The Assessment of Impairment with the Rating Scale of Impairment™ (RSI™): Introduction and Application

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The Mixed Blessings of Something New

The Future

The Mixed Blessings of Something New
We Are the First Congress on Defining Mental Illness (circa 1820)

How Shall We Understand, Define and Categorize Mental Illness?

• By etiology or cause?
• By emotions, behaviors and thoughts?
• By impaired function in activities of life?

The Assessment of Impairment

Goals For Today:
• Review the conceptual basis of Impairment.
• Define Impairment.
• Discuss the relationship of Impairment to symptoms and diagnoses.
• Review data from the largest epidemiologic sample assessing impairment in children.
• Review the Rating Scale of Impairment as a means of assessing impairment in a comprehensive evaluation and as a treatment monitoring tool.
What is the Goal of a Comprehensive Evaluation?

• Identify and define symptoms?
• Identify and define strengths and weaknesses?
• Appreciate the relationship of a set of symptoms to a unitary condition?
• Meet eligibility criteria?
• Define limits of functional impairment to set a baseline for intervention?

Why is the assessment of impairment critical to a comprehensive evaluation?

Why is direct observation (e.g. FuBA) so critical for school based assessment?
An exhaustive review of the literature demonstrates that the relationship between symptoms and functioning remains unexpectedly weak and often bidirectional (McKnight and Kashdan, 2009).

Need

- Clinicians are required to demonstrate the impact psychological and psychiatric diagnoses have on children and adults.
- There is a clear need to measure "impairment" when using the IDEIA, Diagnostic and Statistical Manual of the American Psychiatric Association (DSM) or the International Classification of Diseases (ICD) as a guide to eligibility determination and/or diagnosis.
- The need to measure impairment is increasing.

Given trends demonstrating an increased incidence of mental health and physical symptoms across the population (Castle, Aubert, Verbrugge, Khalid, & Epstein, 2007), it is not unexpected that there is an increasing need to demonstrate functional impairment as part of a diagnostic process for medical, mental health and even educational conditions.
Understanding impairment is by far the most important and greatest challenge facing medical, educational, and mental health care providers today.

BACKGROUND & INTRODUCTION

Questions in Need of Answers to Define Impairment

- There is still no consistent agreement on even the simplest nomenclature issues about impairment (Rapee, et al., 2012).
- As researchers advocate for an expanding appreciation and understanding of impairment in the diagnostic process, progress in clinical practice is slow (Rapee, et al., 2012).
- For example, the DSM-5 Impairment and Disability Assessment Study Group recommended that impairment be viewed as a consequence of a disorder rather than a requisite feature of the disorder itself and that clinical criteria alone should not be used to determine thresholds for diagnosis (DSM-5 Impairment Disability Assessment Group, 2011).
What Does it Mean “to Be Impaired”?

• To be impaired means to be unable to perform whatever daily activities are required.
• But exactly how does impairment relate to symptom count and severity of a specific condition?
• How do symptoms and impairments contribute to disability, handicap and deficits in adaptive functioning?
• What variables within the family, community and broader culture may insulate or contribute to impairment.
• Is impairment an end point or a stop along the way to recovery?

What Does it Mean “to Be Impaired”?

• Some symptoms in an algorithm model are more potent than others in predicting impairment (Vera, et al., 2010).
• At certain ages, gender may differentially affect the expression of some symptoms and the severity of functional impairment.
• Impairment is also very clearly not appreciated on a linear continuum (Baillargeon and Bernier, 2010).

What Does it Mean “to Be Impaired”?

• The relationship of a particular condition to levels of impairment is also not evenly distributed across a bell curve.
• Youth of minority status or parents with limited socioeconomic status may experience much greater severity of impairment despite symptoms that are equal to youth in other social classes (Baillargeon and Bernier, 2010).
• Complicating matters further, is the fact that certain conditions may cause more or less impairment in certain settings. This suggests that context and rater may play a significant role in severity of impairment reported (Watabe, et al., 2014).
The term impairment is used differently by medical, mental health and educational professionals.

What is impairment?

Defining Impairment
Impairment is the reduced ability to meet the demands of life because of a psychological, physical, or cognitive condition.

The prevalence of mental health and physical symptoms are increasing.

It's not surprising that there's a need to demonstrate functional impairment during diagnosis.

Understanding impairment is by far the most important and greatest challenge facing medical, educational, and mental health care providers today.
How shall we define:

- Symptoms?
- Severity?
- Situation?
- Adaptive behavior?
- Disorder?
- Disability?
- Impairment

Defining Impairment

- Webster’s New College Dictionary (2008) defines the word impair as “the state or fact of being impaired,” which means to be weakened or damaged based on the Latin word pejor meaning worse.
- To be impaired means to be unable to perform whatever daily activities are required.
- Impairment has been defined by the AMA as “any physical, mental or behavioral disorder that interferes with the ability to engage safely in any life activity.

Symptoms

- Manifestation of dysfunction
- Complaint
- Presence or absence of a behavior
- Difficulty
- Reflects a condition
- Observation
SYMPTOMS VS. IMPAIRMENT

Impairment is not the same as symptoms

- Symptoms are physical, cognitive or behavioral manifestations of a disorder.
- Impairments are the functional consequences of these symptoms.

In one study 14.2% of a sample of children were significantly impaired without a formal diagnosis.

(Balazs et al., 2013; Wille et al., 2008)

Angold et al., 1999

Severity

- Degree
- Intensity
- Perception
- Frequency
- Suffering
- Duration
Situation

• Context
• Instance
• Set of demands
• Moment to moment experience
• Setting

Adaptive Behavior

• Socially acceptable
• Ability to adjust
• Function
• Functional skill
• Quality of thinking
• Goal directed behavior
• Logic
• Knowing how to

How does impairment differ from adaptive behavior?
IMPAIRMENT VS. ADAPTIVE BEHAVIOR

A skill deficit occurs when a person does not know how to perform an everyday task, whereas a deficit in performance occurs when an individual has acquired a skill, yet does not seem to use it when needed.

(Ditterline & Oakland, 2009)

Thus, while measures of adaptive behavior emphasize the presence of adaptive skills in daily functioning, measures of functional impairment tend to emphasize the outcome of a behavior or the performance of an individual rather than the presence or absence of the skill.

Ditterline & Oakland (2009);
Dumas et al. (2010);
Gleason & Coster (2012)

Adaptive Behavior vs. Impairment

<table>
<thead>
<tr>
<th>Skill</th>
<th>vs.</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you know HOW to do it?</td>
<td>vs.</td>
<td>Do you ACTUALLY do it?</td>
</tr>
</tbody>
</table>
Adaptive Behavior vs. Impairment

Using utensils

Not using utensils to eat

IMPAIRMENT VS. ADAPTIVE BEHAVIOR

- Adaptive behavior is a collection of social, practical and conceptual knowledge needed for daily functioning.
- Main difference is between knowledge and performance.
- Adaptive behavior is often linked with intellectual disability.
- RSI validity studies find minimal relation with intellectual ability.

Disorder

- A political phenomenon
- A collection of symptoms
- A deviation from the norm
- A disease
- A group of symptoms that significantly impairs functioning
- A subjective condition
- A collection of objective signs
Disability

- A perceived inability to perform daily functions
- Persistent
- Legislated
- Sociopolitical
- Mental, physical or emotional
- Cultural

Impairment

- Loss of function
- Specific
- Temporary or permanent
- Midpoint or step towards disability
- Requires accommodations
Conceptual Basis of Impairment

- In Western medicine, the medical model guides diagnosis and treatment in all aspects of medicine, mental health, and to some extent, education.
- The purpose of this model is to identify treatments for diagnoses based on evidence of specific symptoms assumed to suggest problems inherent within one or more organs of the body.
- The medical model has driven research and theory about physical and mental health problems on the basis of causation, symptom relief, and cure and in many cases has been quite successful (e.g., tuberculosis, measles, etc.).

Conceptual Basis of Impairment

- As the fields of medicine, psychology and education have evolved, interest in the degree of impairment an individual may experience in a given situation, regardless of diagnosis, has increased.
- A recent Google search revealed thousands of relevant books and scientific articles addressing impairments caused secondary to physical, mental health and educational conditions.

Conceptual Basis of Impairment

- The American Psychiatric Association in the new DSM-5 (APA, 2013) very heavily emphasizes the role of impairment over and above symptom presentation.
- However, the issue of disability has been complicated and often confused with the severity of a particular condition. There is no doubt that there is a positive correlation between the severity of a condition and consequent disability or impairment but many studies have demonstrated that the relationship is not particularly robust.
- The term “functional impairment” is a concept that easily equates with disability in the World Health Organization’s International Classification of Functioning, Disability and Health (WHO, 2001).
Conceptual Basis of Impairment

- Findings suggest that the lives of individuals who do not meet specific symptom criteria may be just as impaired and disrupted as the lives of individuals who meet various criteria.
- Many who may meet symptom count for a specific diagnosis may not be significantly impaired.
- It is therefore not surprising that in a previous revision of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Test Revision (APA, 2000) a requirement of significant impairment was noted in more than 70% of the disorders listed as a criterion for diagnosis (Lehman, Alexopoulos, Goldman, Jeste, & Üstün, 2002). This requirement has continued in the new DSM-5 (APA, 2013).

Impairment

Impairment can be viewed as the outcome of a risk factor such as a psychological disorder interacting with other variables manifested by a constellation of measurable behaviors.

How is impairment defined?

- The medical community?
- The educational community?
- The mental health community?
- The vocational community?
- The AAMR?
- WHO?
Impairment has been defined by the AMA as “any physical, mental or behavioral disorder” that interferes with the ability to engage safely in daily activities.

Child with a Disability
IDEIA defines this term as follows:

• (a) General (1) Child with a disability means a child evaluated in accordance with §§300.304 through 300.311 as having an intellectual disability**, a hearing impairment (including deafness), a speech or language impairment, a visual impairment (including blindness), a serious emotional disturbance (referred to in this part as “emotional disturbance”), an orthopedic impairment, autism, traumatic brain injury, an other health impairment, a specific learning disability, deaf-blindness, or multiple disabilities, and who, by reason thereof, needs special education and related services.

• (2)(i) Subject to paragraph (a)(2)(ii) of this section, if it is determined, through an appropriate evaluation under §§300.304 through 300.311, that a child has one of the disabilities identified in paragraph (a)(1) of this section, but only needs a related service and not special education, the child is not a child with a disability under this part.

Americans With Disabilities Act
January 05, 2012 ADA Regulations: What is a Mental Impairment?
How can you be sure you’re meeting ADA regulations for workers with mental conditions? Medically speaking, the term “mental illness” describes a plethora of mental and emotional disorders ranging from mild anxiety to more serious conditions that significantly interfere with major life activities such as learning, working, and simply communicating with others. Legally speaking, “mental illness” isn’t quite as easy to define, yet under the ADA, employers are expected to reasonably accommodate employees who fall into this ambiguous category.


Vocational Impairment

The individual has a significant vocational impairment, that is, a significant impairment of the ability to prepare for, obtain, or keep employment in an occupation consistent with his or her abilities, activities, and interests, considering the factors described in §21.50 and paragraph (b) of this section.

§21.52
www.benefits.va.gov/ilo/ilo... United States Department of Veterans Affairs

The DSM-5 not only did not change this process but completely omitted any organized means of evaluating impairment!

Global Assessment Of Functioning

- Despite research suggesting that the GAF was valid and reliable (Pedersen and Karterud, 2012), it was dropped from the DSM-5 reportedly for several reasons, including a lack of conceptual clarity and suggestions of questionable psychometrics (Canino, Fisher, Alegría, and Bird, 2013).
- Instead, the authors of the DSM-5 suggest that the World Health Organization Disability Assessment Schedule (WHODAS) be included in the DSM-5 “for further study” (pg. 16).
Symptoms vs. Impairment

- Inattention
- Difficulty completing homework

Assessing Impairment in the Eligibility Process

Global Assessment of Functioning (GAF) Scale

IDEA Individuals with Disabilities Act
Revised in 2004

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Key Features of the RSI

- Fast completion time
- Age-appropriate items
- Assess youth ages 5 to 18 years
- Large representative normative sample
- Assess impairment clearly regardless of educational classification or diagnosis

Key Features of the RSI

- Available in Spanish
- Monitor progress across time
- Satisfies the impairment criteria of DSM-5 and IDEA
- Multiple-raters for a more accurate assessment
- Assist in forming intervention and treatment planning
- Aligned with World Health Organization’s domains of functioning.

Uses for the RSI
User Qualifications

- To administer the RSI, practitioners must have B-level qualifications
- B-level qualifications require, at a minimum, that graduate-level courses in testing and measurement at a university or have received equivalent documented training

Structure of the RSI
### Guidelines for T-Scores

Higher T-scores on the RSI indicating higher levels of impairment.

<table>
<thead>
<tr>
<th>T-score</th>
<th>Percentile Ranks</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 60</td>
<td>1-82</td>
<td>No Impairment</td>
</tr>
<tr>
<td>60-64</td>
<td>84-92</td>
<td>Mild Impairment</td>
</tr>
<tr>
<td>65-69</td>
<td>93-97</td>
<td>Moderate Impairment</td>
</tr>
<tr>
<td>&gt; 70</td>
<td>98-99</td>
<td>Considerable Impairment</td>
</tr>
</tbody>
</table>

### RSI Scales & Descriptions

### Directions on the RSI

**Child's Name:**

**INSTRUCTIONS:** Read each statement that follows the phrase, "During the past four weeks, how often has your child..." then circle the letter under the word that tells how often you saw the behavior. Read each question carefully, then circle how often you saw the behavior in the past four weeks. Answer every question without skipping any. If you want to change your answer, put an “X” through it and circle your new choice. Be sure to answer every question.

<table>
<thead>
<tr>
<th>Question</th>
<th>Possible Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
RSI Structure: Scales

School/Work  Mobility  Family

Social  Domestic  Self-Care

Standardization, Reliability &
Validity

Standardization Sample

- Data collection took place from September 2012 to August 2014
- Data was collected in all 50 states
- Over 8,000 ratings were completed across the 4 RSI forms

<table>
<thead>
<tr>
<th>Parent RSI 5-12 Years Form</th>
<th>Teacher RSI 5-12 Years Form</th>
<th>Parent RSI 13-18 Years Form</th>
<th>Teacher RSI 13-18 Years Form</th>
<th>Normative Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>2,800</td>
</tr>
</tbody>
</table>
Excellent Psychometric Properties

Internal Consistency

<table>
<thead>
<tr>
<th>Item</th>
<th>Parent</th>
<th>Teacher</th>
<th>Parent</th>
<th>Teacher</th>
<th>Parent</th>
<th>Teacher</th>
<th>Parent</th>
<th>Teacher</th>
<th>Parent</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Work</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Friend</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Anxiety</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Family</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

*Parent and Teacher scores are from the AIMS GR-10 Teacher Forms (School Work and Friend) and the AIMS GR-10 Parent Forms (Anxiety and Family).
Standard Error of Measurement

<table>
<thead>
<tr>
<th>Scale/Item</th>
<th>Test-Retest Reliability</th>
<th>Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSI-30</td>
<td></td>
<td>84% to 99.3% of the difference between Time 1 and Time 2 fell with in +/- 10 T-score points</td>
</tr>
</tbody>
</table>

Test-Retest Reliability

- Assessed over a 2- to 4-week interval and within a general population sample
- Total Score corrected $r = .89$ to .96
- RSI Scales corrected $r = .85$ to .97

Stability
Inter-Rater Consistency

- Looked at agreement between 2 parents or 2 teachers rating the same child
- Parent Raters:
  - RSI Scales corrected $r = .65$ to .87
  - RSI Total Score corrected $r = .87$
- Teacher Raters:
  - RSI Scales corrected $r = .56$ to .59
  - RSI Total Score corrected $r = .77$

Content Validity

Criterion-Related Validity

- Will look at differences between mean score differences by clinical groups
- This includes the following areas:
  - Primary diagnosis
  - Number of diagnoses
T-scores by General Population and Clinical Groups: RSI Parent Forms

T-scores by General Population and Clinical Groups: RSI Teacher Forms

Mean T-scores by General Population and Number of Diagnoses: RSI (5–12) Parent Form
Is the RSI measuring unique variance?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>WISC IV FS</td>
<td>-0.07</td>
</tr>
<tr>
<td>CAS FS</td>
<td>-0.04</td>
</tr>
<tr>
<td>WJ III Achievement</td>
<td>-0.03</td>
</tr>
<tr>
<td>Clinician Rating</td>
<td>0.34</td>
</tr>
<tr>
<td>CGAS</td>
<td>0.41</td>
</tr>
<tr>
<td>Conners</td>
<td>0.23</td>
</tr>
<tr>
<td>Conners</td>
<td>0.29</td>
</tr>
<tr>
<td>ABAS</td>
<td>-0.52</td>
</tr>
<tr>
<td>DESSA</td>
<td>-0.71</td>
</tr>
<tr>
<td>CEFI</td>
<td>-0.78</td>
</tr>
<tr>
<td>WISC IV</td>
<td>-0.07</td>
</tr>
<tr>
<td>CAS</td>
<td>-0.04</td>
</tr>
<tr>
<td>WJ III</td>
<td>-0.03</td>
</tr>
<tr>
<td>Clinician Scale</td>
<td>0.34</td>
</tr>
<tr>
<td>5-12 Parent</td>
<td>0.24</td>
</tr>
<tr>
<td>5-12 Teacher</td>
<td>0.22</td>
</tr>
<tr>
<td>5-12 Parent</td>
<td>0.26</td>
</tr>
<tr>
<td>5-12 Teacher</td>
<td>0.22</td>
</tr>
<tr>
<td>5-12 Parent</td>
<td>0.27</td>
</tr>
<tr>
<td>5-12 Teacher</td>
<td>0.27</td>
</tr>
<tr>
<td>13-16 Parent</td>
<td>0.22</td>
</tr>
<tr>
<td>13-16 Teacher</td>
<td>0.27</td>
</tr>
<tr>
<td>13-16 Parent</td>
<td>0.27</td>
</tr>
<tr>
<td>13-16 Teacher</td>
<td>0.27</td>
</tr>
</tbody>
</table>
Is the RSI measuring unique variance?

**ABAS**

<table>
<thead>
<tr>
<th>Age</th>
<th>Parent</th>
<th>5-12</th>
<th>5-16</th>
<th>13-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-12</td>
<td>Teacher</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-16</td>
<td>Parent</td>
<td>3.0</td>
<td>3.6</td>
<td>3.0</td>
</tr>
<tr>
<td>13-16</td>
<td>Teacher</td>
<td>3.7</td>
<td>3.7</td>
<td>3.7</td>
</tr>
</tbody>
</table>

**DESSA**

<table>
<thead>
<tr>
<th>Age</th>
<th>Parent</th>
<th>5-12</th>
<th>5-16</th>
<th>13-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-12</td>
<td>Teacher</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-16</td>
<td>Parent</td>
<td>7.2</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>13-16</td>
<td>Teacher</td>
<td>6.9</td>
<td>6.9</td>
<td>6.9</td>
</tr>
</tbody>
</table>

**CEFI**

<table>
<thead>
<tr>
<th>Age</th>
<th>Parent</th>
<th>5-12</th>
<th>5-16</th>
<th>13-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-12</td>
<td>Teacher</td>
<td>7.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-16</td>
<td>Parent</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
</tr>
<tr>
<td>13-16</td>
<td>Teacher</td>
<td>7.1</td>
<td>7.1</td>
<td>7.1</td>
</tr>
</tbody>
</table>
Relationship between the RSI and Other Impairment Measures

- RSI and the Barkley Functional Impairment Scale (BFIS–CA)
  - Child Sample corrected $r = .55$ to $.67$
  - Youth Sample corrected $r = .63$ to $.71$
- RSI and the Children’s Global Assessment Scale (CGAS)
  - Corrected $r = -.34$ to -.51

Relationship Between the RSI and Other Measures

Administration, Scoring, & Interpretation
Progress Monitoring & Treatment Effectiveness Report

RSI Interpretation

<table>
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<td>84-92</td>
<td>Mild Impairment</td>
</tr>
<tr>
<td>65-69</td>
<td>93-97</td>
<td>Moderate Impairment</td>
</tr>
<tr>
<td>&gt; 70</td>
<td>98-99</td>
<td>Considerable Impairment</td>
</tr>
</tbody>
</table>
Case Study: Joey

Joey

- 13 years old
- History of ADHD
- Described as extremely literal
- Misses social cues
- Socially isolated
- Referred to the school psychologist
Joey: Assessment Plan

- Interviews with Joey’s mother
- Complete the RSI and behavior checklists
- Administer neurological, intellectual, and achievement tests

Results of the Interview

- Joey’s mother has not been satisfied with the effect of medical and educational intervention
- Joey appears to be advanced in some academic areas, but very behind in others
- Joey is passive and avoids social interactions
- At home, he demonstrates poor hygiene
- Refuses to complete household chores
- Joey displays disruptive behavior

Assessment Results

- Concerns in both home and school settings for emotional distress, social impairment, academic challenges, inattention, depression, and anxiety
- Achievement scores demonstrated average intellect with problems noted in Processing Speed, Planning, and Attention
- When assessed for reading, math, and written language, Joey was placed several grades below his current placement.
Results of the Parent RSI

<table>
<thead>
<tr>
<th>Scale</th>
<th>Raw Score</th>
<th>T-score</th>
<th>90% Confidence Interval</th>
<th>Percentile Rank</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>School/Work</td>
<td>42</td>
<td>85</td>
<td>74.9 to 86.1</td>
<td>97</td>
<td>Considerable Impairment</td>
</tr>
<tr>
<td>Social</td>
<td>37</td>
<td>79</td>
<td>68 to 81</td>
<td>99</td>
<td>Considerable Impairment</td>
</tr>
<tr>
<td>Mobility</td>
<td>2</td>
<td>67</td>
<td>66 to 68</td>
<td>84</td>
<td>No Impairment</td>
</tr>
<tr>
<td>Dementia</td>
<td>13</td>
<td>63</td>
<td>54 to 67</td>
<td>90</td>
<td>Mild Impairment</td>
</tr>
<tr>
<td>Self-Care</td>
<td>24</td>
<td>85</td>
<td>68 to 83</td>
<td>99</td>
<td>Considerable Impairment</td>
</tr>
<tr>
<td>Total Score</td>
<td>438</td>
<td>81</td>
<td>76 to 83</td>
<td>99</td>
<td>Considerable Impairment</td>
</tr>
</tbody>
</table>

Treatment Plan for Joey

Areas of impairment as noted by Joey's Parent

Intervention Planning for Joey

- Adjustments to medication dosage and administration time
- Parents worked with a behavioral consultant
  - Implemented a multi-level response cost behavioral program
- Revisions to Joey’s IEP
- School psychologist worked with Joey in a social skills group
Joey's Treatment Progress

Case Study: Megan
Megan

- 11 years old
- History of ASD, OCD, ADHD, and Anxiety disorders
- Treated with multiple psychiatric medications
- Impairments in the home and school settings

Megan: Assessment Plan

- Interviews with Megan’s parents and her teacher
- Complete the RSI and behavior checklists
- Administer neurological, intellectual, and achievement tests

Results of the Parent Interview

- Megan is the second of four children
- Megan was a difficult child.
- She receives special education service
- She has difficulty concentrating and following instructions, is often very disorganized, and loses her belongings.
- She is also very uncooperative at home
- Megan displays a range of disruptive and non-disruptive behaviors
Results of the Teacher Interview

• Megan's teachers have also noted a number of areas of impairment

Assessment Results

• Megan scored lower on the working memory domain of the WISC-IV and Planning and Successive Scales of the CAS2.
• Parent and teacher reports for behavior characteristic of executive functioning assessed with the Comprehensive Executive Function Inventory (CEFI; Naglieri & Goldstein, 2013) noted symptoms as well, particularly with behaviors related to attention, organization, planning, and self-monitoring.

Results of the RSI
Treatment Plan for Megan

Areas of impairment as noted by Megan's parents and teachers

Intervention Planning for Megan

- Megan qualified for an individual aid at school
- Megan's family referred for in-home behavioral therapy
- Megan began working with a cognitive therapist on a weekly basis
- A response cost point system was implemented at school
- No changes were made to Megan's medication regimen

Megan's Treatment Progress: Parent Report
Conclusions

- Impairment can be defined and measured in children.
- Functional impairment can be accurately measured with the Rating Scale of Impairment.
- The RSI offers the first valid, reliable comprehensive measure of daily functional challenges within a factor analyzed framework built on the WHODAS categories.
- Assessment of and treatment monitoring of impairment offers an important advance in assessment.