: Very High childhood symptom severity
- greater than or equal to 94th percentile: High childhood symptom severity
- less than 94th percentile: Normal Range relative to population expectations

*** Subscales ***
The WURS-25 comprises three factors that reflect distinct but interrelated dimensions of

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Client Name	Generic Client

Scoring and Interpretation Information (cont.)

childhood symptomatology:
1. Disruptive Mood/Behaviour (items 5, 6, 8, 10, 12, 13, 14, 18, 19, 21, 22): This subscale assesses childhood patterns of emotional dysregulation, oppositional behaviour, and conduct difficulties. This factor captures the emotional and behavioural dysregulation that often characterises childhood ADHD presentations, including difficulties with anger management, defiant behaviour, and problems with authority figures.
2. Inattentive/Hyperactive (items 1, 3, 4, 7, 15, 16, 23, 24, 25): This subscale measures core ADHD symptoms during childhood, focusing on attention difficulties, hyperactivity, and academic underachievement. This factor represents the classic ADHD symptom domains of inattention, hyperactivity, and academic difficulties that are central to diagnostic criteria.
3. Depression/Anxiety (items 2, 9, 11, 17): This subscale evaluates childhood emotional difficulties including worry, sadness, and negative self-perception that may co-occur with ADHD. This factor captures the internalising symptoms that frequently accompany childhood ADHD and are crucial for differential diagnosis.

*** Differential Diagnosis ***
The WURS-25 employs a sophisticated logistic regression scoring approach that extends beyond traditional total score interpretation to provide nuanced diagnostic information and aid in differential diagnosis. This approach generates fitted values that calculate the probability of ADHD membership relative to comparison groups. These are then converted to probabilities for presentation (although the raw fitted values are presented in a table at the end of the report for reference). This transformation yields percentage probabilities indicating the likelihood of ADHD group membership relative to the comparison population. Two distinct equations have been validated through extensive research:
1. ADHD vs Non-Clinical Comparison. This equation differentiates individuals with ADHD from non-clinical populations. A high probability indicates a higher likelihood that the client belongs to the ADHD group as opposed to the non-clinical group.
2. ADHD vs Depression/Anxiety Comparison. This equation differentiates ADHD from mood and anxiety disorders. A high probability indicates a higher likelihood that the client belongs to the ADHD group as opposed to the depression / anxiety group.

*** Overall Descriptor ***
The WURS-25 generates an Overall Descriptor through a sophisticated decision matrix that integrates total scores and probability estimates. This system moves beyond simple cutoff scores to provide clinically meaningful descriptors:
- Very Likely ADHD: High total scores (?46) combined with high probabilities (?80%) for both comparisons indicate very strong evidence of childhood ADHD with clear differentiation from both non-clinical individuals and mood/anxiety disorders.
- Likely ADHD: Various combinations of elevated scores and probabilities suggesting good evidence of childhood ADHD, including high total scores with moderate clinical probabilities or moderate total scores with high probabilities across comparisons.
- Clinically Undifferentiated from Mood/Anxiety Disorders: This descriptor indicates that whilst childhood symptoms differ significantly from non-clinical individuals, they cannot be reliably distinguished from individuals with depression or anxiety disorders. This pattern suggests elevated childhood symptomatology that requires additional clinical information for differential diagnosis.
- Unlikely ADHD: Patterns suggesting limited evidence for childhood ADHD, typically involving moderate total scores with low clinical probabilities or other combinations indicating minimal ADHD likelihood.
- Very Unlikely ADHD: Low total scores combined with weak probabilities across comparisons,

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Client Name	Generic Client

Scoring and Interpretation Information (cont.)

indicating minimal evidence of childhood ADHD symptomatology.
- Inconsistent Results: Contradictory or unusual patterns that do not fit typical profiles, such as low total scores with high clinical probabilities, requiring careful clinical interpretation and possible reassessment.

*** Plots ***
Several visualisations display the client's scores relative to normative expectations. The Stacked Bar Chart presents the proportional contribution of each factor to the total percentile score, enabling identification of which symptom domains primarily drive elevated scores, using colour coding with elevated ranges in orange (High) and very elevated ranges in red (Very High). The Horizontal Distribution Chart overlays the client's total score on bell curve distributions representing different populations: non-clinical (blue curves) and ADHD (red curves). The separation between distributions illustrates the degree of differentiation possible, whilst the client's position relative to each curve provides intuitive understanding of their symptom pattern. Percentile markers (25th, 75th) and mean lines help contextualise the client's position within each distribution. Individual horizontal charts for each subscale follow the same format, enabling detailed analysis of specific symptom domains and helping identify whether elevations are broad-based or concentrated in particular areas. When multiple administrations are available, the WURS-25 generates a line graph displaying total scores across assessment points, enabling tracking of symptom reporting consistency over time.

Client Responses

		Not at all or very slightly	Mildly	Moderately	Quite a bit	Very much
1	concentration problems, easily distracted	0	1	2	3	**4**
2	anxious, worrying	0	**1**	2	3	4
3	nervous, fidgety	0	**1**	2	3	4
4	inattentive, daydreaming	0	1	2	**3**	4
5	hot- or short-tempered, low boiling point	**0**	1	2	3	4
6	temper outbursts, tantrums	**0**	1	2	3	4
7	trouble with stick-to-it-tiveness, not following through, failing to finish things started	0	1	2	**3**	4
8	stubborn, strong-willed	0	**1**	2	3	4
9	sad or blue, depressed, unhappy	**0**	1	2	3	4

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Client Name | Generic Client

Client Responses (cont.)

		Not at all or very slightly	Mildly	Moderately	Quite a bit	Very much
10	disobedient with parents, rebellious, sassy	0	**1**	2	3	4
11	low opinion of myself	0	**1**	2	3	4
12	irritable	**0**	1	2	3	4
13	moody, ups and downs	0	**1**	2	3	4
14	angry	**0**	1	2	3	4
15	acting without thinking, impulsive	0	**1**	2	3	4
16	tendency to be immature	0	1	**2**	3	4
17	guilty feelings, regretful	0	**1**	2	3	4
18	losing control of myself	0	**1**	2	3	4
19	tendency to be or act irrational	0	1	**2**	3	4
20	unpopular with other children, didn't keep friends for long, didn't get along with other children	0	1	2	**3**	4
21	trouble seeing things from someone else's point of view	0	**1**	2	3	4
22	trouble with authorities, trouble with school, visits to principal's office	**0**	1	2	3	4
23	As a child in school I was overall a poor student, slow learner	0	1	2	**3**	4
24	As a child in school I had trouble with mathematics or numbers	0	1	**2**	3	4
25	As a child in school I was not achieving up to potential	0	1	2	3	**4**

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Client Name	Generic Client

Other Results

	Fitted Value (Non-Clinical)	Fitted Value (Clinical)
Results	1.8	2.1