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A Review of the Clinical Utility and Psychometric Properties of the Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS): Cutoffs and Percentile Rankings

The Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS), developed by Wolraich et al. (1998), is a 43-item teacher-report measure designed to assess symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD) and common comorbid conditions in children aged 5-12 years. This technical review synthesises current literature on the VADTRS's psychometric properties and provides clinicians with comprehensive scoring frameworks, percentile rankings, and detailed interpretive guidelines. The document outlines the dimensional structure of ADHD symptom presentations and comorbid conditions, their relationship with functional impairment criteria, while addressing important considerations for differential diagnosis and treatment planning. This framework enables clinicians to effectively incorporate VADTRS findings into comprehensive case conceptualisation and evidence-based intervention planning for children presenting with attention, behavioural, and emotional concerns.

View the VADTRS on NovoPsych.com.au

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Developer & Author

The Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS) scale was developed by Wolraich and colleagues (1998):

> Wolraich, M. L., Feurer, I. D., Hannah, J. N., Baumgaertel, A., & Pinnock, T. Y. (1998). Obtaining systematic teacher reports of disruptive behaviour disorders utilizing DSM-IV. *Journal of Abnormal Child Psychology*, *26*(2), 141–152. https://doi.org/10.1023/a:1022673906401

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.

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Description

The Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS) is a 43-item teacher-report measure designed to assess symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD) and common comorbid conditions in children aged 5-12 years (Wolraich et al., 1998). Developed as a companion to the parent-report version, the VADTRS evaluates four distinct clinical dimensions plus functional impairment:

1. Inattention - assesses symptoms related to difficulty sustaining attention, following through on instructions, organisation, and distractibility.
2. Hyperactivity/Impulsivity - measures behaviours such as fidgeting, excessive talking, difficulty waiting turns, and interrupting others.
3. Combined ADHD - evaluates the presence of both inattentive and hyperactive/impulsive symptoms.
4. Oppositional Defiant/Conduct Problems- screens for argumentative behaviour, defiance, anger, and more serious rule-breaking behaviours.
5. Anxiety/Depression - assesses symptoms of emotional distress including worry, fearfulness, and sadness.

Additionally, the scale assesses functional impairment across two performance domains: academic performance (reading, mathematics, and written expression) and classroom behaviour Performance (peer relationships, following directions, class disruption, assignment completion, and organisational skills). This functional impairment assessment is used to determine whether a child meets the clinical cutoff criteria for each of the behavioural dimensions assessed.

For clinicians, the VADTRS offers several distinct advantages, particularly in comprehensive ADHD assessment. The scale provides critical information from the educational setting, where many ADHD symptoms are most readily observable and functionally impairing. This teacher perspective is essential given that DSM diagnostic criteria for ADHD require symptoms to be present across multiple settings. The VADTRS aids in assessment, treatment planning, and intervention evaluation within the school environment, where children spend a significant portion of their day and where academic and social functioning can be directly observed.

There is also a complementary parent-rated version, the Vanderbilt ADHD Diagnostic Parent Rating Scale (VADPRS). The combined use of VADTRS and VADPRS helps clinicians ensure that symptoms are observed across multiple settings, which is a key diagnostic requirement for ADHD according to DSM criteria. This multi-informant approach helps clinicians identify whether functional impairment is present across settings, distinguish between situational versus pervasive difficulties, and develop more targeted intervention strategies that address setting-specific needs whilst ensuring consistency in approach between home and school environments.

The VADTRS has demonstrated value in both referred clinical samples and community populations, with the original validation study conducted in a large population of over 8,000 elementary school children across 16 schools (Wolraich et al., 1998). In treatment planning, scores on the VADTRS may indicate the need for targeted classroom interventions addressing particular aspects of functioning. For example, high scores on the Oppositional Defiant/Conduct subscale might suggest the need for classroom behaviour management strategies, while elevated Anxiety/Depression scores could indicate the need for additional emotional support within the educational setting.

Psychometric Properties

The VADTRS was initially validated in a large population comprising elementary school children during two consecutive academic years (Wolraich et al., 1998). The full sample included 16 schools, 398 teachers, and 8,257 children in the 1993-1994 year, and 10 schools, 214 teachers, and 4,323 students during the 1994-1995 year. The sample was predominantly white, with African-American representing the only significant minority at 6.9% of the population. Approximately 17.2% of the sample were below the poverty level, and the sample comprised a range of

settings including a medium-size city with varied ethnic and socioeconomic population, an upper-middle-class suburban section, and a rural section.

The internal consistency of the VADTRS has been consistently demonstrated across the validation samples. In the original study, coefficient alpha values were good for the inattention dimension (.92), hyperactive/impulsive dimension (.90), and oppositional-defiant/conduct dimension (.87), and the anxiety/depression dimension (.80) (Wolraich et al., 1998). The performance dimensions also demonstrated excellent internal consistency, with the classroom behaviour performance dimension achieving .94 and the academic performance dimension achieving .95.

Factor analysis identified a strong four-factor structure for the behavioural items, comprising inattention, hyperactivity/impulsivity, oppositional-defiant/conduct problems, and anxiety/depression dimensions. Principal component extraction followed by both orthogonal and oblique rotations supported this dimensional structure. The cumulative proportion of covariance accounted for by the latent dimensions was 52.8%, distributed as 33.5%, 8.2%, 7.2%, and 3.8% among the four respective prerotated dimensions. The performance section yielded two distinct dimensions (classroom behaviour and academic performance), accounting for 87.5% of the cumulative proportion of covariance (72.5% and 15.0% respectively). Confirmatory factor analysis provided strong support for the theoretical structure underlying the VADTRS. The latent variable structure identified in the Year 1 data set was confirmed in the Year 2 data set, with no item migrating from its hypothesised dimension. Coefficients of factor structure similarity between the two data sets averaged .99 and ranged from .99 to 1.0 for the four individual behavioural dimensions, demonstrating excellent stability of the factor structure across time.

Construct validity of the VADTRS is supported through theoretically consistent relationships between dimensions and known clinical conditions. Correlations between the behavioural dimensions ranged from .24 to .61, with the strongest associations being evidenced between the two ADHD dimensions (.61). The scale demonstrated meaningful relationships with teacher reports of diagnosed ADHD ($r = .32$ for both inattentive and hyperactive/impulsive dimensions), academic problems, and behavioural problems. Notably, the inattentive dimension showed a stronger association with academic problems ($r^2 = 25\%$) compared to the hyperactive/impulsive dimension ($r^2 = 7\%$), which aligns with theoretical expectations and clinical research findings. The academic and behavioural performance dimensions were appropriately associated with each other and with teacher reports of academic and behavioural problems, supporting their validity as measures of functional impairment.

Percentile rankings for the VADTRS are derived from symptom counts (the number of items rated as "often" or "very often" for each subscale) based on the original normative sample of over 8,000 elementary school children from the Wolraich et al. (1998) validation study. Gender-specific norms are essential because multivariate analysis revealed statistically significant gender differences ($p < .001$) across all behavioural dimensions, with males consistently demonstrating higher average symptom scores than females on inattentive, hyperactive/impulsive, and oppositional-defiant/conduct subscales, while females showed superior performance on academic and classroom behavioural measures. Percentiles are calculated separately for male and female students using standard normal distribution methods, where each possible symptom count is converted to a z-score using gender-specific means and standard deviations, then transformed to percentile ranks. When gender is not specified or is identified as non-binary, combined male and female percentiles are calculated using pooled statistics; however, these should be interpreted with caution as they may not fully represent the individual's normative reference group. The normative statistics from the Wolraich et al. (1998) 1994-1995 sample are:

Males (n = 2,014):

- Inattentive (M = 2.0, SD = 3.1)
- Hyperactive/Impulsive (M = 1.4, SD = 2.6)
- Combined (M = 3.4, SD = 5.4) - *calculated from the above subscales*
- Oppositional-Defiant/Conduct (M = 0.4, SD = 1.4)
- Anxiety/Depression (M = 0.3, SD = 1.0)

Females (n = 1,972):

- Inattentive (M = 1.0, SD = 2.2)
- Hyperactive/Impulsive (M = 0.5, SD = 1.5)
- Combined (M = 1.5, SD = 3.5) - *calculated from the above subscales*
- Oppositional-Defiant/Conduct (M = 0.2, SD = 0.9)
- Anxiety/Depression (M = 0.3, SD = 1.0)

Combined (n = 3,986) *(all values calculated from the male/female M and SDs)*:

- Inattentive (M = 1.51, SD = 2.74)
- Hyperactive/Impulsive (M = 0.95, SD = 2.18)
- Combined (M = 2.46, SD = 4.73)
- Oppositional-Defiant/Conduct (M = 0.30, SD = 1.19)
- Anxiety/Depression (M = 0.30, SD = 1.00).

This symptom count approach differs from dimensional raw score percentiles (as used in the VADPRS), providing direct correspondence with DSM diagnostic criteria while enabling meaningful comparison to the reference population's symptom frequency distributions.

Scoring & Interpretation

The Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS) scores consist of subscale scores across multiple clinical domains. Higher scores represent higher levels of symptoms within each of the domains measured. Raw scores (sum of Likert response options), symptom scores, clinical cutoff descriptors (whether meeting the diagnostic criteria or not), and percentiles (based upon the symptom counts) are provided for the following subscales of the VADTRS:

1. Inattentive (Items 1-9) assesses core symptoms of inattention including difficulty sustaining attention, not listening when spoken to, failing to follow instructions, and being easily distracted.
2. Hyperactive/Impulsive (Items 10-18) measures hyperactivity and impulsivity symptoms including fidgeting, inappropriate movement, excessive talking, and interrupting others.
3. Combined presentation occurs when both Inattentive and Hyperactive/Impulsive criteria are met.
4. Oppositional Defiant/Conduct Problems (Items 19-28) screens for oppositional and conduct behaviours such as arguing with adults, defying requests, being angry or resentful, and more serious rule-breaking behaviours.
5. Anxiety/Depression (Items 29-35) assesses internalising symptoms including fearfulness, worry, sadness, and feelings of worthlessness.

Items 36-43 assess functional impairment in academic (reading, mathematics, and written expression) and classroom (peer relationships, following directions, class disruption, assignment completion, and organisational skills) domains. These functional impairment questions are used to determine whether a child meets the clinical cutoff criteria for each of the behavioural dimensions assessed.

The VADTRS employs both dimensional (raw score) and symptom count scoring approaches. The raw score uses the dimensional scoring technique where sum scores for each subscale provide continuous measures of symptom severity, where higher scores equate to higher symptom severity. However, the percentiles are based upon symptom counts (the number of items rated as "often" or "very often" for each subscale) and are derived from the original normative sample of over 8,000 elementary school children from the Wolraich et al. (1998) validation study. Percentiles are calculated separately for male and female students, with combined norms used when gender information is not available. Percentiles indicate the child's position relative to same-gender peers in the normative sample based on their symptom count. A percentile of 50 indicates that the symptom count for the child is at average and expected levels for a child of

that gender, and a percentile of 90 indicates that the child has relatively high symptom counts compared to their peers (i.e., higher than 90 percent of their peers).

The clinical cutoffs use the symptom count approach where behaviours rated as "often" or "very often" are flagged as significant symptoms, with clinical cutoffs based upon meeting both threshold numbers AND functional impairment (Items 36-43). ADHD presentations require six or more qualifying symptoms plus functional impairment in at least one domain. Oppositional Defiant/Conduct problems require three or more symptoms plus impairment, and Anxiety/Depression requires three or more symptoms plus functional impairment. The functional impairment questions (Items 36-43) evaluate eight domains: three academic performance areas (reading, mathematics, written expression) and five classroom behavioural performance areas (peer relationships, following directions, class disruption, assignment completion, and organisational skills), where scores of 1 or 2 (problematic or somewhat of a problem) indicate significant impairment.

Note, research has consistently demonstrated gender differences in the presentation and recognition of ADHD, with females often being underdiagnosed due to less disruptive symptom presentations and different behavioural expressions (Hinshaw et al., 2022; Martin, 2024). To address this potential bias, the VADTRS interpretive system includes gender-equivalence flagging that identifies cases where female students may warrant further clinical evaluation despite not meeting traditional diagnostic thresholds. Specifically, when a female student's symptom count falls below the diagnostic threshold but her percentile rank matches or exceeds that of males who do meet diagnostic criteria (90th percentile for inattentive symptoms, 95th percentile for hyperactive/impulsive symptoms), the interpretive text will include a clinical note highlighting this discrepancy. This flagging system recognises that percentile ranks may represent clinical significance across genders, and ensures that clinicians are alerted to potentially significant symptoms that might otherwise be overlooked in female students, thereby supporting more equitable diagnostic practices.

On first administration of the VADTRS a plot shows the normative percentiles for all subscales with a coloured background at the 90th percentile and above, indicating potentially elevated scores. A line is presented on this plot at the 50th percentile which indicates an average symptom level for each of the subscales. Subsequent administrations of the VADTRS show longitudinal plots showing the ADHD subtype raw scores and comorbid percentiles over time. Note the coloured shading in the background of both plots represents symptom severity, not necessarily whether a client meets diagnostic criteria or not (given this is dependent upon functional impairment too).

When VADTRS scores are available from multiple timepoints, changes in scores can provide valuable information about the effectiveness of interventions or developmental changes in symptoms. For comparative interpretation, changes in symptom counts are flagged. If applicable, this interpretive text outlining change in scores is displayed first within the interpretive text section.

Supporting Information

Percentile Calculations

To derive comprehensive normative data for the VADTRS, two primary calculations were performed: (1) computation of a Combined ADHD subscale representing total symptom burden across inattentive and hyperactive/impulsive domains, and (2) generation of gender-pooled statistics for population-level interpretation.

Combined ADHD Subscale Derivation

The Combined subscale was calculated as the arithmetic sum of Inattentive and Hyperactive/Impulsive symptom counts for each participant. While the mean of the combined distribution equals the sum of constituent means (M_{combined}

$= M_{\text{inattentive}} + M_{\text{hyperactive}}$), calculation of the combined standard deviation required incorporation of the intercorrelation between subscales to avoid underestimation of variance.

The standard deviation for the sum of two correlated variables was computed using the formula:

$$SD_{\text{combined}} = \sqrt{(SD_1^2 + SD_2^2 + 2r \times SD_1 \times SD_2)}$$

where r represents the Pearson correlation coefficient between Inattentive and Hyperactive subscales. Based on the factor intercorrelations reported in the original VADTRS validation study (Wolraich et al., 1998), a correlation of $r = 0.77$ was applied consistently across gender groups. This correlation coefficient falls within the range of 0.75-0.79 reported in the original research and reflects the substantial but distinct relationship between these ADHD symptom domains.

Gender-Pooled Statistics

Pooled statistics combining male and female samples were calculated using standard formulae for combining independent groups with unequal sample sizes. The pooled mean was computed as the weighted average:

$$M_{\text{pooled}} = (n_1 \times M_1 + n_2 \times M_2) / (n_1 + n_2)$$

The pooled variance incorporated both within-group variance and between-group differences:

$$s^2_{\text{pooled}} = [(n_1-1) \times SD_1^2 + (n_2-1) \times SD_2^2 + n_1 \times n_2 \times (M_1-M_2)^2/N] / (N-2)$$

where $N = n_1 + n_2$. The pooled standard deviation was derived as $SD_{\text{pooled}} = \sqrt{s^2_{pooled}}$. This approach preserves the statistical properties of both constituent samples while accounting for gender-based mean differences in the combined distribution.

To derive the percentile lookup tables for each subscale and the total score, the following approach was taken. For each possible raw score value, the corresponding z-score was calculated:

$$z = (X - \mu) / \sigma$$

where X is the average score, μ is the mean for that subscale from the normative sample, and σ is the standard deviation. These z-scores were then converted to percentiles using the cumulative normal distribution function:

$$\text{percentile} = \Phi(z) \times 100$$

where Φ is the standard normal cumulative distribution function.

The lookup tables (see below) provide a direct mapping from raw scores to percentile ranks for each subscale within each gender group.

Percentile Tables

Percentile tables with a red line indicating the number of symptoms required to meet diagnostic criteria (in addition to the functional impairment requirement).

	Inattention		
	Male	Female	Combined
	2	1	1.51
Symptom Count	3.1	2.2	2.74
0	26	32	29
1	37	50	43
2	50	68	57
3	63	82	71
4	74	90	82
5	83	97	90
6	90	99	95
7	95	99.7	98
8	97	99.9	99
9	99	99.99	99.7

meets diagnositc criteria

	Hyperactive		
	Male	Female	Combined
	1.4	0.5	0.95
Symptom Count	2.6	1.5	2.18
0	30	37	33
1	44	63	51
2	59	84	68
3	73	95	83
4	84	99	92
5	92	99.9	97
6	95	99.99	99
7	98	99.99	99.7
8	99	99.99	99.9
9	99.8	99.99	99.99

meets diagnositc criteria

	Combined		
	Male	Female	Combined
	3.4	1.5	2.46
Symptom Count	5.4	3.5	4.73
0	26	33	30
1	33	44	38
2	40	56	46
3	47	67	55
4	54	76	63
5	62	84	70
6	68	90	77
7	75	94	83
8	80	97	88
9	85	98	92
10	89	99	94
11	92	99.7	96
12	94	99.9	98
13	96	99.9	99
14	98	99.98	99.3
15	98	99.99	99.6
16	99	99.99	99.8
17	99.4	99.99	99.9
18	99.7	99.99	99.95

		Oppositional / Conduct		
		Male	Female	Combined
		0.4	0.2	0.3
Symptom Count		1.4	0.9	1.19
meets screening criteria	0	39	41	40
	1	67	81	72
	2	87	98	92
	3	97	99.9	99
	4	99	99.9	99.9
	5	99.9	99.9	99.9
	6	99.9	99.9	99.9
	7	99.9	99.9	99.9
	8	99.9	99.9	99.9
	9	99.9	99.9	99.9
	10	99.9	99.9	99.9

		Anxiety		
		Male	Female	Combined
		0.3	0.3	0.3
Symptom Count		1	1	1
meets screening criteria	0	38	38	38
	1	76	76	76
	2	96	96	96
	3	99.7	99.7	99.7
	4	99.99	99.99	99.99
	5	99.99	99.99	99.99
	6	99.99	99.99	99.99
	7	99.99	99.99	99.99

Note. Some percentiles hit a ceiling at a particular symptom count and so the maximum percentile is provided to higher symptom count scores (e.g., Male Oppositional / Conduct hits a ceiling of 99.9 at a symptom count of 5 and so all symptom counts of 6 and above are allocated the same percentile). .

Interpretive Text

The interpretive report for the Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS) is constructed from several components that are conditionally displayed based on the child's scores, gender, and clinical cutoff criteria. The report follows a structured format designed to provide clinicians with meaningful insights into ADHD symptoms and comorbid conditions from the teacher's perspective.

Gender-Specific Normative Context

Using Gender-Specific Percentiles:

- "Gender-specific percentiles are reported below using the [male/female] normative sample."

Using Combined Percentiles:

- "Note: No gender has been assigned for this client, so the percentiles used will be for the combined male and female sample. Interpret percentiles with caution as they may not fully represent this individual's normative group."
- "Note: The client gender was entered as nonbinary so the percentiles used will be for the combined male and female sample. Interpret percentiles with caution as they may not fully represent this individual's normative group."

Overall Summary Statement

The report begins with a comprehensive overview based on clinical cutoff results:

- "The results of the Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS), as completed on [current date], "

ADHD Presentations:

- [Combined Presentation] "indicate the client meets the screening criteria for ADHD Combined (exceeding the cutoffs for both Inattentive and Hyperactive/Impulsive subtypes) presentation."
- [Individual Presentations] "indicate the client meets the screening criteria for ADHD [Predominantly Inattentive/Predominantly Hyperactive/Impulsive] presentation."
- [No ADHD Presentations Above Cutoff] "indicate the client does not meet the screening criteria for ADHD."

Comorbid Conditions:

- [With ADHD] "Additionally, the client meets screening criteria for [condition(s)]."
- [Without ADHD but with Comorbidities] "However, the client does meet the screening criteria for [condition(s)]."
- [Without ADHD and No Comorbidities] "The client also does not meet screening criteria for any of the comorbid conditions assessed (Oppositional Defiant Disorder or Anxiety/Depression)."

Detailed Subscale Interpretations

Inattentive Symptoms

Above Clinical Cutoff

- "Symptom Count: [count], Percentile: [percentile] (Above Clinical Cutoff)"

- "The client's score on the Inattentive subscale is above the clinical cutoff, with [count] of 9 inattentive symptoms rated as occurring 'Often' or 'Very Often' (six or more are required to meet diagnostic criteria). Additionally, there is evidence of functional impairment in the classroom or academic performance. These results are consistent with the Predominantly Inattentive presentation of ADHD."
- Followed by specific endorsed symptoms

Below Clinical Cutoff and ≥90th Percentile (the minimum value for males to achieve diagnostic criteria)

- "Symptom Count: [count], Percentile: [percentile] (Below Clinical Cutoff)"
- "Although the client's score is relatively high, they do not meet the full criteria for the Inattentive presentation of ADHD."

Insufficient Symptoms with Impairment:

- "This is because [count] of 9 inattentive symptoms were rated as occurring 'Often' or 'Very Often' (six or more are required to meet diagnostic criteria)."

Sufficient Symptoms without Impairment:

- "This is because despite having [count] of 9 inattentive symptoms rated as occurring 'Often' or 'Very Often' (meeting the symptom threshold), there is no evidence of functional impairment in the classroom or academic performance, which is required for a clinical diagnosis."

Below Clinical Cutoff and <90th Percentile

- "The client's score does not suggest clinically significant inattentive symptoms from the teacher's perspective. They display [count] of the 9 inattentive symptoms at clinically significant levels and show [no apparent functional impairment/functional impairment despite fewer symptoms than required]."

Gender-Equivalence Flag:

- "Clinical Note: Although this symptom count ([count]) falls below the diagnostic threshold of 6 symptoms, it represents the [percentile]th percentile - meaning [percentile]% of the reference group had fewer symptoms. This percentile level matches or exceeds that of males who score 6 symptoms and meet diagnostic criteria. Given research showing ADHD is frequently under-diagnosed in females, these symptoms warrant further clinical evaluation."

Hyperactive/Impulsive Symptoms

Above Clinical Cutoff

- "Symptom Count: [count], Percentile: [percentile] (Above Clinical Cutoff)"
- "The client's score on the Hyperactive/Impulsive subscale is above the clinical cutoff, with [count] of 9 hyperactive/impulsive symptoms rated as occurring 'Often' or 'Very Often' (six or more are required to meet diagnostic criteria). Additionally, there is evidence of functional impairment in the classroom or academic performance. These results are consistent with the Predominantly Hyperactive/Impulsive presentation of ADHD."
- Followed by specific endorsed symptoms

Below Clinical Cutoff and ≥95th Percentile (the minimum value for males to achieve diagnostic criteria)

- Similar structure to inattentive symptoms but with hyperactive/impulsive specific content and gender-equivalence flagging when appropriate

Combined ADHD Presentation

Above Clinical Cutoff

- "Total Symptom Count: [count], Percentile: [percentile] (Above Clinical Cutoff)"
- "The client meets criteria for both the Inattentive and Hyperactive/Impulsive presentations of ADHD, indicating a Combined presentation. This suggests significant difficulties with both attention regulation and behavioural control in the classroom setting, which often leads to more substantial academic and social impairment than either presentation alone."

Below Clinical Cutoff

- "Total Symptom Count: [count], Percentile: [percentile] (Below Clinical Cutoff)"
- "The client does not meet criteria for a Combined presentation of ADHD, as they do not satisfy the full clinical requirements for [both/either] the Inattentive [and/or] Hyperactive/Impulsive presentations individually."

Oppositional Defiant Symptoms

Above Clinical Cutoff

- "Symptom Count: [count], Percentile: [percentile] (Above Clinical Cutoff)"
- "The client's score on the Oppositional Defiant Disorder screening subscale is above the clinical cutoff, with [count] of 10 oppositional symptoms rated as occurring 'Often' or 'Very Often' (three or more are required to meet screening criteria). Additionally, there is evidence of functional impairment in the classroom or academic performance. These results suggest the presence of oppositional behaviours that may be consistent with Oppositional Defiant Disorder."
- Followed by specific endorsed symptoms

Anxiety/Depression Symptoms

Above Clinical Cutoff

- "Symptom Count: [count], Percentile: [percentile] (Above Clinical Cutoff)"
- "The client's score on the Anxiety/Depression screening subscale is above the clinical cutoff, with [count] of 7 anxiety/depression symptoms rated as occurring 'Often' or 'Very Often' (three or more are required to meet screening criteria). Additionally, there is evidence of functional impairment in the classroom or academic performance. These results suggest the presence of anxiety or mood symptoms that warrant further assessment, particularly as they are observable in the classroom setting."
- Followed by specific endorsed symptoms

Functional Impairment Section

With Functional Impairment

- "The assessment indicates functional impairment in [list of specific areas]. These functional impairments are significant as they indicate that the symptoms are causing problems in the classroom environment, which is an essential criterion for diagnosis."

Without Functional Impairment

- "The assessment does not indicate significant functional impairment in academic or classroom behavioural domains. This is noteworthy, as functional impairment is a key diagnostic criterion for ADHD and related

disorders. The absence of functional impairment suggests that even if symptoms are present, they may not be causing clinically significant problems in the classroom setting."

Specific Endorsed Symptoms Display

For subscales above clinical cutoff, the report includes specific symptoms endorsed:

- "In particular, the teacher endorsed the following [symptom type] symptoms:"
    - [Bulleted list of top 4 endorsed symptoms with response level]

Change Analysis for Multiple Administrations

When VADTRS scores are available from multiple timepoints, change analysis appears at the beginning of the interpretive text:

- "Since the Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS) was first administered for this client on [initial date], the current results (administered on [current date]) show that [change descriptions for each subscale with reduction / increase / no change in symptoms]."

Developer

Wolraich, M. L., Feurer, I. D., Hannah, J. N., Baumgaertel, A., & Pinnock, T. Y. (1998). Obtaining systematic teacher reports of disruptive behaviour disorders utilizing DSM-IV. *Journal of Abnormal Child Psychology*, *26*(2), 141–152. https://doi.org/10.1023/a:1022673906401

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Assessment Questions

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Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS)

Instructions:

Each rating should be considered in the context of what is appropriate for the age of the children you are rating.

		Never	Occasionally	Often	Very Often
1	Does not pay attention to details or makes careless mistakes, such as in homework	0	1	2	3
2	Has difficulty sustaining attention to tasks or activities	0	1	2	3
3	Does not seem to listen when spoken to directly	0	1	2	3
4	Does not follow through on instruction and fails to finish schoolwork (not due to oppositional behaviour or failure to understand)	0	1	2	3
5	Has difficulty organising tasks and activities	0	1	2	3
6	Avoids, dislikes, or is reluctant to engage in tasks that require sustaining mental effort	0	1	2	3
7	Loses things necessary for tasks or activities (school assignments, pencils, or books)	0	1	2	3
8	Is easily distracted by extraneous stimuli	0	1	2	3
9	Is forgetful in daily activities	0	1	2	3
10	Fidgets with hands or feet or squirms in seat	0	1	2	3
11	Leaves seat in classroom or in other situations in which remaining seated is expected	0	1	2	3
12	Runs about or climbs excessively in situations in which remaining seated is expected	0	1	2	3
13	Has difficulty playing or engaging in leisure activities quietly	0	1	2	3
14	Is “on the go” or often acts as if “driven by a motor”	0	1	2	3
15	Talks excessively	0	1	2	3
16	Blurts out answers before questions have been completed	0	1	2	3

Page 1 of 3

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		Never	Occasionally	Often	Very Often
17	Has difficulty waiting in line	0	1	2	3
18	Interrupts or intrudes on others (e.g., butts into conversations or games)	0	1	2	3
19	Loses temper	0	1	2	3
20	Actively defies or refuses to comply with adults' requests or rules	0	1	2	3
21	Is angry or resentful	0	1	2	3
22	Is spiteful and vindictive	0	1	2	3
23	Bullies, threatens, or intimidates others	0	1	2	3
24	Initiates physical fights	0	1	2	3
25	Lies to obtain goods for favours or to avoid obligations (i.e., "cons" others)	0	1	2	3
26	Is physically cruel to people	0	1	2	3
27	Has stolen items of nontrivial value	0	1	2	3
28	Deliberately destroys others' property	0	1	2	3
29	Is fearful, anxious, or worried	0	1	2	3
30	Is self-conscious or easily embarrassed	0	1	2	3
31	Is afraid to try new things for fear of making mistakes	0	1	2	3
32	Feels worthless or inferior	0	1	2	3
33	Blames self for problems, feels guilty	0	1	2	3
34	Feels lonely, unwanted, or unloved; complains that "no one loves him/her"	0	1	2	3
35	Is sad, unhappy, or depressed	0	1	2	3

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36	PERFORMANCE Rate his/her academic performance in reading					
	1 Problematic 2 Somewhat of a Problem 3 Average 4 Above Average 5 Excellent					
		Problematic	Somewhat of a Problem	Average	Above Average	Excellent
37	Rate his/her academic performance in mathematics	1	2	3	4	5
38	Rate his/her academic performance in written expression	1	2	3	4	5
39	CLASSROOM BEHAVIOURAL PERFORMANCE Rate his/her classroom behavioural performance in relationships with peers					
	1 Problematic 2 Somewhat of a Problem 3 Average 4 Above Average 5 Excellent					
40	Rate his/her classroom behavioural performance in following directions/rules	1	2	3	4	5
41	Rate his/her classroom behavioural performance in disrupting class	1	2	3	4	5
42	Rate his/her classroom behavioural performance in assignment completion	1	2	3	4	5
43	Rate his/her classroom behavioural performance in organisational skills	1	2	3	4	5
44	Name of teacher who completed this form:					

Developer Reference:

Wolraich, M. L., Feurer, I. D., Hannah, J. N., Baumgaertel, A., & Pinnock, T. Y. (1998). Obtaining systematic teacher reports of disruptive behavior disorders utilizing DSM-IV. Journal of Abnormal Child Psychology, 26(2), 141–152. https://doi.org/10.1023/a:1022673906401

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Sample Result

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Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS)

Client Name	Generic Client	*Date administered*	18 Jun 2025
Date of birth (age)	14 Dec 2015 (9)	*Time taken*	2 min 31s
Assessor	Dr David Hegarty		

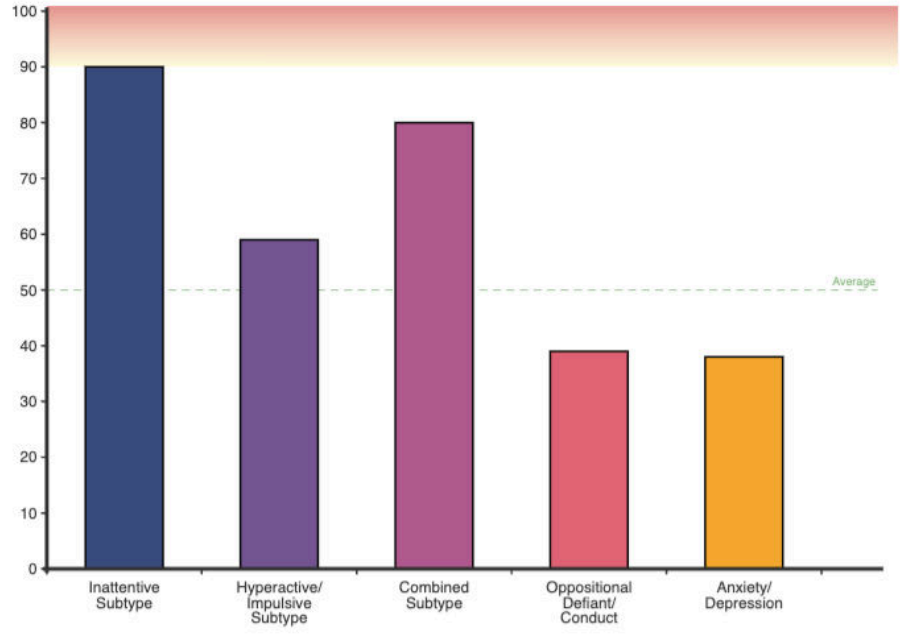
Informant

Teacher Name	Mr J. Smith

Results

	Raw Score	Symptom Count	Above clinical cutoff?	Normative Percentile
Inattentive Subtype	16	6	Yes	90
Hyperactive/Impulsive Subtype	9	2	No	59
Combined Subtype	25	8	No	80
Oppositional Defiant Disorder / Conduct Problems	5	0	No	39
Anxiety/ Depression	7	0	No	38

VADTRS Subscale Normative Percentiles



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Client Name	Generic Client

Interpretation

Gender-specific percentiles are reported below using the male normative sample.

The results of the Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS), as completed on 18 June 2025, indicate the client meets the screening criteria for ADHD Predominantly Inattentive presentation.

Inattentive Symptoms
Symptom Count: 6, Percentile: 90 (Above Clinical Cutoff)
The client's score on the Inattentive subscale is above the clinical cutoff, with 6 of 9 inattentive symptoms rated as occurring "Often" or "Very Often" (six or more are required to meet diagnostic criteria). Additionally, there is evidence of functional impairment in the classroom or academic performance. These results are consistent with the Predominantly Inattentive presentation of ADHD. In particular, the teacher endorsed the following inattentive symptoms:
- 6. Avoids, dislikes, or is reluctant to engage in tasks that require sustaining mental effort (Very Often)
- 1. Does not pay attention to details or makes careless mistakes, such as in homework (Often)
- 2. Has difficulty sustaining attention to tasks or activities (Often)
- 4. Does not follow through on instruction and fails to finish schoolwork (not due to oppositional behaviour or failure to understand) (Often)

Hyperactive/Impulsive Symptoms
Symptom Count: 2, Percentile: 59 (Below Clinical Cutoff)
The client's score does not suggest clinically significant hyperactive/impulsive symptoms from the teacher's perspective. They display 2 of the 9 hyperactive/impulsive symptoms at clinically significant levels (fewer than the six required).

Combined ADHD Presentation
Total Symptom Count: 8, Percentile: 80 (Below Clinical Cutoff)
The client does not meet criteria for a Combined presentation of ADHD. Although they meet criteria for the Inattentive presentation, they do not meet the full criteria for the Hyperactive/Impulsive presentation, which is required for a Combined diagnosis.

Oppositional Defiant Symptoms
Symptom Count: 0, Percentile: 39 (Below Clinical Cutoff)
The client's score does not suggest clinically significant oppositional defiant symptoms from the teacher's perspective. They display 0 of the 10 oppositional symptoms at clinically significant levels (fewer than the three required).

Anxiety/Depression Symptoms
Symptom Count: 0, Percentile: 38 (Below Clinical Cutoff)
The client's score does not suggest clinically significant anxiety or depression symptoms from the teacher's perspective. They display 0 of the 7 anxiety/depression symptoms at clinically significant levels (fewer than the three required).

Functional Impairment
The assessment indicates functional impairment in following directions/rules, disrupting class, assignment completion and organisational skills. These functional impairments are significant as they indicate that the symptoms are causing problems in the classroom environment, which is an essential criterion for diagnosis.

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Client Name	Generic Client

Scoring and Interpretation Information

For comprehensive information on the VADTRS, see here.

The Vanderbilt ADHD Diagnostic Teacher Rating Scale (VADTRS) scores consist of subscale scores across multiple clinical domains. Higher scores represent higher levels of symptoms within each of the domains measured. Raw scores (sum of Likert response options), symptom scores, clinical cutoff descriptors (whether meeting the diagnostic criteria or not), and percentiles (based upon the symptom counts) are provided for the following subscales of the VADTRS:

- Inattentive (Items 1-9) assesses core symptoms of inattention including difficulty sustaining attention, not listening when spoken to, failing to follow instructions, and being easily distracted.
- Hyperactive/Impulsive (Items 10-18) measures hyperactivity and impulsivity symptoms including fidgeting, inappropriate movement, excessive talking, and interrupting others.
- Combined presentation occurs when both Inattentive and Hyperactive/Impulsive criteria are met.
- Oppositional Defiant/Conduct Problems (Items 19-28) screens for oppositional and conduct behaviours such as arguing with adults, defying requests, being angry or resentful, and more serious rule-breaking behaviours.
- Anxiety/Depression (Items 29-35) assesses internalising symptoms including fearfulness, worry, sadness, and feelings of worthlessness.

Items 36-43 assess functional impairment in academic (reading, mathematics, and written expression) and classroom (peer relationships, following directions, class disruption, assignment completion, and organisational skills) domains. These functional impairment questions are used to determine whether a child meets the clinical cutoff criteria for each of the behavioural dimensions assessed.

The VADTRS employs both dimensional (raw score) and symptom count scoring approaches. The raw score uses the dimensional scoring technique where sum scores for each subscale provide continuous measures of symptom severity, where higher scores equate to higher symptom severity. However, the percentiles are based upon symptom counts (the number of items rated as "often" or "very often" for each subscale) and are derived from the original normative sample of over 8,000 elementary school children from the Wolraich et al. (1998) validation study. Percentiles are calculated separately for male and female students, with combined norms used when gender information is not available. Percentiles indicate the child's position relative to same-gender peers in the normative sample based on their symptom count. A percentile of 50 indicates that the symptom count for the child is at average and expected levels for a child of that gender, and a percentile of 90 indicates that the child has relatively high symptom counts compared to their peers (i.e., higher than 90 percent of their peers).

The clinical cutoffs use the symptom count approach where behaviours rated as "often" or "very often" are flagged as significant symptoms, with clinical cutoffs based upon meeting both threshold numbers AND functional impairment (Items 36-43). ADHD presentations require six or more qualifying symptoms plus functional impairment in at least one domain. Oppositional Defiant/Conduct problems require three or more symptoms plus impairment, and Anxiety/Depression requires three or more symptoms plus functional impairment. The functional impairment questions (Items 36-43) evaluate eight domains: three academic performance areas (reading, mathematics, written expression) and five classroom behavioural performance areas (peer relationships, following directions, class disruption, assignment completion, and organisational skills), where scores of 1 or 2 (problematic or somewhat of a problem) indicate

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Client Name	Generic Client

Scoring and Interpretation Information (cont.)

significant impairment.

Note, research has consistently demonstrated gender differences in the presentation and recognition of ADHD, with females often being underdiagnosed due to less disruptive symptom presentations and different behavioural expressions (Hinshaw et al., 2022; Martin, 2024). To address this potential bias, the VADTRS interpretive system includes gender-equivalence flagging that identifies cases where female students may warrant further clinical evaluation despite not meeting traditional diagnostic thresholds. Specifically, when a female student's symptom count falls below the diagnostic threshold but her percentile rank matches or exceeds that of males who do meet diagnostic criteria (90th percentile for inattentive symptoms, 95th percentile for hyperactive/impulsive symptoms), the interpretive text will include a clinical note highlighting this discrepancy. This flagging system recognises that percentile ranks may represent clinical significance across genders, and ensures that clinicians are alerted to potentially significant symptoms that might otherwise be overlooked in female students, thereby supporting more equitable diagnostic practices.

On first administration of the VADTRS a plot shows the normative percentiles for all subscales with a coloured background at the 90th percentile and above, indicating potentially elevated scores. A line is presented on this plot at the 50th percentile which indicates an average symptom level for each of the subscales. Subsequent administrations of the VADTRS show longitudinal plots showing the ADHD subtype raw scores and comorbid percentiles over time. Note the coloured shading in the background of both plots represents symptom severity, not necessarily whether a client meets diagnostic criteria or not (given this is dependent upon functional impairment too).

When VADTRS scores are available from multiple timepoints, changes in scores can provide valuable information about the effectiveness of interventions or developmental changes in symptoms. For comparative interpretation, changes in symptom counts are flagged. If applicable, this interpretive text outlining change in scores is displayed first within the interpretive text section.

Client Responses

		Never	Occasionally	Often	Very Often
1	Does not pay attention to details or makes careless mistakes, such as in homework	0	1	**2**	3
2	Has difficulty sustaining attention to tasks or activities	0	1	**2**	3
3	Does not seem to listen when spoken to directly	0	**1**	2	3
4	Does not follow through on instruction and fails to finish schoolwork (not due to oppositional behaviour or failure to understand)	0	1	**2**	3
5	Has difficulty organising tasks and activities	0	1	**2**	3

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Client Name	Generic Client

Client Responses (cont.)

		Never	Occasionally	Often	Very Often
6	Avoids, dislikes, or is reluctant to engage in tasks that require sustaining mental effort	0	1	2	**3**
7	Loses things necessary for tasks or activities (school assignments, pencils, or books)	0	**1**	2	3
8	Is easily distracted by extraneous stimuli	0	1	**2**	3
9	Is forgetful in daily activities	0	**1**	2	3
10	Fidgets with hands or feet or squirms in seat	0	1	**2**	3
11	Leaves seat in classroom or in other situations in which remaining seated is expected	0	**1**	2	3
12	Runs about or climbs excessively in situations in which remaining seated is expected	**0**	1	2	3
13	Has difficulty playing or engaging in leisure activities quietly	0	**1**	2	3
14	Is "on the go" or often acts as if "driven by a motor"	0	**1**	2	3
15	Talks excessively	0	**1**	2	3
16	Blurts out answers before questions have been completed	0	1	**2**	3
17	Has difficulty waiting in line	**0**	1	2	3
18	Interrupts or intrudes on others (e.g., butts into conversations or games)	0	**1**	2	3
19	Loses temper	0	**1**	2	3
20	Actively defies or refuses to comply with adults' requests or rules	0	**1**	2	3
21	Is angry or resentful	0	**1**	2	3
22	Is spiteful and vindictive	**0**	1	2	3
23	Bullies, threatens, or intimidates others	**0**	1	2	3
24	Initiates physical fights	**0**	1	2	3

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Client Name	Generic Client

Client Responses (cont.)

		Never	Occasionally	Often	Very Often
25	Lies to obtain goods for favours or to avoid obligations (i.e., "cons" others)	0	1	2	3
26	Is physically cruel to people	0	1	2	3
27	Has stolen items of nontrivial value	0	1	2	3
28	Deliberately destroys others' property	0	1	2	3
29	Is fearful, anxious, or worried	0	1	2	3
30	Is self-conscious or easily embarrassed	0	1	2	3
31	Is afraid to try new things for fear of making mistakes	0	1	2	3
32	Feels worthless or inferior	0	1	2	3
33	Blames self for problems, feels guilty	0	1	2	3
34	Feels lonely, unwanted, or unloved; complains that "no one loves him/her"	0	1	2	3
35	Is sad, unhappy, or depressed	0	1	2	3

36 PERFORMANCE

Rate his/her academic performance in reading

1 Problematic
2 Somewhat of a Problem
3 Average
4 Above Average
5 Excellent

		Problematic	Somewhat of a Problem	Average	Above Average	Excellent
37	Rate his/her academic performance in mathematics	1	2	3	4	5
38	Rate his/her academic performance in written expression	1	2	3	4	5

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Client Name	Generic Client

Client Responses (cont.)

39	CLASSROOM BEHAVIOURAL PERFORMANCE Rate his/her classroom behavioural performance in relationships with peers					
	1 Problematic 2 Somewhat of a Problem ***3 Average*** 4 Above Average 5 Excellent					
40	Rate his/her classroom behavioural performance in following directions/rules	1	**2**	3	4	5
41	Rate his/her classroom behavioural performance in disrupting class	1	**2**	3	4	5
42	Rate his/her classroom behavioural performance in assignment completion	1	**2**	3	4	5
43	Rate his/her classroom behavioural performance in organisational skills	1	**2**	3	4	5
44	Name of teacher who completed this form:					
	Mr J. Smith					