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RIAS-2 Score Report

by Cecil R. Reynolds, PhD, and Randy W. Kamphaus, PhD

Client name:	Sample Client
Client ID:	SC
Gender:	Male
Age:	68 : 1
Ethnicity:	Hispanic
Grade/highest level of education:	16 years
Test date:	02/29/2016
Date of birth:	01/09/1948
Examiner:	P Smith
Reason for referral:	Memory loss
Referral source:	Dr Jennings

This report is intended for use by qualified professionals only and is not to be shared with the examinee or any other unqualified persons.

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Version: 1.00

RIAS-2 Subtest Scores/Index Summary

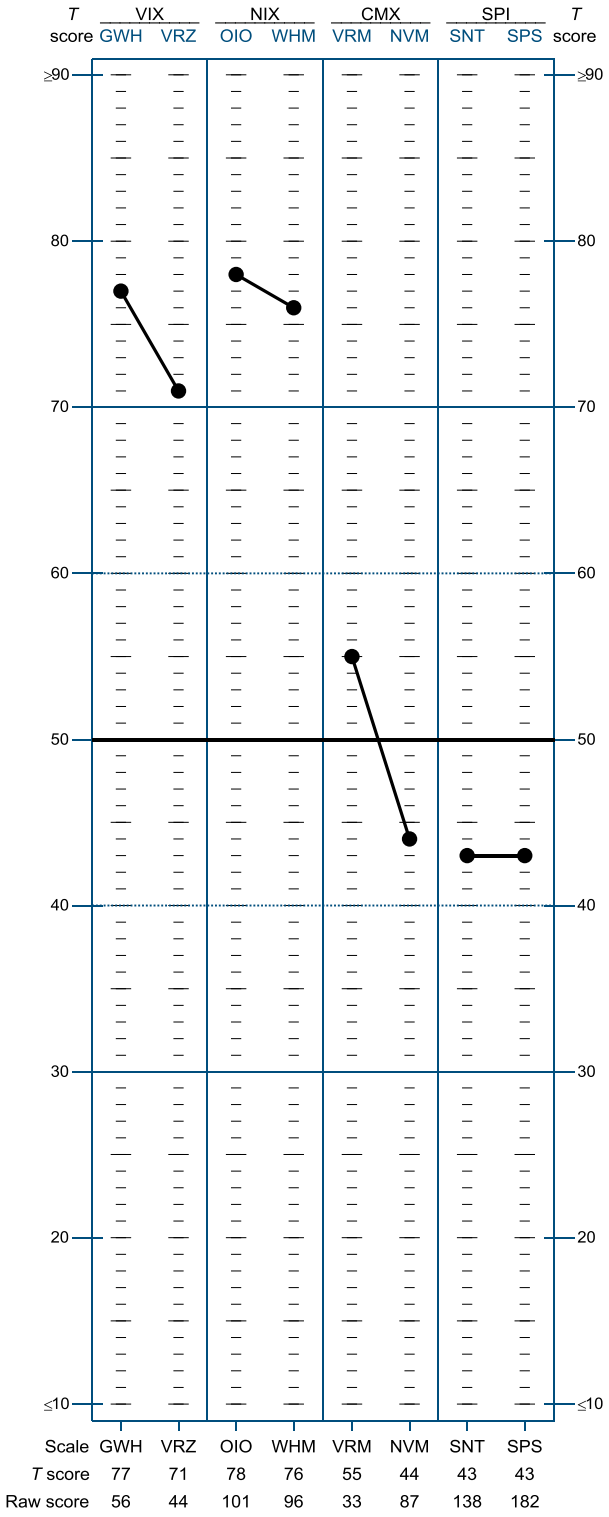
Age-Adjusted *T* Scores

	Raw score	Verbal	Nonverbal	Memory	Speeded Processing
Guess What *(GWH)*	56	77			
Odd-Item Out *(OIO)*	101		78		
Verbal Reasoning *(VRZ)*	44	71			
What's Missing *(WHM)*	96		76		
Verbal Memory *(VRM)*	33			55	
Nonverbal Memory *(NVM)*	87			44	
Speeded Naming Task *(SNT)*	138				43
Speeded Picture Search *(SPS)*	182				43
Sum of *T* Scores		148	+ 154 = 302	99	86
RIAS-2 Indexes		**VIX** 136	**NIX** 142	**CIX** 144	**CMX** 99	**SPI** 87
Confidence interval	95%	131-139	135-146	139-147	93-105	84-90
Percentile rank		99	99.7	99.8	47	19
		Verbal Intelligence Index	**Nonverbal Intelligence Index**	**Composite Intelligence Index**	**Composite Memory Index**	**Speeded Processing Index**

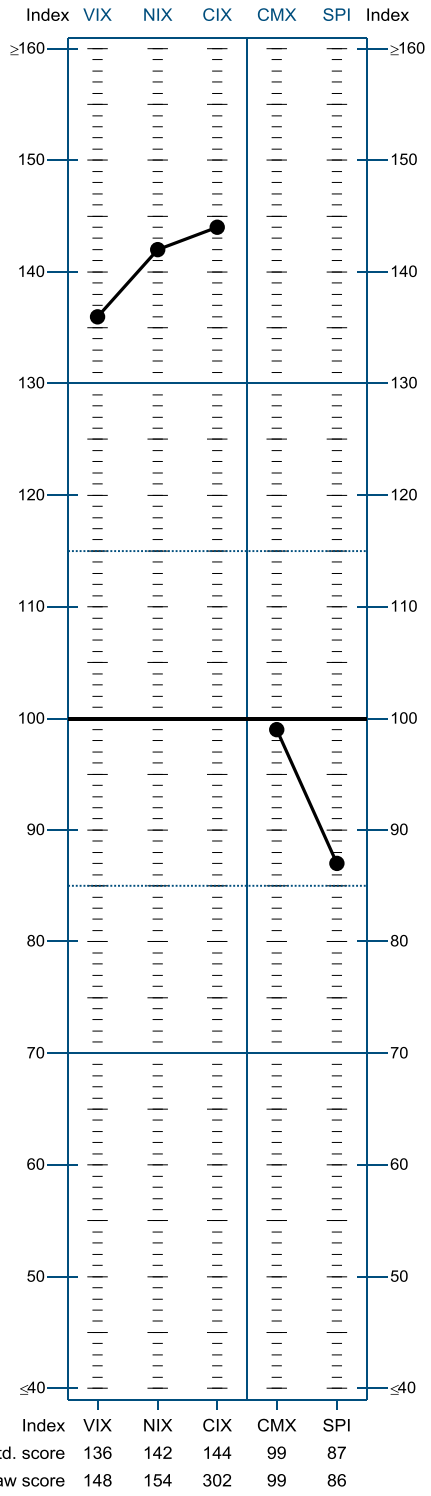
		TVB	TNB	TTB
RIAS-2 Total Battery Scores		**123**	**120**	**125**
Confidence interval	95%	118-127	115-124	121-128
Percentile rank		94	91	95
		Total Verbal Battery Score	**Total Nonverbal Battery Score**	**Total Test Battery Score**

RIAS-2 Profiles

RIAS-2 Subtest *T* Scores

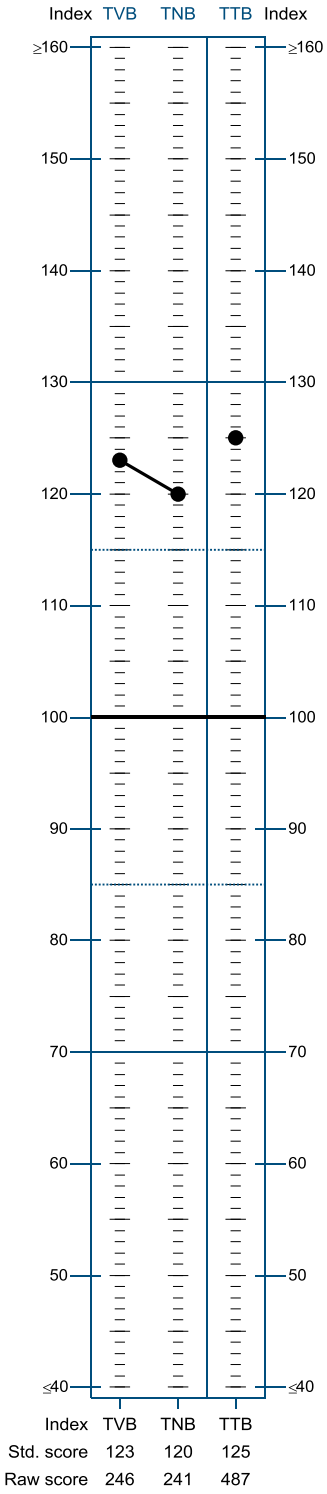


RIAS-2 Indexes



RIAS-2 Total Battery Profiles

RIAS-2 Total Battery Scores



Background Information

Sample Client is a 68-year-old male. Sample has completed 16 years of education and is currently not attending school.

Caveat and Descriptive Text

The test scores, descriptions of performance, and other interpretive information provided in this computer report are predicated on the following assumptions. First, it is assumed that the various subtests were administered and scored correctly in adherence with the general and specific administration and scoring guidelines provided in chapter 2 of the RIAS-2/RIST-2 Professional Manual (Reynolds & Kamphaus, 2015). Second, it also is assumed that the examinee was determined to be appropriately eligible for testing by the examiner according to the guidelines for testing eligibility provided in chapter 2 of the RIAS-2 Professional Manual and that the examiner was appropriately qualified to administer and score the RIAS-2/RIST-2.

This report is intended for evaluation, transmission to, and use only by individuals appropriately qualified and credentialed to interpret the RIAS-2/RIST-2 under the laws and regulations of their local jurisdiction and meeting the guidelines for use of the RIAS-2/RIST-2 as stated in the RIAS-2 Professional Manual (Reynolds & Kamphaus, 2015; see chapter 2).

Sample was administered the Reynolds Intellectual Assessment Scales – Second Edition (RIAS-2). The RIAS-2 is an individually administered measure of intellectual functioning normed for individuals between the ages of 3 and 94 years. The RIAS-2 contains several individual tests of intellectual problem solving and reasoning ability that are combined to form a Verbal Intelligence Index (VIX) and a Nonverbal Intelligence Index (NIX). The subtests that compose the VIX assess verbal reasoning ability along with the ability to access and apply prior learning in solving language-related tasks. Although labeled the Verbal Intelligence Index, the VIX also is a reasonable approximation of crystallized intelligence. The NIX comprises subtests that assess nonverbal reasoning and spatial ability. Although labeled the Nonverbal Intelligence Index, the NIX also provides a reasonable approximation of fluid intelligence. These two indexes of intellectual functioning are then combined to form an overall Composite Intelligence Index (CIX). By combining the VIX and NIX to form the CIX, a stronger, more reliable assessment of general intelligence (*g*) is obtained. The CIX measures the two most important aspects of general intelligence according to widely accepted theories and research findings: reasoning or fluid abilities and verbal or crystallized abilities. Each of these indexes is expressed as an age-corrected standard score that is scaled to a mean of 100 and a standard deviation of 15. These scores are essentially normally distributed and can be converted to a variety of other metrics if desired.

The RIAS-2 also contains subtests designed to assess verbal memory and nonverbal memory. Depending on the age of the individual being evaluated, the verbal memory subtest consists of a series of sentences, age-appropriate stories, or both, read aloud to the examinee. The examinee is then asked to recall these sentences or stories as precisely as possible. The nonverbal memory subtest consists of the presentation of pictures of various objects or abstract designs for a period of 5 seconds. The examinee is then shown a page containing six similar objects or figures and must discern which object or figure was previously shown. The scores from the verbal memory and nonverbal memory subtests are combined to form a Composite Memory Index (CMX), which provides a reliable assessment of working memory and also may provide indications as to whether or not a more detailed assessment of memory functions may be required. In addition, the high reliability of the verbal and nonverbal memory subtests allows them to be compared directly to each other.

Moreover, the RIAS-2 contains subtests designed to assess verbal and nonverbal speeded processing. Depending on the age of the individual being evaluated, the speeded naming task (i.e., verbal speeded processing) consists of rapidly naming a series of common objects (i.e., dogs, cats, tree, cars) or geometric shapes (i.e., triangle, circle, square, star). Also depending on the age of the individual being evaluated, the speeded picture search subtest (i.e., nonverbal speeded processing) consists of the ability to find target faces in an array of faces or finding target pictures (i.e., houses and geometric designs) in an array of similar pictures. The scores from the speeded naming and speeded picture search subtests are combined to form a Speeded Processing Index (SPI), which provides a reliable assessment of speeded processing and also may provide indications as to whether or not a more detailed assessment of speeded processing may be required. In addition, the high reliability of the verbal and nonverbal speeded processing subtests allows them to be compared directly to each other.

For reasons described in the RIAS-2/RIST-2 Professional Manual (Reynolds & Kamphaus, 2015), it is recommended that the RIAS-2 subtests be assigned to the indices described above (e.g., VIX, NIX, CIX, CMX, and SPI). For those who do not wish to consider the memory or speeded processing scales as a separate entity and prefer to apportion the subtests strictly according to verbal and nonverbal domains, the RIAS-2 subtests can be combined to form a Total Verbal Battery (TVB) score and a Total Nonverbal Battery (TNB) score. The subtests that compose the Total Verbal Battery score assess verbal reasoning ability, verbal memory, verbal speeded processing and the ability to access and apply prior learning in solving language-related tasks. Although labeled the Total Verbal Battery score, the TVB also is a reasonable approximation of crystallized intelligence. The TNB comprises subtests that assess nonverbal reasoning, spatial ability, nonverbal memory, and nonverbal speeded processing. Although labeled the Total Nonverbal Battery score, the TNB also provides a reasonable approximation of fluid intelligence. These two indexes of intellectual functioning are then combined to

form an overall Total Test Battery (TTB) score. By combining the TVB and the TNB to form the TTB, a stronger, more reliable assessment of general intelligence (*g*) is obtained. The TTB measures the two most important aspects of general intelligence according to recent theories and research findings: reasoning, or fluid, abilities and verbal, or crystallized, abilities. Each of these scores is expressed as an age-corrected standard score that is scaled to a mean of 100 and a standard deviation of 15. These scores are essentially normally distributed and can be converted to a variety of other metrics if desired.

Composite Norm-Referenced Interpretations

On testing with the RIAS-2, Sample earned a Composite Intelligence Index or CIX of 144. On the RIAS-2, this level of performance falls within the range of scores designated as significantly above average and exceeds the performance of more than 99% of individuals at Sample's age. The chances are 95 out of 100 that Sample's true CIX falls within the range of scores from 139 to 147.

Sample earned a Verbal Intelligence Index (VIX) of 136, which falls within the significantly above average range of verbal intelligence skills and exceeds the performance of more than 99% of individuals Sample's age. The chances are 95 out of 100 that Sample's true VIX falls within the range of scores from 131 to 139.

Sample earned a Nonverbal Intelligence Index (NIX) of 142, which falls within the significantly above average range of nonverbal intelligence skills and exceeds the performance of more than 99% of individuals Sample's age. The chances are 95 out of 100 that Sample's true NIX falls within the range of scores from 135 to 146.

Sample earned a Composite Memory Index (CMX) of 99, which falls within the average range of working memory skills. This exceeds the performance of 47% of individuals Sample's age. The chances are 95 out of 100 that Sample's true CMX falls within the range of scores from 93 to 105.

Sample earned a Speeded Processing Index (SPI) of 87, which falls within the below average range of speeded processing skills. This exceeds the performance of 19% of individuals Sample's age. The chances are 95 out of 100 that Sample's true SPI falls within the range of scores from 84 to 90.

On testing with the RIAS-2, Sample earned a Total Test Battery or TTB score of 125. This level of performance on the RIAS-2 falls within the range of scores designated as moderately above average and exceeds the performance of 95% of individuals at Sample's age. The chances are 95 out of 100 that Sample's true TTB falls within the range of scores from 121 to 128.

Sample's Total Verbal Battery (TVB) score of 123 falls within the range of scores designated as moderately above average and exceeds the performance of 94% of

individuals his age. The chances are 95 out of 100 that Sample's true TVB falls within the range of scores from 118 to 127.

Sample's Total Nonverbal Battery (TNB) score of 120 falls within the range of scores designated as moderately above average and exceeds the performance of 91% of individuals his age. The chances are 95 out of 100 that Sample's true TNB falls within the range of scores from 115 to 124.

Subtest Norm-Referenced Interpretations

The Guess What subtest measures vocabulary knowledge in combination with reasoning skills that are predicated on language development and acquired knowledge. On testing with the RIAS-2, Sample earned a *T* score of 77 on Guess What.

Odd-Item Out measures analytical reasoning abilities within the nonverbal domain. On testing with the RIAS-2, Sample earned a *T* score of 78 on Odd-Item Out.

Verbal Reasoning measures analytical reasoning abilities within the verbal domain. English vocabulary knowledge is also required. On testing with the RIAS-2, Sample earned a *T* score of 71 on Verbal Reasoning.

What's Missing measures spatial and visualization abilities. On testing with the RIAS-2, Sample earned a *T* score of 76 on What's Missing.

Verbal Memory measures the ability to encode, briefly store, and recall information in the verbal domain. English vocabulary knowledge also is required. On testing with the RIAS-2, Sample earned a *T* score of 55 on Verbal Memory.

Nonverbal Memory measures the ability to encode, briefly store, and recall information in the nonverbal and spatial domains. On testing with the RIAS-2, Sample earned a *T* score of 44 on Nonverbal Memory.

Speeded Naming measures the ability to differentiate and recognize simple stimuli verbally under time constraints. On testing with the RIAS-2, Sample earned a *T* score of 43 on the Speeded Naming Task.

Speeded Picture Search measures the ability to differentiate simple stimuli visually under time constraints. On testing with the RIAS-2, Sample earned a *T* score of 43 on Speeded Picture Search.

RIAS-2 Discrepancy Score Summary Table

Discrepancy Score	Score Difference	Statistically Significant?	Prevalence in Standardization Sample
VIX < NIX	6	no	>20%
CIX > CMX	45	yes (.01)	≤ 1%
VRM > NVM	11	yes (.05)	>20%

CIX > SPI	57	yes (.01)	≤ 1%
SNT = SPS	0	no	>20%
TVB > TNB	3	no	>20%

VIX is the Verbal Intelligence Index, NIX is the Nonverbal Intelligence Index, CIX is the Composite Intelligence Index, CMX is the Composite Memory Index, VRM is the Verbal Memory Subtest, NVM is the Nonverbal Memory Subtest, CIX is the Composite Intelligence Index, SPI is the Speeded Processing Index, SNT is the Speeded Naming Task, SPS is the Speeded Picture Search Subtest, TVB is the Total Verbal Battery Index, and TNB is the Total Nonverbal Battery Index.

Discrepancy Norm-Referenced Interpretations

Sample's VIX of 136 and NIX of 142 are consistent with his CIX noted previously and indicate that Sample's verbal and nonverbal abilities are similarly developed.

When compared to Sample's measured level of general intelligence as reflected in Sample's CIX, it can be seen that his CMX falls significantly below his CIX. This result indicates that Sample is able to engage in intellectual problem solving and general reasoning tasks at a level that significantly exceeds his ability to use immediate recall and working memory functions. The magnitude of the difference seen in this instance may take on special diagnostic significance due to its relative infrequency in the general population. A difference between CIX and CMX of this magnitude occurs in less than 1% of the population.

Within the subtests making up the CMX, Sample's performance in the verbal memory domain significantly exceeded his level of performance within the nonverbal memory domain. This difference is reliable and indicates that Sample functions at a significantly higher level when asked to recall or engage in working memory tasks that are easily adapted to verbal linguistic strategies, as opposed to tasks relying on visual-spatial cues and other nonverbal memory features. Although most likely representing a real difference in Sample's abilities in these two areas, the magnitude of this difference is relatively common, occurring in more than 20% of the population at Sample's age.

Within the subtests making up the SPI, Sample's performance was substantially equivalent on verbal and nonverbal speeded processing tasks. This result indicates that Sample functions about equally well when called on to differentiate simple stimuli verbally or nonverbally under time constraints.

Sample's TVB of 123 and TNB of 120 are consistent with his TTB noted previously and indicate that Sample's verbal and nonverbal abilities are similarly developed.

If interested in comparing the TTB and CIX scores, the TTB and CMX scores, or the TTB and SPI scores, it is better to compare the CIX and CMX or the CIX and SPI directly. As noted in the RIAS-2/RIST-2 Professional Manual (Reynolds & Kamphaus, 2015), the TTB is simply a reflection of the sum of the *T* scores of the subtests that compose the CIX, CMX, and SPI. Thus, it is more appropriate to make a direct comparison of the CMX and CIX or the SPI and the CIX because any apparent discrepancy between the TTB and the

CIX or the TTB and the CMX or SPI will in fact be a reflection of discrepancies between the CIX and the CMX or between the CIX and the SPI, so these values are best examined directly. To compare the CMX, SPI, or CIX to the TTB may exaggerate some differences inappropriately.

General Interpretive Caveats

Examiners should be familiar with the cultural and linguistic background of Sample (which may radically alter the suggestions contained herein) and be certain to consider these factors before arriving at a final decision regarding any diagnosis, classification, or related decision and before making any form of further assessment or treatment recommendations.

General Feedback and Recommendations

Composite Score Feedback and Recommendations

Sample's SPI of 87 falls within the below average range and indicates mild difficulties with speeded processing of verbal and visual/spatial information relative to others Sample's age. This may cause mild problems and some frustration in the acquisition of new learning or academic or training material when faced with the specialized demands placed by learning under time constraints, but is unlikely to disturb most functions of day-to-day living. Test-taking under timed conditions may also be adversely affected and Sample may benefit from extended testing times wherein Sample can demonstrate more accurately what he has learned or his problem-solving skills under untimed conditions.

Various adaptations are often recommended for individuals who perform in this range on speeded processing tasks. For example, day-to-day tasks may be redesigned to avoid the necessity of decision making under speeded conditions including tasks in work, community, and home environments. Other adaptations of potential benefit include vocational, academic, and social planning aimed at lessening the demands for accurate speeded decisions. When adaptations are not possible, technological aids (e.g., digital calculators, digital cueing of explicit decision rules related to work performances, etc.) may be used to make speeded decisions necessary for daily functioning. Test-taking under timed conditions may also be adversely affected and Sample may benefit from extended testing times wherein Sample can demonstrate more accurately what he has learned or his problem-solving skills under untimed conditions.

Discrepancy Feedback and Recommendations

The magnitude of discrepancy between Sample's CIX score of 144 and CMX score of 99 is relatively unusual within the normative population, suggesting that general intellectual skills are relatively more intact than memory function. Prognostically, this finding suggests that overall functioning can improve if the effects of memory difficulties can be mitigated.

The use of multiple modalities is typically recommended to increase recall, such as routinely pairing visual/spatial stimuli with verbal stimuli in order to enhance recall. The use of lists, oral language and written language directions, signs, and verbal reminders may be especially helpful. Yet another example would involve adding verbal instructions to directions given via a map, graph, or picture. Frequent verbal and visual/spatial directions and reminders are recommended in most circumstances where recall needs to be enhanced.

The use of tools such as personal digital devices (e.g., smart phones, tablet computers, personal computers, or other technologies) or hard copies of reminders may all be used to mitigate the effects of verbal memory problems.

The magnitude of discrepancy between Sample's CIX score of 144 and SPI score of 87 is relatively unusual within the normative population, suggesting that general intellectual skills are relatively more intact than speeded processing of information. Prognostically, this finding suggests that overall functioning may be improved when speeded processing of information is not required by school, community, or work demands.

Various adaptations are often recommended for individuals who perform in this range on speeded processing tasks. For example, day-to-day tasks may be redesigned to avoid the necessity of decision making under speeded conditions including tasks in work, community, and home environments. Other adaptations of potential benefit include vocational, academic, and social planning aimed at lessening the demands for accurate speeded decisions. When adaptations are not possible, technological aids (e.g., digital calculators, digital cueing of explicit decision rules related to work performances, etc.) may be used to make speeded decisions necessary for daily functioning. Test-taking under timed conditions may also be adversely affected and Sample may benefit from extended testing times wherein Sample can demonstrate more accurately what he has learned or his problem-solving skills under untimed conditions.

Recommendations for Additional Testing

Sample's CIX score of 144 is significantly higher than his CMX score of 99. As such, follow-up evaluation may be warranted. Additional testing with the Child and Adolescent Memory Profile (Sherman & Brooks, 2015), TOMAL-2 (Reynolds & Voress,

2007), or similar measure is suggested to determine if Sample's memory difficulties are modality-specific in that it is localized to either verbal or visual/spatial information, or if the impairment exists in short-term acquisition or long-term retrieval of previously learned material. A thorough history, supplemented by questions about qualitative aspects of memory, should be used as well. It also may be helpful to inquire about the individual's perception of memory problems and have him describe the onset, duration, and environmental contexts that are affected.

Sample's CIX score of 144 is significantly higher than his SPI score of 87. As such, follow-up evaluation may be warranted. Additional testing is suggested to determine if Sample's speeded processing of information difficulties are modality-specific in that it is localized to either verbal or nonverbal information, or if the impairment is exacerbated by other problems, such as memory. A thorough history, supplemented by questions about qualitative aspects of daily functioning under speeded decision making conditions should be used as well. It also may be helpful to inquire about the individual's perception of speeded information processing problems and have him describe the onset, duration, and environmental contexts that are affected.

RIAS-2 Extended Score Summary Table

Subtest	Raw score	*T* score (Mean = 50, SD = 10)	*z* score (Mean = 0, SD = 1)	Scaled score (Mean = 10, SD = 3)
GWH	56	77	2.70	18
OIO	101	78	2.80	18
VRZ	44	71	2.10	16
WHM	96	76	2.60	18
VRM	33	55	0.50	12
NVM	87	44	-0.60	8
SNT	138	43	-0.70	8
SPS	182	43	-0.70	8

Index	Sum of subtest *T* scores	*T* score (Mean = 50, SD = 10)	*z* score (Mean = 0, SD = 1)	Index score (Mean = 100, SD = 15)	Percentile rank	95% confidence interval	90% confidence interval	NCE (Mean = 50, SD = 21.06)	Stanine (Mean = 5, SD = 2)
VIX	148	74	2.40	136	99	131-139	132-139	>99	9
NIX	154	78	2.80	142	99.7	135-146	136-145	>99	9
CIX	302	79	2.93	144	99.8	139-147	140-146	>99	9
CMX	99	49	-0.07	99	47	93-105	94-104	49	5
SPI	86	41	-0.87	87	19	84-90	85-90	32	3
TVB	246	65	1.53	123	94	118-127	119-126	82	8
TNB	241	63	1.33	120	91	115-124	116-123	78	8
TTB	487	67	1.67	125	95	121-128	122-128	85	8

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End of Report