An Overview of The New Brown Executive Function/Attention Scales (Brown EF/A Scales)

Presented by: Valorie O’Keefe, Consultant Psychologist
www.pearsonclinical.com.au

Uses for Brown EF/A Scales

- Use as a stand alone screener to identify individuals who should receive a full evaluation for ADHD
- Use as part of a comprehensive assessment, along with clinical interview, to aide in the diagnosis of ADHD
- As a formal tool for monitoring response to treatment and progress

Brown EF/A Scales

Thomas E. Brown, PhD
Department of Psychiatry, Keck School of Medicine, University of Southern California.
Author of the Brown Attention-Deficit Disorder Scales® (Brown ADD Scales) (1996, 2001) and the New Brown Executive Function/Attention Scales (Brown EF/A Scales)
Brown EF/A Publication: 2019
Age range: 3 through adult
Administration time: 10–15 minutes
Administration type
Paper pencil or digital with Q-Global
Who can use it?: Psychologists and Medical Practitioners (Paediatrician/Psychiatrist)

Change in Understanding ADHD

Attention Deficit Hyperactivity Disorder

Old Understanding Of ADHD:
“disruptive behaviour disorder of childhood”

New Understanding Of ADHD:
Developmental impairments of brain’s self-management system, its “executive functions”

- Ability to connect, prioritise, and integrate cognitive functions—moment by moment

Executive Functions:
“Will you do it and, if so, how and when?” (Lezak, 2004)

- Will you do it?
  Motivation/Activation (being able to get started)

- How will you do it?
  Planning/Organizing

- When?
  Timing/Remembering (requires working memory and prospective memory)
Executive Functions: Development and Demands

- EF capacity develops through childhood, into adolescence, and beyond; it is not fully present in early childhood.
- Environmental demands for EF increase with age, from preschool through adulthood.
- EF impairments often are not noticeable by age 12.

Brown’s Model of Executive Functions in ADHD

1. Organize, Prioritize, and Activate

- Difficulty organizing tasks, materials
- Difficulty estimating time, prioritizing tasks
- Trouble getting started on work

2. Focus, Shift, and Sustain Attention

- Loses focus when trying to listen or plan
- Easily distracted—internal/external
- Forgets what was read, needs to re-read

3. Regulating Alertness, Effort, and Processing Speed

- Difficulty regulating sleep and alertness
- Quickly loses interest in task, especially longer projects; doesn’t sustain effort
- Difficult to complete task on time, especially in writing—“slow modem”
4. Manage Frustration, Modulate Emotion

(Not included in DSM-5 criteria)

- Emotions impact thoughts, actions too much
- Frustration, irritations, hurts, desires, worries, etc., experienced “like computer virus”
- “Can’t put it to the back of my mind”

(Brown, Outside the Box: Rethinking ADD/ADHD, 2017, Attention Deficit Disorders, 2005)

5. Utilize Working Memory, Access Recall

- Difficulty holding one or several things “on line” while attending to other tasks
- Difficulty “remembering to remember”
- Inadequate “search engine” for activating stored memories, integrating these with current info to guide current thoughts and actions

(Brown, Outside the Box: Rethinking ADD/ADHD, 2017, Attention Deficit Disorders, 2005)

6. Monitor and Self-Regulate Action

(Not just hyperactivity/impulsive behavior)

- Difficulty controlling actions, slowing self and/or speeding up as needed for tasks
- Doesn’t size up ongoing situations carefully
- Hard to monitor and modify own actions to fit situation/aims

(Brown, Outside the Box: Rethinking ADD/ADHD, 2017, Attention Deficit Disorders, 2005)

Executive Functions operate in dynamic, integrated ways

- Most tasks requiring EF require integrated use of multiple aspects of EF
- EF usually operate without conscious deliberation, with automaticity, as in driving a car.
- The level of impairment is not best measured with neuropsych tests, but with clinical assessment of functioning in daily life across time.

(Brown, Outside the Box: Rethinking ADD/ADHD, 2017; Intl..J. Disability, Devel.& Ed, 2006)

What makes Brown EF/A Scales different?

- Items are more specific and contextual: Patients with ADHD experience much situational variability with ability to focus on specific activities which hold strong interest for them, but more limited ability to focus on less interesting tasks, even when they may be important. The Brown EF/A scales include items that ask about difficulties encountered in specific contexts, e.g. difficulty remembering what has been read (when reading is assigned, not self-selected texts).

- Focus on severity as opposed to frequency: Unlike other instruments, items on the Brown EF/A scales focus on severity of specific problems rather than frequency. This allow examinees to report more accurately how much difficulty they experience with each specific symptom.

Brown’s Model of Executive Functions Impaired in ADHD

Symptom Characteristics

- Dimensional, not “all-or-nothing”
  - Everyone sometimes has some impairments in these functions; in ADHD, it is a chronic, severe impairment
- Situational variability: “If I’m interested”
  - Most persons with ADHD have a few activities where ADHD impairments are absent

ADHD looks like a willpower problem, but it isn’t!
Dimensions for Item Responses

Most other ADHD or EF rating scales ask frequency of behaviors related to ADHD in terms of “how often?” But “frequency” does not always indicate how much that problem actually impairs functioning.

Brown EF/A scales ask how big a problem?

0. No problem
1. Little problem
2. Medium problem
3. Big problem

Brown EF/A Scales: New Features

• Fully updated norms (for ages 3 through adults)
• New and updated test items that improve clarity and clinical relevance
• New parent form available for adolescents
• Both gender-specific and combined-gender norms available for all age groups
• Includes DSM-5 symptoms of ADHD and more
• Digital administration and scoring available with Q-global® web based system

Available Forms

Multiple Perspective Assessment: The Brown EF/A scales will provide a comprehensive evaluation of an individual’s ADHD symptoms by assessing functioning using multiple perspectives: self-perspective, teacher’s perspective and parents’ perspective.

• 3 - 7 years  Parent, Teacher
• 8-12 yrs.  Parent, Teacher, Self-Report
• 13 – 18 yrs.  Self-Report, Parent (new)
• 19+ years  Self-Report

(can be completed at home then reviewed in session, or administered orally by examiner)

Cluster Items

6 clusters of executive functions that are often impaired in individuals with ADHD more than in most others of the same age.

Brown EF/A Scales use the 6 clusters to provide a profile of the individual’s reported functioning relative to age-based and gender-based norms.
1. **Activation**
- Feels overwhelmed
- Has difficulty setting priorities
- Procrastinates excessively
- Has difficulty getting organized
- Is slow to react
- Is excessively rigid; a perfectionist
- Is hard to wake up in the morning
- Misunderstands directions

2. **Focus**
- “Spaces out” when reading
- Becomes sidetracked easily
- Loses track in required reading; must reread
- Tries to pay attention but mind drifts
- Has difficulty grasping main idea in reading
- Gets lost in daydreaming
- Becomes distracted easily
- Stares off into space; seems "out of it"
- Doesn’t seem to be listening; gets complaints

3. **Effort**
- Feels sleepy during day
- Needs extra time to complete tasks
- Is criticized as lazy
- Produces inconsistent quality of work
- Does not work to potential
- Begins but effort fades quickly
- Has sloppy, hard-to-read penmanship
- Needs reminders for tasks
- Does not finish tasks

4. **Emotion**
- Is excessively impatient
- Is sensitive to criticism
- Becomes irritated easily; short-fused
- Has difficulty expressing anger
- Exhibits depressed mood
- Tends to be loner among peers
- Appears apathetic

5. **Memory**
- Is excessively forgetful
- Intends to do things but forgets
- Makes repeated restarts in writing
- Misplaces words/letters in writing
- Loses track of items
- Has difficulty memorizing

6. **Monitoring and Self-Regulating Action**
- Hard to work on or play with one thing for a long time, unless really fun
- Often butts in or interrupts
- Does papers too fast, hard to slow down enough to be careful
- Often grabs things or starts without waiting for permission or directions
- Parents complain about having to give same direction repeatedly
- Does too much teasing, arguing, etc. after being asked to stop it.
Administration/Scoring Options and Pricing

• Traditional: Paper Administration and Manual Scoring
  - Administer assessments using record forms and score them yourself with answer sheets and scoring rules mentioned in the manual.
  - Brown EF/A Scales Comprehensive Hand-scoring Starter Kit (All Ages): $623
  - Extra Record Forms pack: $170
  - Extra Hand-Scoring Scoring Sheet pack: $30

• Hybrid: Paper Administration, Q-global Web-based Scoring and Reporting
  - Administer assessments using record forms and score them using our digital Q-global platform. It enables you to quickly assess and efficiently organize examinee information, generate scores, and produce accurate comprehensive reports all via the Web.
  - Brown EF/A Manual: $372
  - Packs of Record Forms: $170
  - Q-Global Unlimited Use Annual Subscription: $70

• Full Digital: Q-global® Web-based Administration, Scoring, and Reporting
  - Administer assessments using our digital Q-global platform. It enables you to quickly assess and efficiently organize examinee information, generate scores, and produce accurate comprehensive reports all via the Web.
  - Q-global Score Report: $6
  - Includes administration, scoring and reporting for Parent, Teacher or Self-Report
COMPARISON TABLES

Cluster-to-Total Composite Score Comparisons

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<th>Cluster</th>
<th>Total</th>
<th>Cluster 1</th>
<th>Cluster 2</th>
<th>Difference</th>
<th>Standardization</th>
<th>Base Rate</th>
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ITEM RESPONSES BY CLUSTER

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<th>Item</th>
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ABOUT THE BROWN EF/A SCALES

The Brown EF/A Scales provide an easy-to-administer, standard test battery consisting of a battery of nine subtests that measure sustained attention, executive functions, and working memory across a range of ages. The Brown EF/A Scales are designed to be administered to children and adults, with scores age-standardized. The Battery is administered under standardized conditions, with instructions provided in English. The Brown EF/A Scales are designed to be administered to children and adults, with scores age-standardized. The Battery is administered under standardized conditions, with instructions provided in English.

PSEUDOCODE

for child in children:
    for subtest in subtests:
        score = administer(subtest, child)
        record(score)
    progress_report(child)

process_results(children)

progress_report(child)

BROWN EF/A SCALES T-SCORE PROFILE

Progress Report

Brown EF/A Scales
Brown Executive Function/Attention Scales
Thomson F. Brown, PhD

Exercise Information

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<thead>
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<th>Age at Testing</th>
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BROWN SCALES.

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