Introduction to the Delis Rating of Executive Functions (D-REF)

Anne-Marie Kimbell, Ph.D.
National Training Consultant

Agenda

Product features and digital use:
- overview of D-REF
- development and structure
  - core indices and total EF index
- Q-global
- administration options
- reporting options
  Case report illustration

Executive functioning

- Executive functioning represents a diverse set of cognitive abilities.
- Executive functions reflect the ability to manage and regulate one’s behavior in order to achieve desired goals.
- The behavioral problems associated with executive functioning deficits are well established therefore, it is possible to identify potential executive functioning deficits through behavior ratings.
- The D-REF is designed to quantify behavioral evidence for executive functioning deficits from parent, teacher, and self reports.
I would move this up to the very beginning to establish why the rating of EF is important in conjunction with the use of the performance measures.

ugabeam, 8/8/2012
Quick Overview

- Individual Self, Parent, and Teacher response forms with 36 questions each
- Top “5” Stressors for prioritizing interventions
- On-screen administration, scoring, and reporting
  - Remote administration
  - Audio option
  - Hardcopy option
- Three core indices and a Total EF Index
  - Behavioral Functioning
  - Emotional Functioning
  - Executive Functioning
- Three Reporting Options
  - Single Rater
  - Multiple Rater
  - Progress Monitoring

Content and Structure of the D-REF

- Executive functions that have a high probability of frequently interfering with functioning and likely a source of stress.
- Behaviors frequently observed in commonly diagnosed developmental disorders.
- Easy to read and understandable for children, adolescents, and adults with low educational attainment.
- Items designed for rapid administration to quickly identify symptoms for further evaluation.
Development and Structure

Standardization Sample Size by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Parent Form</th>
<th>Teacher Form</th>
<th>Self Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-6 years</td>
<td>100</td>
<td>76</td>
<td>N/A</td>
</tr>
<tr>
<td>7-8 years</td>
<td>100</td>
<td>76</td>
<td>N/A</td>
</tr>
<tr>
<td>9-10 years</td>
<td>70</td>
<td>40</td>
<td>N/A</td>
</tr>
<tr>
<td>11-12 years</td>
<td>70</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>13-15 years</td>
<td>60</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>16-18 years</td>
<td>100</td>
<td>50</td>
<td>120</td>
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</tbody>
</table>

Structure of the D-REF

- Total EF Composite
  - Behavioral Functioning
  - Emotional Functioning
  - Executive Functioning
Scales

<table>
<thead>
<tr>
<th>Core Indexes</th>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Behavioral</td>
<td>BE</td>
<td>Assesses the child/adolescent’s ability to regulate his/her behavior to meet the demands of the environment.</td>
</tr>
<tr>
<td>Emotion</td>
<td>EMF</td>
<td>Assesses the child/adolescent’s ability to regulate his/her emotions relative to the demands of the environment.</td>
</tr>
<tr>
<td>Executive</td>
<td>EFX</td>
<td>Assesses the child/adolescent’s higher-level cognitive ability to effectively adapt and function within the demands of the environment.</td>
</tr>
<tr>
<td>Total Composite</td>
<td>TC</td>
<td>Assesses the child/adolescent’s ability to plan, execute, and regulate his/her cognitive, emotional, and behavioral functions to adapt to the demands of the environment.</td>
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</table>

Scales continued

<table>
<thead>
<tr>
<th>Clinical Indexes</th>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>Attention/Working Memory</td>
<td>AWIM</td>
<td>Assesses symptoms of attention, deficient multifaceted, distractible; poor working memory, and disorganization.</td>
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<tr>
<td>Activity Level/Impulse Control</td>
<td>AIC</td>
<td>Assesses symptoms of hyperactivity, impulsivity, and poor self-monitoring.</td>
</tr>
<tr>
<td>Compliance/Management</td>
<td>CAM</td>
<td>Assesses symptoms of mood lability, sensitivity to criticism, emotionality, and social blunting.</td>
</tr>
<tr>
<td>Abstract Thinking/Problem Solving</td>
<td>APS</td>
<td>Revised and Teacher forms only. Assesses symptoms of concrete thinking, cognitive rigidity, and poor decision-making and problem-solving skills.</td>
</tr>
</tbody>
</table>

Parent Form

- Good internal and retest reliability.
- Shows expected sensitivity to disorders with known executive functioning impairments.
- Clinical scales yield additional diagnostically relevant information.
- Top 5 stressor model yields different therapeutic targets compared to most frequently occurring behavior.
- Correlates in expected ways with other rating of executive functioning although there is some behavioral divergence across specific measures.
Teacher Form

- Very good internal and retest reliability.
- Shows expected sensitivity to disorders with known executive functioning impairments.
- Clinical scales yield additional diagnostically relevant information.
- Teacher and Parent scales show a high degree of concordance in clinical samples.
- Top 5 stressor model yields different therapeutic targets compared to most frequently occurring behavior.
- Correlates in expected ways with other rating of executive functioning although there is some behavioral divergence across specific measures.

Self Form

- Moderate to good internal and retest reliability.
- Shows expected sensitivity to disorders with known executive functioning impairments.
- Self, Teacher, and Parent scales show a high degree of concordance in clinical samples.
- Top 5 stressor model yields different therapeutic targets compared to most frequently occurring behavior.
- Correlates in expected ways with other rating of executive functioning although there is more behavioral divergence across the self form than was observed in the Parent and Teacher forms.

Applications

- Assesses behavioral, emotional, and cognitive symptoms in individuals ages 5-18 years.
- One part of a comprehensive psychological, psychoeducational, developmental, or neuropsychological evaluation.
- Can be used to screen for executive functioning deficits in anyone suspected of having problems in these areas, including but not limited to individuals suffering from a traumatic brain injury, neurological condition, metabolic disorder, prenatal exposure to neurotoxins, infectious disease, neoplastic disorder, psychiatric disorder, or congenital disorder.
- Useful in evaluations where behavioral, emotional, and executive functioning deficits are being evaluated.
- Identifies behaviors that interfere with functioning at home, school, or in other psychosocial environments.
Diagnosis and Classification

- Help clinicians identify symptoms consistent with a variety of developmental disorders.
- Useful in psychoeducational evaluations in which special education classification is an important goal.
- The D-REF should not be used in isolation to make diagnostic or classification decisions. It is designed to facilitate these processes in the context of a comprehensive evaluation.

Research and Evaluation

- Studies evaluating executive functions in a variety of medical, neurological, psychiatric, and developmental disorders can use the D-REF to identify specific profiles of executive functioning deficits.
- Item-level analysis can reveal even more specific types of executive functioning deficits that can be further evaluated with standardized cognitive measures.
- Treatment outcome studies.

Progress Monitoring

- Track changes in behavior over time.
- Tracking the effects of medication therapy.
- The D-REF online scoring and reporting provides comparison data between time 1 and time 2 evaluations.
### Self Form ADHD-Combined Versus Matched Controls

<table>
<thead>
<tr>
<th>Index</th>
<th>ADHD-C</th>
<th>Matched Controls</th>
<th>Sig</th>
<th>Effect Size</th>
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</thead>
<tbody>
<tr>
<td>Behavioral Functioning</td>
<td>61.4</td>
<td>47.1</td>
<td>&lt; .01</td>
<td>-1.33</td>
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<tr>
<td>Emotional Functioning</td>
<td>61.1</td>
<td>45.6</td>
<td>&lt; .01</td>
<td>-1.42</td>
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<tr>
<td>Executive Functioning</td>
<td>63.4</td>
<td>48.5</td>
<td>&lt; .01</td>
<td>-1.32</td>
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<tr>
<td>Total Composite</td>
<td>62.7</td>
<td>48.5</td>
<td>&lt; .01</td>
<td>-1.49</td>
</tr>
<tr>
<td>Attention/Working Memory</td>
<td>65.2</td>
<td>48.4</td>
<td>&lt; .01</td>
<td>-1.47</td>
</tr>
<tr>
<td>Activity/Impulse Control</td>
<td>61.3</td>
<td>46.7</td>
<td>&lt; .01</td>
<td>-1.25</td>
</tr>
<tr>
<td>Compliance/Anger Control</td>
<td>63.1</td>
<td>47.2</td>
<td>&lt; .01</td>
<td>-1.39</td>
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### Parent Form ADHD-Inattentive Versus Matched Controls

<table>
<thead>
<tr>
<th>Index</th>
<th>ADHD-I</th>
<th>Matched Controls</th>
<th>Sig</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Functioning</td>
<td>56.2</td>
<td>48.5</td>
<td>&lt; .01</td>
<td>-0.81</td>
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<tr>
<td>Emotional Functioning</td>
<td>53.8</td>
<td>49.0</td>
<td>0.08</td>
<td>-0.57</td>
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<tr>
<td>Executive Functioning</td>
<td>61.8</td>
<td>50.2</td>
<td>&lt; .01</td>
<td>-1.22</td>
</tr>
<tr>
<td>Total Composite</td>
<td>57.8</td>
<td>49.0</td>
<td>&lt; .01</td>
<td>-1.91</td>
</tr>
<tr>
<td>Attention/Working Memory</td>
<td>63.9</td>
<td>49.8</td>
<td>&lt; .01</td>
<td>-1.34</td>
</tr>
<tr>
<td>Activity/Impulse Control</td>
<td>56.8</td>
<td>49.3</td>
<td>&lt; .01</td>
<td>-0.79</td>
</tr>
<tr>
<td>Compliance/Anger Control</td>
<td>53.0</td>
<td>48.7</td>
<td>0.07</td>
<td>-0.52</td>
</tr>
<tr>
<td>Abstract/Conceptual Reasoning</td>
<td>58.9</td>
<td>49.1</td>
<td>&lt; .01</td>
<td>-0.99</td>
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### Reporting and Describing D-REF Performance

- Three types of scores
  - Total Composite Score
  - Core Index T scores
  - Clinical Index T score
Ease of Assessment and Scoring

- The D-REF is administered on-line via connection to the D-REF on-line scoring and reporting site
  - Parent, teacher, or child can be sent a link via e-mail to complete the form
  - On-line administration can be setup to be administered in the office
  - A paper form can be downloaded and given to the rater to complete and later entered into the website by the clinician

- Problem or stressful behaviors identified by the D-REF can become the focus of early interventions, and those children showing a high level of executive function symptomatology can be referred for more comprehensive evaluation and intensive treatment

Report Options

- Individual Score Report

- Multi-Rater Score Report
  - Child / Parent / Teacher (3 max)
    - Can run multiple times with additional parent/teacher combos

- Progress Report
  - The D-REF online scoring and reporting provides comparison data between time 1 and time 2 evaluations
  - Track changes in behavior over time
  - Tracking the effects of medication therapy
Report Options

- Choose gender based norms or general norms
- Responses to items printed in report can compare across raters
- Time elapsed per item and total time elapsed
  - Identify problem items for review
  - Identify "very quick" protocols
- Top "5" Stressors printed out for review
Manual

- The manual to accompany D-REF can be downloaded or referenced in the Resource Library section of the Q-global web site. The manual includes:
  - Introduction
  - General testing, Administration and Scoring Guidelines
  - Development of the D-REF
  - Evidence of Reliability and Validity
  - Interpretation
  - Appendices
    - Inclusion/Exclusion Criteria for Clinical Sample
    - D-REF Index Intercorrelations by Age
    - Examiners

Thanks for Coming!

D-REF REPORT USAGE (online) – $2.00

- A usage includes the administration, scoring and reporting of a self, parent, or teacher form
- Once administered and scored, multiple reports can be run at no additional cost.

Visit www.psychcorp.com/DREF
to obtain your 6 complementary trials
<table>
<thead>
<tr>
<th>Name</th>
<th>Telephone</th>
<th>Geographic Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander Quiros, Ph.D.</td>
<td>800.627.7271 ext 262091</td>
<td>FL, GA, LA, Puerto Rico, TX</td>
</tr>
<tr>
<td>Walter Schamber, Ph.D.</td>
<td>800.627.7271 ext 262398</td>
<td>CT, MA, NJ, NY, PA</td>
</tr>
<tr>
<td>Adam Gierl</td>
<td>800.627.7271 ext 262357</td>
<td>AR, CO, DE, DC, MD, ME, MI, MS, NH, RI, TN, VA, VT, WV</td>
</tr>
<tr>
<td>Charlie Burns</td>
<td>800-627-7271 ext 3285</td>
<td>IL, IN, KY, MN, OH, WI</td>
</tr>
<tr>
<td>Nancy McGuiren</td>
<td>800-627-7271 x262552</td>
<td>AZ, CA, NV, OR, UT, WA</td>
</tr>
<tr>
<td>Laura Gabrielson</td>
<td>800-627-7271 ext 3278</td>
<td>AK, AL, GU, HI, IA, ID, KS, MO, MT, NC, ND, ME, NH, OH, SC, SD, VI, WY</td>
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For Military or Government:

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</tr>
</thead>
<tbody>
<tr>
<td>Amy Cadalbert</td>
<td>800-627-7271 ext 262391</td>
<td>AL, AK, AR, AZ, CA, CO, FL, GU, HI, ID, KS, ME, MS, MO, MT, NE, NV, NH, ND, OH, OR, SD, UT, WI, WV</td>
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<tr>
<td>Michelle Knoben</td>
<td>800-627-7271 ext 3290</td>
<td>CT, DE, DC, GA, IL, IN, IA, KY, LA, MA, MD, ME, MN, MI, MI, NY, NC, OK, PA, RI, SC, TN, TX, VT, VA, WA, WI</td>
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For more information contact your Pearson Assessment Consultant or Assessment Representative.