Coolidge Axis II Inventory: Manual

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Introduction to the CATI

Purpose

The Coolidge Axis II Inventory (revised for DSM-5) has a threefold purpose: (1) originally, as the name indicates, it was designed to assess personality disorders according to the multiaxial DSM-III (1980), where personality disorders were placed on a separate axis (Axis II) from clinical syndromes, and currently, the CATI measures 14 personality disorders according to the personality disorder criteria from DSM-5, DSM-IV-TR, and DSM-III-R; (2) the CATI assesses major clinical syndromes from DSM-5, such as anxiety, depression, posttraumatic stress disorder, schizophrenia, and other psychopathological syndromes; and (3) the CATI evaluates neuropsychological and cognitive dysfunction including overall neuropsychological dysfunction, neurocognitive disorder, adult ADHD, executive functions of the frontal lobes, and global working memory problems.

The CATI was originally published as the Coolidge Axis II Inventory (CATI: Coolidge, 1984; Coolidge & Merwin, 1992). The newest, revised edition is a better reflection of its threefold purpose. The current CATI contains 250 items and is answered on a four-point Likert scale ranging from (1) *Strongly False* to (4) *Strongly True*. It takes from 30 to 45 minutes to complete, and it is designed for ages 15 and above. It comes in two available forms: self-report and significant-other report.

CATI Scales

The CATI is organized into eight sections:

1. Maladjustment

This 60-item scale is broad measure of general psychopathology (with no items specifically assessing neuropsychological or cognitive dysfunction). The items cover a wide variety of psychopathological symptomatology from the 14 Personality Disorder scales and the Anxiety and Depression scales. Thus, the Maladjustment scale may be used as a nonspecific measure of general psychopathology independent of (at least scale-wise) neuropsychological or cognitive problems.

2. Validity Scales

This section includes three scales assessing whether or not respondents are answering the items carefully and honestly. The scales are (1) Denial-Malingering scale (97 items), (2) Random Responding (3 items), and (3) Answer Choice Frequency.

- (1) The **Denial-Malingering scale** has 97 items, which are stated such that endorsing the item as *More True than False* or *Strongly True* is endorsing psychopathology, while endorsing *More False than True* or *Strongly False* denies psychopathology. In the purportedly 'normal' normative sample, the mean sum was 175.5 (SD = 29.0). Thus, a patient's score on this scale would be indicative of *mild denial* would begin with scores 140 or less. Also, scores above 230 might indicate severe levels of psychopathology, malingering, or sincere cries for help.
- (2) The **Random Responding scale** has three items. Unless the patient is randomly responding, the items are all very unlikely to be endorsed with any answer other than *Strongly False*. The CATI Online Report will note the number of items (out of three) that have been endorsed with anything other than *Strongly False*. Thus, a valid report will

show *No Evidence of Random Responding*: 0. The latter number is indicative that none of the three items were endorsed with any answer other than *Strongly False*. If a patient *does* endorse any of the three items, the CATI Report will state: *Evidence for Random* Responding: 1 (2 or 3), depending on how many items were endorsed with an answer other than *Strongly False*. The three items are:

- 39. I played quarterback for the Denver Broncos.
- 84. I was a member of the French Foreign Legion.
- 196. I swam the English Channel.

(3) **Answer Choice Frequency** – This data can be used just like the Denial-Malingering scale to indicate whether a patient is using the four answer options more or less than the purportedly normal normative sample. Thus, this scale is another measure of denial, malingering, or normal responding. There are 135 items on the scale, all of which have psychopathology associated with *Strongly True*. The normative sample choice indicates how often the purportedly normal sample chose those answer choices. Thus, if a patient's *w* frequency choice was 88, it would mean that a normal person only chose *Strongly False* 57 times, and it would be indicative that the patient was denying more than the normal sample.

Answer Choice	Frequency Choice of this Patient	Normative Sample Choice
Strongly False	W	57
More False than True	Х	47
More True than False	у	22
Strongly True	Z	9

3. Personality Disorders

This section includes 14 personality disorder scales, ten of which are from the DSM-5: Antisocial, Avoidant, Borderline, Dependent, Histrionic, Narcissistic, Obsessive-Compulsive, Paranoid, Schizoid, and Schizotypal. Two are from Appendix B of the DSM-IV: Passive-Aggressive and Depressive, and two, Sadistic and Self-Defeating, are from the appendix of the DSM-III-R.

4. Major Clinical Syndromes

This section includes scales measuring the disorders of (1) Anxiety, (2) Depression, (3) Schizophrenia (with a Psychotic Thinking subscale), (4) Posttraumatic Stress Disorder, (5) Social Phobia, and (6) Social Withdrawal.

- (1) The **Anxiety scale** has 28 items, which are similar to the criteria of the Generalized Anxiety Disorder in DSM-5. The items on the scale are broadly based measures of anxiety including an inability to relax, anxiety-provoking social situations, lack of self-assurance, insecure relationships, envy, future worries, and troubled dreams.
- (2) The Depression scale has 24 items, similar to the criteria presented in DSM-5 for Depressive Disorders. The items deal with suicidal ideation, past suicide attempts, depressive thinking, pessimism, disappointments with people, and troubled dreams. Because the psychopathological concepts of anxiety and depression have some overlapping behavioral symptomatology, there are 11 overlapping items between the

Anxiety and Depression scales of the CATI, so it can be expected that the Anxiety and Depression scale scores will be highly correlated.

- (3) The Schizophrenia scale is composed of 45 items that cover many of the diagnostic criteria for Schizophrenia in DSM-5. The items include the general categories of paranoia, suspiciousness, hypersensitivity, ideas of reference, strange and unusual thinking, multiple somatic concerns, and eccentricity. There is also an 11-item Psychotic Thinking subscale of the CATI Schizophrenia scale. The items deal specifically with psychotic thought processes such as ideas of reference, paranoia, suspiciousness, bizarre somatic complaints, and self-mutilating behavior.
- (4) The **Posttraumatic Stress Disorder (PTSD) scale** consists of 14 items that partially cover the DSM-5 PTSD criteria. Therefore, a diagnosis of PTSD should not be based solely on the CATI PTSD scale alone. Consult the DSM-5 for a complete description of the PTSD criteria.
- (5) The **Social Phobia scale** has 6 items dealing with fears of interacting, speaking, or being embarrassed in social situations covering some of the general features section of DSM-5 for Social Phobia. The Social Withdrawal scale has 15 items (4 from the Social Phobia scale) broadly covering not only social aversion but also the withholding of emotions and feelings, lack of desire for or lack of enjoyment of close relationships, preference for solitary activities, seeing oneself as a loner, feelings of aloofness, and possessing no close friends.

5. Neuropsychological Syndromes

This section includes (1) an 18-item General Neuropsychological Dysfunction scale (with three subscales measuring language problems, memory and concentration problems, and neurosomatic disturbances; (2) a neurocognitive scale (according to various DSM-5 criteria); (3) a general executive dysfunctions scale (with three subscales measuring decision-making difficulties, planning problems, and task completion difficulties); (4) a global working memory problems scale; (5) an adult ADHD scale (with three subscales measuring ADHD subtypes of combined type, inattentive type, and hyperactive/impulsive type).

(1) General Neuropsychological Dysfunction Scale

Eighteen items were created on a theoretical and clinical basis from the clinical neuropsychology literature (e.g., Binder, 1986; Gasparrini, Satz, Heilman, & Coolidge, 1978; Lezak, 1983, 1987; McGlynn & Schacter, 1989; Parker, 1990). The items were chosen for their sensitivity and/or specificity to a variety of types of neuropsychological dysfunction. The CATI 18-item General Neuropsychological Dysfunction scale has three subscales: Language Functions; Memory and Concentration; and Neurosomatic Symptoms. The items for each of these three subscales are as follows:

Language Functions

- 47. I have trouble understanding what I read.
- 79. When people talk to me it sounds like they are mumbling.
- 106. I slur my words or I find common words difficult to pronounce.
- 129. People do not understand what I am trying to say.
- 170. I have been told that my style of speech is strange or vague.

Memory and Concentration

- 14. I think my memory has gotten worse in the past few years.
- 121. I have trouble trying to remember the names of common objects.
- 126. I tend to forget things I am supposed to do.
- 132. I find it difficult to memorize anything.
- 156. I often forget what I am about to say.
- 163. I have trouble concentrating.
- 216. I forget things I have just learned.

Neurosomatic Symptoms

- 147. When I try to go somewhere, I get lost easily.
- 169. I have noticed a change in my sense of taste or smell.
- 173. I have problems with my balance.
- 180. I think there is something wrong with my mind.
- 199. I have headaches.
- 218. I have dizzy spells.

(2) Neurocognitive Disorder

DSM-5 added a large section on major to mild neurocognitive disorder (p. 591 - 643). The CATI has 31 items that cover the broad spectrum of cognitive dysfunction that occurs in neurocognitive disorders including problems in short- and long-term memory, attention, language difficulties, decision-making problems, etc. Scores on the CATI Neurocognitive Disorder scale will be highly correlated with the CATI General Neuropsychological Dysfunction scale, but the former covers a broader array of symptoms.

(3) General Executive Dysfunctions of the Frontal Lobes Scale

A set of 16 items was selected from the CATI based on their face validity, consistent with the theoretical understanding of the executive functions of the frontal lobes (Lezak, 1982; Luria, 1966; Welsh, Pennington, & Grossier, 1991). The executive functions have been described as a set of behaviors that help to achieve a future goal and may include planning, organizing one's use of time, searching, strategizing, impulse control, inhibition, and cognitive flexibility. Damage to the frontal lobes may impair these functions often affecting an individual's social and occupational functioning, but without concomitant evidence of a deficit on traditional neuropsychological assessment measures (Lezak, 1993). A factor analysis of the 16 items resulted in three subscales. They are as follows:

Decision Difficulty

- 16. I get advice or reassurance from others before I make everyday decisions.
- 21. I have trouble making everyday decisions.
- 32. Other people make most of my important decisions.
- 36. I consider myself dependent on others.
- 49. I seldom let others make important decisions in my life, like where to live, or what job to take, etc.
- 74. I enjoy making my own decisions without help from others.
- 107. I have no difficulty starting projects on my own.

190. I avoid or postpone making decisions.

Planning Problems

- 28. I am not a procrastinator, that is, I don't put off things that need to be done.
- 41. I like to make complete plans for my vacation or leisure time.
- 53. I am very concerned about details, lists, or schedules before I begin a task.
- 189. I like to be really organized and have everything in order before I get ready to do something.

Task Completion Difficulty

- 24. My perfectionism interferes with my completing a task on time.
- 28. I am not a procrastinator, that is, I don't put off things that need to be done.
- 38. I fail to accomplish tasks even when I have the ability.
- 60. Often I cannot complete a task because I set my standards too high.
- 190. I avoid or postpone making decisions.
- 191. I have trouble finishing things on time because I spend too much time getting organized.

(4) Global Working Memory

The CATI contains a 32-item working memory scale that specifically focuses on a broad array of memory problems. Again, many of the items overlap with the General Neuropsychological Dysfunction scale and the Neurocognitive Disorder scale, so all three scores on these scales should be highly correlated.

(5) Attention-Deficit Hyperactivity Disorder (ADHD)

The CATI contains an 18-item ADHD scale with three subscales: ADHD combined type (18 items), ADHD inattentive type (9 items), and ADHD hyperactive/impulsive type (9 items).

6. Hostility Scales

Propensity towards hostile behavior is another important consideration when assessing pathological syndromes and personality disorders. There are three scales:

(1) **Anger**, which is comprised of 15 items concerned with the issues of anger control, temper tantrums, verbal hostility, and physical fights;

(2) **Dangerousness**, which is comprised of 18 items concerned with emotional lability, anger, cruelty, fighting, paranoia, impulsiveness, a history of juvenile delinquency, lack of empathy, stealing, and a lack of remorse.

(3) **Impulsiveness**, which is comprised of 7 items concerned with impulsivity and its facets: recklessness, assertiveness, boldness, quitting a job without thinking about the repercussions, and goal-less travel. The scale has no overlapping items with the Anger scale, and two overlapping items with the Dangerousness scale.

7. Other Clinical/Personality Scales

There are five other clinical scales that may be of interest to clinicians: Depersonalization Disorder, Easily Frustrated, Introversion-Extraversion, Early History of Juvenile Delinquency, and Eccentric/Bizarre Behavior. The Introversion-Extraversion scale has 24 items assessing a

person's inner world orientation (introversion) or outer world orientation (extraversion). The items measure enjoyment of solitary versus social activities and gatherings, desire to please others, public displays of feeling, and desire for attention and praise from others. The single bidimensional scale is interpreted as follows: high scores indicate introversion and low scores indicate extraversion.

8. Critical Items

There are six categories of critical items: (1) Suicidal Ideation/Intention assessed by three items; (2) two items which assess Drug and/or Alcohol Problems; (3) three items which assess Food or Body Issues; (4) six items which assess Sleep Problems; (5) six items which assess Sexuality Problems; and (6) five items which assess bothersome memories, worsening memory, doubts about one's mind, delusions of reference, and visual/auditory hallucinations.

(1) Suicidal Ideation/Intention

There are three critical items in this category:

- 131. I have made more than one suicidal threat or gesture in my life.
- 188. More than once I have hurt myself badly on purpose, like cutting my wrists or smashing my fists against a wall, etc.
- 198. Recently I have felt like killing myself.

(2) Drug and Alcohol

There are two critical items in this category:

- 17. Someone I know thinks I have an alcohol or drug problem.
- 177. I have gotten into trouble because of my drinking or drug problem.

(3) Food and Body Issues

There are three critical items in this category.

- 211. I have a problem with food.
- 214. I have many physical body problems.
- 249. I think my body is defective or inadequate in some way.

(4) Sleep Problems

There are two critical items in this category:

- 200. I am troubled by my dreams (sleep or daydreams).
- 250. I have a sleep problem (nightmares, insomnia, etc.).

(5) Sexuality

There are six critical items in this category:

- 4. I like to look sexy or act sexy.
- 67. I am up tight when people find me sexually attractive.
- 73. I have been very thoughtless in my spending money, or sex, drug use, shoplifting, reckless driving, or binge eating.
- 96. When I go out, I like to look exotic, wild, or dramatic.
- 97. I have never forced anyone to have sex with me.
- 141. I have been sexually faithful to one person for more than one year.
- 151. I question the faithfulness of my spouse or sexual partner.

(6) Other Critical Items

- 14. I think my memory has gotten worse in the past few years.
- 31. I feel like people are talking directly to me or about me on the TV or radio.
- 178. I hear voices or see things that are not really there.

- I think there is something wrong with my mind. I have a memory that bothers me. 180.
- 212.

Professional Qualifications

A PhD level degree is required to score and interpret the CATI. People with a Master's degree in Clinical Psychology and with specific course work in psychopathology, as specified by the American Psychological Association, may be allowed to use the CATI. Any professional who uses the CATI should possess the required knowledge necessary to interpret it. The overall validity of the CATI depends to some extent on the knowledge of its administrators. As with any psychological test, the CATI's scores and interpretations are based on psychological theory and actuarial research. Under no circumstances should the CATI be used by unqualified persons, nor should the CATI report be used in any clinical situation or policy or decision-making process in the absence of solid corroborating data such as behavioral observations, biographical and historical information, clinical interview, current social and personal circumstances of the client, and other psychological test results. Use of the CATI by persons without an extensive clinical background is clearly inappropriate.

The Philosophy of Diagnosis of the CATI

There are two currently popular methods of measuring personality disorders: categorical vs. dimensional. The categorical approach assumes that personality disorders are discrete non-continuous entities. Under this approach, a person is seen as either having or not having a disorder. The DSM-5 is based on a categorical taxonomic approach. The DSM-5 and previous versions specify a list of criteria that a person must meet in order to receive a specific diagnosis. The dimensional approach assumes that personality disorders are at the extreme of a continuous scale of normal personality functioning. The dimensional approach has the potential to provide precise measurement with higher diagnostic reliability (Frances, 1982).

The CATI is based primarily on a dimensional approach. Norms have been established on purportedly normally functioning people, and cut-off scores have been established at one and two standard deviations. The greater a person's score, the more likely he or she would behave in a manner consistent with a personality disorder. It should be noted that a person's score on a dimension may be influenced by environmental factors such as social and/or occupational functioning. In fact, the DSM-5 indicates that a personality disorder diagnosis requires that the person be sufficiently disrupted in social and/or occupational functioning. Therefore, a diagnosis of a personality disorder should be given only after careful examination of other relevant clinical data, and according to DSM-5, after an assessment is made of the extent of social and/or occupational dysfunction in the person's life.

In general, a CATI *T* score (mean = 50, SD = 10) of 60 indicates the high likelihood of the clinical presence of a disorder, although there some risk of a false positive. A CATI *T* score of 70 indicates a much higher likelihood of the presence of a clinical disorder, although if the 70 level is used as a screening criterion, then there is a risk of missing some patients who actually have the disorder (categorically) but will not be included dimensionally. However, the risk of false positives is likely to be very low.

Why all the Attention to Personality Disorders?

With the change to a multiaxial classification system in the 1980 version of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-III), the category of personality disorders received renewed attention. While clinical syndromes were placed on Axis I, the personality disorders were placed on a separate axis, Axis II. This change subtly forced clinicians to examine their patients for personality disorders when they had not necessarily done so in the past. A second major change was that unlike the previous edition of the diagnostic manual, DSM-II (1968), the personality disorders now had specific criteria listed for each disorder. In DSM-II, personality disorders were simply listed with one to three sentence descriptions. In DSM-III the patients had to meet a specified number of the criteria to meet criterion for a disorder. No criterion for a disorder was more important or essential than any other criterion, thus, they were described as polythetic criteria. In 1987 with the publication of DSM-III-R, two new personality disorders were added in the appendix under the heading, "Proposed Diagnostic Categories Needing Further Study" (page 367). They were the Sadistic and Self-Defeating personality disorders, and are included in the CATI scales. In DSM-IV (1994), two additional personality disorders were added to the Appendix, Passive-Aggressive and Depressive, while Sadistic and Self-Defeating were eliminated. In DSM-5 (2013), Passive-Aggressive and Depressive personality disorders were eliminated. However, the reasons for elimination of these and other personality disorders was specious and not soundly psychometrically based, thus, all 14 personality disorders from DSM-III-R and DSM-IV have been retained in the CATI.

Test Administration

The CATI can be administered by paper-and-pencil or patients may take it online at **www.CoolidgeTests.com**. When administered by paper-and-pencil, the patient's answers must be entered by the Mental Health Provider at **www.CoolidgeTests.com**. A patient may be assessed either by completing the CATI directly (self-report version), or through the ratings of another individual who knows the respondent well (significant-other version). The latter has been created to permit an assessment of the patient's behavior by a person familiar with the patient. In the initial use of the significant other version, (Coolidge, Bracken, Taylor, Smith, & Peters, 1985), caretakers of Alzheimer's patients reported on personality change in their patients. The reliability and the validity of the significant-other version have been established in a study of 52 married couples (Coolidge, Burns, & Mooney, 1993).

CATI Test-Taking Guidelines

The following general guidelines should be followed when administering the CATI.

- 1. The respondents should be seated in a quiet, private location, either at the Provider's office, or at home.
- 2. The appropriate materials should be given to the respondent either self-report or the significant-other version or the patient may take the CATI online.
- 3. It is important to establish that the respondent understands the instructions. If there is uncertainty about any point, the issue should be clarified before beginning testing.
- 5. If the respondent has a question about a particular item, the examiner should be careful to answer in such a way as not to influence the respondent's answer.

- 6. If answer sheets are used by the patient, the answer sheets should be carefully inspected to ensure that the respondent's name and all other demographic information is completed, and that there are no excessive omissions in responding to items.
- 7. Completed answer sheets and reports, as well as other CATI materials should be treated as highly confidential and stored in such a way that unauthorized persons do not have access to them.

Standardization and Psychometric Properties of the CATI

Normative Sample

The current CATI norms and scale reliabilities are based on a sample of purportedly normal community-dwelling adults ages 15 to 92. The participants were recruited through college students and consisted of their friends, relatives, and acquaintances. The college students were asked to recruit people whom they deemed normal or psychologically healthy. Specifically they were told not to test anyone who had previously been in jail or prison, anyone previously committed to a mental hospital, or anyone diagnosed with mental retardation.

Sample Size	Total $N = 937$	Men = 359; Women = 578
Age	Mean Age = 29.20 years	Age Range = 15 to 92 years
Ethnicity	White = 89% ; Hispanic = 7%	Black = 2%; Asian = 1%
Education	At least high school or more = 99% ; Some	Bachelor degree or greater =
	college = 70%	8%
Marital Status	Single = 57% ; Married or cohabiting = 39%	Divorced, separated, or
		widowed = 5%

Means, Standard Deviations and Scale Reliabilities for the Normative Sample

Maladjustment Scale

Scale	Mean (SD)	Scale Reliability (α)
Maladjustment	109.96 (20.77)	.92

Personality Disorder Scales

Scale	Mean (SD)	Scale Reliability (α)
Antisocial	79.50 (13.80)	.86
Avoidant	38.00 (8.50)	.80
Borderline	50.40 (9.90)	.80
Dependent	56.80 (10.20)	.87
Depressive	14.00 (3.80)	.75
Histrionic	77.10 (8.60)	.76
Narcissistic	62.90 (9.20)	.74
Obsessive-Compulsive	72.30 (8.20)	.68
Paranoid	41.90 (6.90)	.79
Passive-Aggressive	51.90 (7.50)	.78
Sadistic	29.00 (5.60)	.69
Schizoid	65.40 (8.20)	.73
Schizotypal	42.50 (6.90)	.73
Self-Defeating	42.60 (6.40)	.66

Clinical Syndromes

Scale	Mean (SD)	Scale Reliability (α)
Anxiety	54.90 (11.60)	.89
Depression	41.90 (9.80)	.89
Post-Traumatic Stress	30.20 (7.00)	.81
Psychotic Thinking	18.20 (4.20)	.73
Schizophrenia	85.00 (14.30)	.89
Social Phobia	12.70 (3.40)	.74
Social Withdrawal	31.60 (6.30)	.80

Neuropsychological Syndromes

Scale	Mean (SD)	Scale Reliability (α)
Gen. Neuropsychological Dysfunction	31.80 (8.00)	.83
Language Difficulties	8.30 (2.50)	.74
Memory Problems	13.40 (3.90)	.74
Neurosomatic Symptoms	10.30 (2.90)	.50
Neurocognitive Disorder	55.75 (11.76)	.91
General Executive Dysfunction	31.32 (5.84)	.70

Decision Making Difficulties	14.48 (3.59)	.68
Poor Planning	9.71 (2.59)	.40
Task Completion Difficulties	12.08 (3.03)	.69
Global Working Memory Problems	59.99 (9.73)	.92
Attention-Deficit Hyperactivity Disorder	34.56 (6.98)	.91
Inattention Subtype	15.3 (5.1)	.86
Hyperactive/Impulsive Subtype	16.3 (5.0)	.87

Hostility Scales

Scale	Mean (SD)	Scale Reliability (α)
Anger	30.00 (6.50)	.80
Dangerousness	30.40 (6.20)	.73
Impulsiveness	15.00 (3.60)	.65

Other Clinical Scales

Scale	Mean (SD)	Scale Reliability (α)
Introversion-Extraversion	71.30 (9.40)	.84

Validity Scales

Scale	Mean (SD)	Scale Reliability (α)
Denial-Malingering	175.50 (29.00)	.84

Test-Retest Reliability

In a study by Merwin & Coolidge (1987), 39 college students (mean age = 21.0) completed the CATI during class time. One week later, they were asked to take the test again. They were instructed not to try to "second guess" the experimenters but to take the test under the same instructions that they took it initially, (i.e., try to answer honestly). The test-retest reliabilities were good to excellent for all scales. They ranged from r = .80 to r = .90 with a median r = .86.

Convergent/Concurrent Validity

Since the CATI's inception in 1984, its scales have been shown to have good convergent and concurrent validity with many well established psychological and neuropsychological tests including the Spielberger State-Trait Anxiety Scale, the MMPI Anxiety scale, the Beck Depression Inventory, the MMPI Depression scale, the Millon Clinical Multiaxial Inventory (MCMI-II; for the CATI personality disorder scales), and some neuropsychological laboratory and paper-and-pencil tests. Please email Professor Coolidge (fredcoolidge@yahoo.com) for details or reprints.

Concordance for the CATI Personality Disorders with the MCMI-II

The following results appeared in the normative study by Coolidge and Merwin (1992). For the CATI, a criterion of one standard deviation above the mean of the normative sample was chosen to mark the presence of a personality disorder. When this standard was applied to the clinical sample and matched to the diagnoses of the clinicians, a 50% concordance rate was obtained (12 of 24 patients). For the MCMI-II, at a base rate of 75 to mark the presence of a personality disorder, a 63% concordance rate was obtained (15 of 24 patients). However, the higher

concordance rate of the MCMI-II was apparently attained at the cost of a higher false positive rate. According to the clinicians, the patients averaged 1.2 primary diagnoses per person. The MCMI-II diagnosed an average of 3.4 primary diagnoses (greater than or equal to a base rate of 75) per patient while the CATI averaged 2.8 diagnoses (greater than or equal to one standard deviation above the mean) per patient. For the 15 patients who were diagnosed the same by the clinicians and the MCMI-II, the average primary diagnoses per patient was 4.7 on the MCMI-II. The CATI identified 8 of the 24 clinician-diagnosed patients as having no personality disorders (i.e., none had any scales one standard deviation above the mean). The MCMI-II identified three patients as having no personality disorders. When this same criterion was applied to the 24 matched control subjects, 12 subjects had one or more elevated scales, and six subjects had two or more elevated scales.

Composition of CATI Scales and their Items

Validity

Denial-Malingering	2, 4, 5, 10, 12, 13, 14, 15, 16,
	17, 18, 20, 21, 22, 24, 27, 31,
	32, 33, 34, 36, 38, 40, 42, 44,
	46, 47, 50, 51, 52, 55, 56, 58,
	61, 62, 68, 70, 71, 76, 77, 78,
	79, 80, 81, 85, 88, 89, 90, 92,
	93, 95, 98, 99, 100, 104, 105,
	106, 108, 110, 114, 116, 118,
	121, 122, 125, 126, 127, 128,
	129, 131, 132, 133, 136, 139,
	143, 147, 151, 154, 156, 161,
	163, 164, 167, 170, 173, 174,
	177, 178, 180, 182, 186, 187,
	188, 190, 194, 198, 200

Scale Item #

Overall Maladjustment

Maladjustment	5, 10, 12, 13, 15, 17, 20, 21, 23, 27, 31, 33,
5	38, 44, 50, 52, 55, 58, 62, 68, 70, 73, 76, 80,
	85, 88, 89, 90, 92, 97, 99, 100, 105, 109, 114,
	116, 118, 122, 127, 128, 131, 133, 136, 139,
	143, 151, 154, 161, 164, 167, 177, 178, 180,
	182, 188, 194, 198, 200, 213, 220

Personality Disorder Scales

Scale Item #

Antisocial	2, 5, r8, 10, 13, 20, 27, r29,
	r30, r34, r35, 40, 42, 46,
	51, r59, 62, r63, 70, 71, 73,
	76, r82, 85, 89, 92, 93, 95,
	r97, 101, r103,
	118, r120, 127, r135, r138,
	r141, 143, r144, r145, r148,
	177, r179,
	182, 186

Scale Item #

Avoidant	r1, 7, 11, 12, r37, r65, 69, 72,
	r94, 104, r115, r119, 128,
	139, r142, 187, 201, 225

Scale Item

Borderline	r6, 10, 13, 44, 55, 56, 62, 64,
	73, r77, 105, r108, 110,
	131, 133, 143, r150, 157,
	r175, r179, 188, 198, 220

Scale Item

Dependent	12, 16, r19, 21,r22, 32, 36,
· · · · ·	12, 16, r19, 21,r22, 32, 36, r45, r49, 56, 68, 69, r74, 78, 81, 86, r107, 110, 122, 135, r142, 148, r153, 158, 187,
	81 86 r107 110 122 135
	r_{142} 140 r_{152} 150 107
	190, 203

Scale Item

Depressive	202, 205, 207, 209, 215, 217,
	221

Histrionic	1, 4, r6, r15, 36, 37, 64, r67,
	75, r77, 80, r82, r83, 94,

96, 105, r108, 119, 123, 129,
140, 157, 158, 164, 170, 174,
176, 193, 208, 210

Obsessive-Compulsive	12, 15, 24, 34, 38, 41, 53, 60, r73, 87, r91, r107, 108, 111, r115, 130, 135, r140, 166, 174, 189, 190, 191, 192, 197, 204, 209, 215,
	111, r115, 130, 135, r140,
	166, 174, 189, 190, 191,
	192, 197, 204, 209, 215,
	224, r159

Scale Item

Paranoid	r3, r9, 19, r22, r25, 27, 43, 50,
	52, r57, 61, 77, 88, r102,
	r112, r123, 125, 136, 151,
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Scale Item

r22, 27, r28, r34, 38, r48, 58, 86, 90, r107, r113, r115, r120, 126, 137, 152, r160, 167,
181, 190, 219, 222, 223

Scale Item #

Sadistic	18, r30, 45, 46 , r63, 70, 85,
	92, 114, 118, 127, r138, r153,
	161, 167, 182, 186

Scale Item

Self-Defeating	3, 13, r25, r26, 29, 33, 38, 72,
	89, 98, 111, 117, 122, 130,
	152, r155, 159, 162, 168,
	r172, 181

Schizotypal	r1, r3, 23, 31, r65, 66, r94, 99, r102, 116, r123, 128, 129, 139, 154, 169, 170, 178, 183, 184, 194, 195
	Scale Item #

Schizoid	r1, 23, 93, 100, 108, 115, 128,
	139, 224

Clinical Syndromes

Scale Item

Anxiety	r9, r11, r13, 21, 25, 33, 43,
	44, 50, 55, 68, 72, 78, 86,
	100, 111, r122, 125, 129, 137,
	139, r148, r150, 171, 180,
	187, 197, 200

Scale Item

Depression	r6, 7, 21, r26, 44, 52, 55, 68,
	79, 86,r94, 98, 100, 128, 130,
	131, 139, r150, r175, 180,
	188, 197, 198, 200

Scale Item

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Schizophrenia	r9, 14, 21, r25, r26, 31, 33,
-	r37, 43, 44, r48, 50, 52, 62,
	68, 85, 88, 99, 100, r102, 109,
	114, 116, 124, 125, 128, 129,
	139,143, 152, 162, 163, 168,
	169, 170, 177, 178, 180, 184,
	185, 188, 194, 195, 197, 200

Psychotic Thinking	31, 52, 79, 88, 125, 169, 170,
	178, 180, 188, 194, 220

Posttraumatic Stress Disorder	r6, r9, 15, 27, 44, r82, 105,
	r120, 139, 163, r175, 200,
	212, 213

Scale Item

Social Phobia r1, 7, 11, r37, 72, 104

Scale Item

Social Withdrawal	r1, 15, 23, r37, r56, r65, 72, 100, 104, 108, r123, 128, 139,
	r176, r193

Scale Item

Posttraumatic Stress Disorder	227, 228, 229, 230, 231, 232,
	233, 234, 235, 236, 237, 238,
	239, 240, 241, 242, 243, 244

Neuropsychological Syndromes

Scale Item

General Neuropsychological	14, 47, 79, 106, 121, 126,
Dysfunction	129, 132, 147, 156, 163, 169,
	170, 173, 180, 199, 216, 218

Scale Item #

Language Difficulties	47, 79, 106, 129, 170
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Scale Item

Memory Problems	14, 121, 126, 132, 156, 163, 216

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Nourse $matic Distribution = 147, 160, 172, 180, 100, 214, 219$		
Neurosoniauc Problems 147, 109, 175, 180, 199, 214, 218	Neurosomatic Problems	147, 169, 173, 180, 199, 214, 218

Neurocognitive Disorder	14, 16, 47, 21, 24, r28, 32, 36, 38, r49, 60, r74,
	79, 106, r107, 121, 126, 129, 132, 147, 156, 163,
	169, 170, 173, 180, 190, 191, 199, 216, 218

Executive Dysfunctions of the Frontal Lobe

Scale Item #

Executive Dysfunctions of	16, 21, 24, r28, 32, 36, 38, r41, r49, r53, 60,
the Frontal Lobes	r74, r107, r189, 190, 191

Scale Item #

Decision Making Difficulties	16, 21, 32, 36, r49, r74, r107, 190
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Scale Item #

Poor Planning r28, r41, r53, r189

Scale Item #

	Task Completion Difficulties	24, r28, 38, 60, 190, 191
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Global Working Memory

Scale Item #

Global Working Memory	14, 16, 21, 32, 36, 38, 47, 79, 106, 121, 126,
Problems	129, 132, 147, 156, 163, 170, 173, 190, 191,
	216, r28, r41, r49, r53, r74, r107, r189, 245,
	246, 247, 248

Attention-Deficit Hyperactivity Disorder

Scale Item #

Attention-Deficit	227, 228, 229, 230, 231, 232, 233, 234, 235, 236,
Hyperactivity Disorder	237, 238, 239, 240, 241, 242, 243, 244

Inattention subtype	227, 228, 229, 230, 231, 232, 233, 234, 235
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Hyperactive/Impulsive	236, 237, 238, 239, 240, 241, 242, 243, 244
subtype	

Other Clinical Scales

Early Juvenile Delinquency	5, 18, 40, 46, r59, 70, 76, 95

Scale Item

Scale Item #

Eccentric/Bizarre Behavior	116, 154, 170, 195

Scale Item

Depersonalization	44, 78, r175, 180, 213

Scale Item #

Easily Frustrated	82, 120, 174

Scale Item #

Introversion-Extroversion	1, 3, 4, r7, r11, r15, r23, 37,
	65, r67, r69, r72, r78, r86, 96,
	r104, r110, 119, 123, r128,
	r139, 140, 176, r187, 193

Hostility Scales

Scale Item

Dangerousness	r6, 27, r30, 42, 50, 73, 76, 85, 89, r97, r102,
	r103, 114, r138, 142, r179, 182, 194

Scale Item

Anger	10, r22, 27, 42, 58, r82, 89, r112,
	r120,133, 136, 143, 174, r179, 188

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References and Relevant Studies

- American Psychiatric Association. (1968). *Diagnostic and Statistical Manual of Mental Disorders (2nd ed)*. Washington, DC: Author.
- American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders (3rd ed.)*. Washington, DC: Author.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed. re.). Washington, DC: Author.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.); DSM-I. Washington, DC: Author.
- American Psychiatric Association. (200). *Diagnostic and statistical manual of mental disorders* (4th ed.Text-Re ised); DSM-I-TR. Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.); DSM-5. Washington, DC: Author.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.
- Binder, L. M. (1986). Persisting symptoms after mild head injury: A re iew of postconcussi e syndrome. *Journal of Clinical and Experimental Neuropsychology*, 8, 323-346.
- Coolidge, F. L. (1984). Coolidge Axis II In entory. U.S. Copyright TXU-026, Washington, D.C.
- Coolidge, F. L., Bracken, D. D., Taylor, L. R., Smith, K., & Peters, B. (1985). Personality disorders in Alzheimer's disease: A hierarchical cluster analysis approach. *Journal of Clinical and Experimental Neuropsychology*, 7, 616.
- Coolidge, F. L., Burns, E. M., & Mooney, J. A. (1995). Reliability of observer ratings in the assessment of personality disorders: A preliminary study. *Journal of Clinical Psychology*, *51*, 22-28.
- Coolidge, F. L., Burns, E. M., & Mull, C. E. (1992). Personality disorders in the elderly. *Clinical Gerontologist*, 12, 41-55.
- Coolidge, F. L., & Griego, J. A. (1995). Executive functions of the frontal lobes: Psychometric properties of a self-rating scale. *Psychological Reports*, 77, 24-26.
- Coolidge, F. L., & Merwin, M. M. (April, 1989). Self-assessment of the cogniti e and emotional sequelae of brain damage. Paper presented at the meeting of the Western Psychological Association, Reno, N.
- Coolidge, F. L. & Merwin, M. M. (1992). Reliability and alidity of the Coolidge Axis II In entory: A new in entory for the assessment of personality disorders. *Journal of Personality Assessment, 59*, 223-238.
- Coolidge, F. L., Merwin, M. M., Nathan, J. H., & Schmidt, M. M. (1996, June). Assessment of neurobeha ioral symptoms after traumatic brain injury. *Indian Journal of Psychological Issues*, . 4, 1-9.
- Coolidge, F. L., Merwin, M. M., & Philbrick, P. B. (No., 1989). alidation of a self-report, brain dysfunction scale of the Coolidge Axis II In entory. Paper presented at the meeting of the National Academy of Neuropsychologists, Washington, DC. (title only)
- Coolidge, F. L., Segal, C. L., Pointer, J. C., Knaus, E. A., Yamazak, T. G., & Silberman, C. S. (in press). Personality disorders in elderly inpatients with chronic mental illness. *Journal of Clinical Geropsychology*
- Costanzo, R. M., & Becker, D. P. (1986). Smell and taste disorders in head injury and neurosurgery patients. In H. L. Meiselman & R. S. Ri lin (Eds.), *Clinical Measurement of Taste and Smell* (pp.565-578). New York: Macmillan.

- Cronbach, L. J. (1951). Coefficient alpha and the internal structures of tests. Psychometrika, 16, 297-334.
- Ewing-Cobbs, L., Le in, H. S., Eisenberg H. M., & Fletcher, J. M. (1987). Language functions following closed-head injury in children and adolescents. *Journal of Clinical and Experimental Neuropsychology*, 9, 575-592.
- Frances, A. (1982). Dimensional and categorical systems of personality diagnosis: A comparison. *Comprehensi e Psychiatry*, 23, 516-527.
- Gasparrini, W. G., Satz, P., Heilman, K., & Coolidge, F. L. (1978). Hemispheric asymmetries of affecti e processing as determined by the Minnesota Multiphasic Personality In entory. *Journal of Neurology, Neurosurgery, and Psychiatry*, *41*, 470-473.
- Heilman, K. M., Saffran, E. & Geschwind, N. (1971). Closed head trauma and aphasia. *Journal* of Neurology, Neurosurgery and Psychiatry, 34, 265-269.
- Hosman, P. A. (1989). Con ergent alidity of the Spielberger Anxiety Scale, the MMPI anxiety scale, and the Coolidge Axis II In entory. Unpublished honor's thesis, Uni ersity of Colorado, Colorado Springs, CO.
- Lezak, M.D. (1993). Newer contributions to the neuropsychological assessment of executi e functions. *Journal of Head Trauma Rehabilitation*, 8, 24-31.
- Lezak, M.D. (1982). The problem of assessing executi e functions. *International Journal of Psychology*, *17*, 281-297.
- Lezak, M.D. (1983). Neuropsychological Assessment. New York: Oxford Uni ersity Press.
- Lezak, M.D. (1987). Relationships between personality disorders, social disturbances, and physical disability following traumatic brain injury. *Journal of Head Trauma Rehabilitation*, *2*, 57-69.
- Lucero, D. L. (1989). The construction and alidation of a depression scale for the CATI. Unpublished honor's thesis, Uni ersity of Colorado, Colorado Springs, CO.
- Luria, A. R. (1966). Higher cortical functions in man. New York: Plenum.
- McGlynn, S. M., & Schacter, D. L. (1989). Unawareness of deficits in neuropsychological syndromes. *Journal of Clinical and Experimental Neuropsychology*, 11, 143-205.
- Mellor, S. (1987). Self-other agreement in personality ratings by committed and uncommitted work partners. *Perceptual and Motor Skills*, 63, 1295-1299.
- Melisop, G., arghese, F., Joshua, S., & Hicks, A. (1982). The reliability of Axis II of DSM-III. *American Journal of Psychiatry*, 139, 1360-1361.
- Merikangas, K. R., & Weissman, M. M. (1986). Epidemiology of DSM-III Axis II Personality Disorders. In A. J. Frances & R. B. Hales (Eds.), *American Psychiatry Association: Annual Re iew: ol. 5. Psychiatry Update Series*. Washington, DC: American Psychiatric Press.
- Merwin, M. M., & Coolidge, F. L. (March, 1987). Coolidge Axis Two In entory scale reliabilities. Paper presented to the meeting of the Colorado Psychological Association, Den er, CO.
- Merwin, M. M., & Coolidge, F. L. (No., 1989). Factor analysis of a self-report in entory for the assessment of brain dysfunction. Paper presented to the meeting of the Colorado Psychological Association, Den er, CO.
- Millon, T. (1977). *Millon Clinical Multiaxial In entory*. Minneapolis: National Computer Systems
- Millon, T. (1985). The MCMI pro ides a good assessment of DSM-III disorders: The MCMI-II will pro e e en better. *Journal of Personality Assessment*, 49, 379-391.

- Millon, T. (1987). *Millon Clinical Multiaxial In entory-II*. Manual. Minneapolis: National Computer Systems.
- Mitton, N. M. (1989). A scale of dissimulation on the CATI: Reliability and alidity. Unpublished master's thesis, Uni ersity of Colorado, Colorado Springs, CO.
- Parker, R. S. (1990). *Traumatic Brain Injury and Neuropsychological Impairment*. New York: Springer- erlag.
- Piersma, H. L. (1986). The factor structure of the Millon clinical multiaxial in entory (MCMI) for psychiatric inpatients. *Journal of Personality Assessment, 50,* 587-594.
- Spielberger, C. D. (1983). *Manual for the State-Trait Anxiety In entory*. Palo Alto, CA: Consulting Psychologists Press, Inc.
- Spitzer, R. L., Forman, J. B. W., & Nee, J. (1979). DSM-III field trials: I. Initial interrater diagnostic reliability. *American Journal of Psychiatry*, 136, 815-817.
- Welsh, M. C., Pennington, B. F., & Grossier, D. (1991). A normati e de elopmental study of executi e functions: A window on prefrontal function in children. *De elopmental Neuropsychology*, 7, 131-149.
- Widiger, T. A., Williams, J. B. W., Spitzer, R. L., & Francis, A. (1985). The MCMI as a measure of DSM-III. *Journal of Personality Assessment*, 49, 366-378.