**Basic Description**

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The manual and coding form can be obtained free of charge from the website. However, the manual asks that those who wish to obtain permission to use the measure contact Melanie Buddin Lyons.

**E-mail:** Mlyons405@aol.com

**Website:** [http://www.buddinpraed.org](http://www.buddinpraed.org)

**Cost per copy (in US $):** $0.00

**Copyright:** Yes

**Description:**

The CANS-MH provides a comprehensive assessment of the type and severity of clinical and psychosocial factors that may impact treatment decisions and outcomes. It is part of the Child and Adolescent Needs and Strengths (CANS) series of decision support tools, with different versions of the CANS tailored to the needs of specific youth populations (see altered versions).

The CANS-MH is designed to affect clinical decision making with the intensity of treatment indicated by the number and severity of presenting risk factors. The measure also assesses for strengths. The CANS-MH can be used either as a prospective assessment tool during treatment planning or as a retrospective assessment tool to review existing information (e.g., chart reviews) for quality assurance monitoring or system planning.

Items can be coded or completed by mental health personnel.
Theoretical Orientation
Summary: Not available.

Domains Assessed:

<table>
<thead>
<tr>
<th>Number</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>General symptomatology (child)</td>
</tr>
<tr>
<td>2.</td>
<td>Risk Behaviors (child)</td>
</tr>
<tr>
<td>3.</td>
<td>Developmental functioning (child)</td>
</tr>
<tr>
<td>4.</td>
<td>Personal / interpersonal functioning (child)</td>
</tr>
<tr>
<td>5.</td>
<td>Family functioning</td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
</tbody>
</table>

Languages Available: English, Portuguese, Spanish

Age Range: 0.00 - 18.0
# of Items: 43
Time to Complete (min): 10
Time to Score (min): 5
Periodicity: unknown
Response Format: 4-point scale. Anchors are given for each point in a scale.

Strengths are rated in the opposite manner so that in all cases a low rating is positive, and a higher rating is indicative of a problem and a need for action.

In general the rating for scales is as follows:
0=no evidence and/or no need for action
1=mild degree and/or need for watchful waiting to see if action is needed
2=moderate degree and/or need for action
3=severe or profound degree and/or need for immediate or intensive action
U=unknown but indicates a need for more information

Materials Needed: Paper and pencil, Computer, Video equipment, Testing stimuli, Physiological equipment, Other
Material Notes: Manual and instrument can be obtained free of charge from the website.

Sample Items:
Domains | Scale | Sample Items
--- | --- | ---
Problem Presentation | Psychosis | 0 (Indicates a child with no evidence of thought disturbance. Both thought processes and content are within normal range.)
| | | 1 (Indicates a child with evidence of mild disruption in thought processes or content. The child may be...
somewhat tangential in speech or evidence somewhat illogical thinking (age inappropriate). This also includes children with a history of hallucinations but none currently. The category would be used for children who are below the threshold for one of the DSM-IV diagnoses listed above.

2 (Indicates a child with evidence of moderate disturbance in thought processes or content. The child may be somewhat delusional or have brief, intermittent hallucinations. The child's speech may be at times quite tangential or illogical. This level would be used for children who meet the diagnostic criteria for one of the disorders listed above.)

3 (Indicates a child with a severe psychotic disorder. Symptoms are dangerous to the child or others.)

<table>
<thead>
<tr>
<th>Risk Behaviors</th>
<th>Danger to Self</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functioning</td>
<td>Intellectual/Developmental</td>
</tr>
<tr>
<td>Care Intensity &amp; Organization</td>
<td>Monitoring</td>
</tr>
<tr>
<td>Family/Caregiver Needs and Strengths</td>
<td>Physical</td>
</tr>
<tr>
<td>Strengths</td>
<td>Family</td>
</tr>
</tbody>
</table>

Notes (additional scales and domains):

For each domain, items also assess the following:

1. PROBLEM PRESENTATION: Attention Deficit/Impulse Control, Depression/Anxiety, Oppositional Behavior, Antisocial Behavior, Substance Abuse, Adjustment to Trauma, Attachment, Situational Consistency of Problems, Temporal Consistency of Problems

2. RISK BEHAVIORS: Danger to others, Runaway, Sexually Abusive Behavior, Social Behavior, Crime and Delinquency

3. FUNCTIONING: Physical/Medical, School Achievement, Intellectual Development, School Behavior, School Attendance, Sexual Development

4. CARE INTENSITY AND ORGANIZATION: Treatment, Transportation, and Service Permanence

5. FAMILY/CAREGIVER NEEDS AND STRENGTHS: Supervision, Involvement with Care, Knowledge, Organization, Residential Stability, Resources, Safety

### Information Provided: (check all that apply)

<table>
<thead>
<tr>
<th>Training</th>
<th>Diagnostic information DSM-III</th>
<th>Diagnostic information DSM-IV</th>
<th>Strengths</th>
<th>Areas of concerns/risks</th>
<th>Program evaluation information</th>
<th>Continuous assessment</th>
<th>Raw Scores</th>
<th>Standard Scores</th>
<th>Percentile</th>
<th>Graph (e.g., of elevated scale)</th>
<th>Dichotomous assessment</th>
<th>Clinical friendly output</th>
<th>Written feedback</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Training

**Training to Administer:**

- **None**
- **Via manual/video**
  - **Yes**
    - **Must be a psychologist**
    - **Training by experienced clinician (<4 hours)**
    - **Yes**
      - **Prior experience psych testing & interpretation**
      - **Training by experienced clinician (≥4 hours)**

**Training to Interpret:**

- **None**
- **Via manual/video**
  - **Yes**
    - **Must be a psychologist**
    - **Training by experienced clinician (<4 hours)**
    - **Yes**
      - **Prior experience psych testing & interpretation**
      - **Training by experienced clinician (≥4 hours)**

**Training Notes:**

The manual (p. 3) states that “a bachelor's degree with some training or experience with mental health is needed to use the CANS-MH reliably after training.”

Formal training and ongoing monitoring ensure the development and maintenance of good reliability. The formal training takes about four hours and consists of an overview, a review of the anchors, and at least two practice vignettes. Most individuals develop reliability above 0.70 with this training format.

A certified trainer approach is being implemented to ensure that a sufficient number of professionals are available to provide good training in the use of these tools. Information regarding training is available on the website.

### Parallel or Alternate Forms

- **Parallel Forms?**
  - **No**
- **Alternate Forms:**
  - **No**
- **Forms for Different Ages:**
  - **Yes**
- **If so, are forms comparable:**
  - **Yes**
- **Any Altered Versions of Measure:**
  - **Yes**
- **Describe:**
  - There are multiple versions of the CANS, which are available from http://www.buddinpraed.org/. The different versions are tailored to the needs of specific populations of youth. The CANS-TEA is a version specific to children who have experienced trauma. It is also reviewed in this database.

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**CHILD & ADOLESCENT NEEDS AND STRENGTHS (CANS-CW):** An Information Integration Tool for Children and Adolescents with Mental Health Challenges

NCTSN Measure Review Database

www.NCTSN.org
Tool for Children and Adolescents with Child Welfare Involvement

2. CHILD & ADOLESCENT NEEDS AND STRENGTHS (CANS-0 to 4): An Information Integration Tool for Early Development

3. CHILD & ADOLESCENT NEEDS AND STRENGTHS (CANS-DD): An Information Integration Tool for Children and Adolescents with Developmental Disabilities and Their Families

4. CHILD & ADOLESCENT NEEDS AND STRENGTHS (CANS-JJ): For At-Risk and Delinquent Children and Adolescents

5. CHILD & ADOLESCENT NEEDS AND STRENGTHS (CANS-SD): An Information Integration Tool for Children and Adolescents with Issues of Sexual Development

6. CHILD & ADOLESCENT NEEDS AND STRENGTHS-TRAUMA EXPOSURE AND ADAPTATION VERSION (CANS-TEA): An Information Integration Tool for Children and Adolescents Exposed to Traumatic Events

Population Used to Develop Measure
Not available.

Psychometrics
Global Rating (scale based on Hudall Stamm, 1996):
Basic properties established by author(s)
Norms: Yes

<table>
<thead>
<tr>
<th>For separate age groups:</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>For clinical populations:</td>
<td></td>
</tr>
<tr>
<td>Separate for men and women:</td>
<td></td>
</tr>
<tr>
<td>For other demographic groups:</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Norms are available from the foundation at www.buddinpraed.org.

Clinical Cutoffs: No
Specify Cutoffs: 
Used in Major Studies: Yes
Specify Studies: Lyons et al. (2004)
The CANS/CANS-MH is a unique measure in that items are not intended to be summed or factored together. Each item represents a potential target of clinical intervention. As such, traditional psychometrics including internal consistency and factorial validity may not be applicable. Nevertheless, studies have examined psychometrics of CANS ratings, including interrater reliability.

**INTERRATER**
The most detailed CANS-MH interrater reliability study, Anderson & Huffine (2003), examined interrater reliability (intraclass correlations) with 60 randomly selected cases (children aged 7 days to 17.5 years). Over half of all coding differences did not affect treatment plan (e.g., were a difference of coding 0 vs. 1, or 2 vs. 3). Reliability was reported as follows:

1. Caseworkers and Researchers: Total Scale (.81), Problem Presentation (.72), Risk Behaviors (.76), Functioning (.85), Care Intensity and Organization (.75), Caregiver Capacity (.75), Strengths (.77).

2. Pairs of Researchers: Total Scale (.85), Problem Presentation (.84), Risk Behaviors (.82), Functioning (.85), Care Intensity and Organization (.77), Caregiver Capacity (.68), Strengths (.84).

3. Reliability between pairs of researchers is what is reported in the table, as these are the numbers that are most comparable with studies involving other measures.

4. The manual reports that for clinical vignettes, the average reliability across studies is .75. For case reviews or current cases, the average reliability is .85. Details are not given regarding the studies or the statistics used to assess reliability.

5. Rawal, Lyons, MacIntyre, & Hunter (2004) reported interrater reliabilities of .67-.87 across all raters in study using residential treatment data from four states.

6. Lyons, Griffin, Quintenz, Jenuwine, & Shasha (2003) reported the reliability of provider rated CANS-MH as .80 using audit reliability measures.

7. Lyons, MacIntyre, Lee, Carpinello, Zuber, & Fazio (2004) reported weighted interrater reliability across all reviewers and all items as .86.

**Content Validity:**
In terms of validity, the CANS correlates with other measures of psychopathology, functioning, and strengths in children. Also, the CANS has been shown to distinguish levels of care and intensity of services. Finally, as a decision support, the CANS has been shown to agree with an expert panel of clinicians 81% of the time. See www.buddinpraed.org.
### Construct Validity: (check all that apply)

<table>
<thead>
<tr>
<th>Validity Type</th>
<th>Not known</th>
<th>Not found</th>
<th>Nonclinical Samples</th>
<th>Clinical Samples</th>
<th>Diverse Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convergent/Concurrent</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discriminant</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitive to Change</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Intervention Effects</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Longitudinal/Maturation Effects</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitive to Theoretically Distinct Groups</td>
<td></td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Factorial Validity</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** Lyons et al. (2003) had providers complete the CANS-MH for a sample of 314 detained youth aged 10-17, 68% Male, 32% Female; 57% White, 34% African American, 5% Hispanic. Average CANS-MH scores showed improvement after three months of treatment. Declines in CAFAS scores and reduced recidivism provide evidence of convergent validity. In addition, youth who were arrested had significantly higher CANS-MH scores than those not rearrested.

### Criterion Validity: (check all that apply)

**Measures used as criterion:**

<table>
<thead>
<tr>
<th>Predictive Validity:</th>
<th>Not known</th>
<th>Not found</th>
<th>Nonclinical Samples</th>
<th>Clinical Samples</th>
<th>Diverse Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Postdictive Validity:</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sensitivity Rate(s):**

**Specificity Rate(s):**

**Positive Predictive Power:**

**Negative Predictive Power:**

**Notes:**

**Limitations of Psychometrics and Other Comments Regarding Psychometrics:**

The test-retest reliability of the CANS-MH has not yet been established. Although the interrater reliability appears to be acceptable, those interested in using the measure should note that reliability training procedures include approximately 4 hours of formal training, plus a bachelor’s degree and some training in mental health.

Although the measure is based on the Childhood Severity of Psychiatric Illness (CSPI), which has evidence of validity, there is little published data on the validity of CANS-MH.

### Consumer Satisfaction

No information available.
### Languages Other than English

<table>
<thead>
<tr>
<th>Language</th>
<th>Translation Quality (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 = Has been translated</td>
</tr>
<tr>
<td></td>
<td>2 = Has been translated and back translated - translation appears good and valid.</td>
</tr>
<tr>
<td></td>
<td>3 = Measure has been found to be reliable with this language group.</td>
</tr>
<tr>
<td></td>
<td>4 = Psychometric properties overall appear to be good for this language group.</td>
</tr>
<tr>
<td></td>
<td>5 = Factor structure is similar for this language group as it is for the development group.</td>
</tr>
<tr>
<td></td>
<td>6 = Norms are available for this language group.</td>
</tr>
<tr>
<td></td>
<td>7 = Measure was developed for this language group.</td>
</tr>
<tr>
<td>1. Spanish</td>
<td>Yes</td>
</tr>
<tr>
<td>2. Portuguese</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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### Use with Trauma Populations

Use with Trauma Populations

<table>
<thead>
<tr>
<th>Populations for which measure has demonstrated evidence of reliability and validity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical abuse</td>
</tr>
<tr>
<td>Sexual abuse</td>
</tr>
<tr>
<td>Neglect</td>
</tr>
<tr>
<td>Domestic Violence</td>
</tr>
<tr>
<td>Community violence</td>
</tr>
<tr>
<td>Medical trauma</td>
</tr>
<tr>
<td>Natural disaster</td>
</tr>
<tr>
<td>Accidents</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Imprisonment</td>
</tr>
<tr>
<td>Witness death</td>
</tr>
<tr>
<td>Terrorism</td>
</tr>
<tr>
<td>Immigration related trauma</td>
</tr>
<tr>
<td>Kidnapping/hostage</td>
</tr>
<tr>
<td>Traumatic loss (death)</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

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### Use with Diverse Populations

Use with Diverse Populations

<table>
<thead>
<tr>
<th>USE WITH DIVERSE POPULATIONS RATING SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Measure is known (personal communication, conference presentation) to have been used with members of this group.</td>
</tr>
<tr>
<td>2. Studies in peer-reviewed journals have included members of this group who have completed the measure.</td>
</tr>
<tr>
<td>3. Measures have been found to be reliable with this group.</td>
</tr>
<tr>
<td>4. Psychometric properties well established with this group.</td>
</tr>
<tr>
<td>5. Norms are available for this group (or norms include a significant proportion of individuals from this group)</td>
</tr>
<tr>
<td>6. Measure was developed specifically for this group.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Population Type:</th>
<th>Degree of Usage: (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Developmental disability</td>
<td>1  2  3  4  5  6</td>
</tr>
<tr>
<td>2. Disabilities</td>
<td></td>
</tr>
<tr>
<td>3. Lower socio-economic status</td>
<td></td>
</tr>
<tr>
<td>4. Rural populations</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
</tbody>
</table>

Notes (including other diverse populations):
1. The CANS is a great tool for facilitating the exchange of information about patients because it provides a common language regarding an array of important areas of symptomatology and functioning.

2. Item anchors are relevant to clinical decision-making.

3. Information provided can be closely linked to treatment planning.

4. The item incorporates a solid focus on strengths, consistent with strength-based treatment planning guidelines.

5. The measure makes conceptual sense to clinicians.

Pros:

1. There are few published articles examining the psychometrics of the CANS-MH. What exists is promising, but more research is needed on the test-retest reliability and validity. It is, however, important to note that the parent measure, the Childhood Severity of Psychiatric Illness, has been used in 12 additional published articles.

2. Although items within dimensions can be combined to create continuous scores that can be used to assess outcomes, if a researcher or clinician is targeting a specific problem area (e.g., Depression/Anxiety), for this purpose, the measure might have restricted statistical power because individual problems are assessed using a 3-point scale. The CANS-MH could be used to screen for a problem in a specific area with a positive screen, followed by administration of an instrument that specifically assesses that area. Nevertheless, the CANS-MH would provide a measure of clinically significant change.

Cons:
The reference for the manual is:

A PsychInfo literature search (6/05) of "Child and Adolescent Needs and Strengths" or "CANS" anywhere revealed that the measure has been referenced in 10 peer-reviewed journal articles.

It should also be noted that the Childhood Severity of Psychiatric Illness (CSPI), the measure upon which the CANS is based, has been referenced in 12 peer-reviewed journals.

A Google search and listing from the measure’s website, also shows that the measure is being used by major mental health projects in multiple states including: Alaska, California, Florida, Illinois, Pennsylvania, and New York. This is also an indication of the use of this measure.

A PsychInfo literature search (6/05) of “Child and Adolescent Needs and Strengths” or “CANS” anywhere revealed that the measure has been referenced in 0 conferences and 0 dissertations.

**Number of Published References:**
(based on author provided information and a PsychInfo search, not including dissertations) 10

**Number of Unpublished References:**
(based on a PsychInfo search of unpublished doctoral dissertations) 0

**Unpublished References:**

**Author Comments:**
The author provided feedback, which was integrated into the review.

**Citation for Review:**
Landon Poppleton

**Editor of Review:**
Chandra Ghosh Ippen, Ph.D., Madhur Kulkarni, M.S.

**Last Updated:**
7/11/2005

**PDF Available:**
yes

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