Behavior assessment in RtI: Considerations when selecting assessment tools

Sandra M. Chafouleas, Ph.D.
Neag School of Education, University of Connecticut

T. Chris Riley-Tillman, Ph.D.
Department of Psychology, East Carolina University

Amy M. Briesch, Ph.D.
Department of Counseling and Applied Psychology, Northeastern University
Purpose

- Review strengths and limitations of different school-based behavior methods within a multi-tiered model of assessment
Why should we care about social behavior outcomes?

Educators indicate spending a disproportionate amount of time responding to significant behavior challenges presented by a small number of students (U.S. Dept. of Ed., 2000)

1 in 5 children has mental health needs yet the majority will not receive needed services (Hoagwood & Erwin, 1997; U.S. Surgeon General, 1999)

School discipline is a top concern by the American public (Rose & Gallup, 2005)
Response to Intervention (RTI)

- An assessment and intervention process for systematically monitoring student progress and making data-based decisions about the need for instructional modifications or increasingly intensified services (see www.rti4success.org).
Original logic: Public health & disease prevention (Larson, 1994)

**Tertiary (FEW)**
Reduce complications, intensity, severity of current cases

**Secondary (SOME)**
Reduce current cases of problem behavior

**Primary (ALL)**
Reduce new cases of problem behavior
Examples of Positive OUTCOMES across Tiers within Domains of Social Behavior

- IEP or other student-specific behavior **goal related to acquisition** of appropriate social skills
- Student-specific behavior **goal related to decrease** in problem behavior
  - Decreases in number of students referred for an evaluation for behavior related disorders
Great... So why can’t we just implement good practices?

... but then, how will you know what you are doing is working?

- To make effective decisions about which practices are needed and then to evaluate the outcomes of those practices, you need **DATA**!
Developing evidence-based assessment (EBA) begins through *a priori* delineation of

a) the purposes of assessment, and then

b) identification of the special requirements for each purpose (and associated criteria for stating when requirement is met)

Commentary by Kazdin (2005)
A Few Caveats to Establishing EBA (Kazdin, 2005):

- Absence of a gold standard criterion
- One measure can’t do it all
  - Multiple measures are needed to evaluate different facets
- Co-morbidity of “problems”
  - What are the most relevant problem features?
- Multiple perspectives are valuable yet agreement may (will) be low!
Purposes of Assessment

- Screening
  - Who needs help?
- Diagnosis
  - Why is the problem occurring?
- Progress Monitoring
  - Is intervention working?
- Evaluation
  - How well are we doing overall?

Emphasized by the National Center on Response to Intervention
Examples of school-based DATA sources for social behavior

ALL BELOW plus functional assessment data

ALL BELOW plus…

• Norm-referenced comparison data
• More detailed profiles of students’ strengths/weaknesses
• Formative data sources sensitive to incremental change

EFFICIENT, EXTANT SOURCES such as…

- Total number of office discipline referrals
- Number of students who are suspended or expelled
- Number students referred or found eligible for special education, particularly in the area of emotional disturbance
What behavioral data sources do you use?

- Screening
- Diagnosis
- Evaluation
- Progress Monitoring
Sources of School-Based Data on Social Behavior

- Extant data
- Standardized behavior rating scales
- Systematic direct observation
- Direct Behavior Rating

Currently dominate in clinic and research
Extant Data

Definition:
- Data sources that already exist within the setting ("permanent products")

Advantages:
- Already available
- Highly contextually relevant
- Natural occurrence can reduce/limit reactivity

(Adapted from Chafouleas, Riley-Tillman, & Sugai, 2007)
Extant data

- **Examples:**
  - Office discipline referrals (ODRs)
  - Attendance and tardy records
  - Suspension/expulsion data
  - Special education data (e.g. referrals for emotional disturbance)
  - Data from existing behavior management plans (e.g. token economy)
“an event in which (a) a student engaged in a behavior that violated a rule/social norm in the school, (b) a problem behavior was observed by a member of the school staff, and (c) the event resulted in a consequence delivered by administrative staff who produced a permanent (written) produce defining the whole event” (Sugai, Horner, & Walker, 2000, p. 96)
Targets of assessment

MAJOR
- Abusive Language/ Inappropriate Language/ Profanity
- Arson
- Bomb Threat/ False Alarm
- Defiance/Disrespect/ Insubordination/
- Non-Compliance
- Disruption
- Dress Code Violation
- Fighting/ Physical Aggression
- Forgery/ Theft
- Gang Affiliation Display
- Harassment/Bullying
- Inappropriate Display of Affection
- Inappropriate Location/ Out of Bounds

- Lying/Cheating
- Other Behavior
  - Property Damage/Vandalism
  - Skip class
  - Truancy
  - Tardy
- Technology Violation
  - Unknown
- Use/Possession of Alcohol
- Use/Possession of Combustibles
- Use/Possession of Drugs
- Use/Possession of Tobacco
- Use/Possession of Weapons

MINOR
- Defiance/Disrespect/ Non-compliance
- Disruption
- Dress Code Violation
- Inappropriate Language
- Other
- Physical Contact/ Physical Aggression
- Property Misuse
- Tardy
- Technology Violation
- Unknown

Source: 2009-10 Referral Definitions
www.swis.org
How might extant data be used?

- Screening
- Diagnosis
- Evaluation
- Progress Monitoring
System-wide screening

Referrals By Location

Number of Referrals

Unknown loc | Locker rm | Office | Common | Bus zn | Special evt | Other loc | Gym | Library | Bus | Café | Bathroom | Park lot | Hall | Plygd | Class

0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0

55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0

60
Discrepancy ratio = student behavior/ peer behavior

2x = significant discrepancy

Willie’s ODR = 10
/Mean ODR = 3.5
DR = 2.86
Staff at West High School note concern about the number of fights occurring among students.

ODRs over the past 2 months are reviewed.

“Johnny and Sam” are brought to Behavior Support Team for additional support planning.

Staff are re-assigned to increase levels of active supervision in those areas at key times.

Review revealed a) most fighting incidents are occurring outside cafeteria and in bus loading area AND b) Johnny and Sam are the most likely culprits.
FRMS Total Office Discipline Referrals

Sustained Impact

Academic Years

Total ODRs

Pre

Post

94-95 95-96 96-97 97-98 98-99 99-00 00-01 01-02 02-03 03-04 04-05 05-06

Academic Years
Progress Monitoring

Average Referrals Per Day Per Month

- Green: 2004-05
- Blue: 2005-06
- Yellow: 2006-07

School Months:
- August
- September
- October
- November
- December
- January
- February
- March
- April
- May
- June
- July

Average Referrals Per Day:
- 0.50
- 0.45
- 0.40
- 0.35
- 0.30
- 0.25
- 0.20
- 0.15
- 0.10
- 0.05
- 0.00

Graph showing the average referrals per day per month for different years.
Example for diagnosis with ODR?
Benefits & Limitations of Extant Data

- Complements other sources in providing contextually relevant information
- Source of progress monitoring information
- Less resource-intensive (data readily available!)
- Limited application within prevention
- Tough to establish and maintain consistent/accurate use.
- Unknown psychometric adequacy
- Challenging to create a system for efficient organization and interpretation
Extant data – summary

- **Screening** – yes, but may be limited in prevention/early intervention roles
- **Progress monitoring** – yes, but creating usable system for interpretation/presentation can be challenging
- **Diagnosis** – maybe, with regard to adding contextual relevance
- **Evaluation** – yes, relevance within the specific setting but limited with regard to norm comparisons
**Behavior Rating Scales**

- **Definition:**
  Tools that require an individual to rate the behavior of another based on past observation of that person’s behaviors (Kratochwill, Sheridan, Carlson, & Lasecki, 1999).

- **Examples:**
  - Behavior Assessment System for Children – 2 (BASC-2)
  - Achenbach System of Empirically-Based Assessment (e.g. CBCL)
  - Conner’s Rating Scales – 3
  - Social Skills Intervention System (SSIS)
Scope of the scale

- **Comprehensive** scales: large number of items (often 100+) that cluster together to assess a wide range of behaviors
  - “General purpose” (Merrell, 2008)
  - Often include broadband and narrow-band syndromes (Ramsey, Reynolds & Kamphaus, 2002).

- **Narrow band** scales: focused on one or two behavioral constructs
  - Attention (Brown ADD Scales; Brown, 2001)
  - Adaptive behavior (Vineland-II; Sparrow, Balla, & Cicchetti, 1984)
Problem Behaviors:
- Externalizing
- Bullying
- Hyperactivity/Inattention
- Internalizing
- Autism Spectrum

Social Skills:
- Communication
- Cooperation
- Assertion
- Responsibility
- Empathy
- Engagement
- Self-Control
# Children’s Depression Inventory (Kovacs, 1992)

**Ages 7-17**

**27 items (2 week reflection)**

<table>
<thead>
<tr>
<th>Negative mood</th>
<th>Interpersonal Problems</th>
<th>Ineffectiveness</th>
<th>Anhedonia</th>
<th>Negative Self Esteem</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am sad... once in a while all the time</td>
<td>I like being with people</td>
<td>I do most things... O.K. wrong</td>
<td>I am tired... Once in awhile all the time</td>
<td>I look O.K. I look ugly</td>
</tr>
</tbody>
</table>
### Multidimensional Anxiety Scale for Children (MARCH, 1997)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Item Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Symptoms</td>
<td>I have pains in my chest</td>
</tr>
<tr>
<td></td>
<td>My hands feel sweaty or cold</td>
</tr>
<tr>
<td>Harm Avoidance</td>
<td>I check to make sure things are safe</td>
</tr>
<tr>
<td></td>
<td>I worry about doing something stupid or embarrassing</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>I have trouble asking other kids to play with me</td>
</tr>
<tr>
<td></td>
<td>I worry about other people laughing at me</td>
</tr>
<tr>
<td>Separation/Panic</td>
<td>I keep the light on at night</td>
</tr>
<tr>
<td></td>
<td>I avoid going places without my family</td>
</tr>
</tbody>
</table>

**Ages 8-19**
Example BASC-2 Score Profile
Example: ASEBA TRF Score Profile

```
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>2</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>34</td>
<td>9</td>
<td>32</td>
</tr>
<tr>
<td>T Score</td>
<td>66-B</td>
<td>56</td>
<td>50</td>
<td>72-C</td>
<td>50</td>
<td>67-B</td>
<td>68-B</td>
</tr>
<tr>
<td>Percentile</td>
<td>95</td>
<td>73</td>
<td>&lt;=50</td>
<td>&gt;70</td>
<td>&lt;=50</td>
<td>96</td>
<td>&gt;97</td>
</tr>
</tbody>
</table>
```

#### Internalizing
- 14.Cries
- 0.5.EnjoysLittle
- 51.Dizzy
- 11.Dependent
- 9.MindOff
- 1.ActsYoung
- 2.Noisy

#### Externalizing
- 26.NoGui
- 28.BreaksRules
- 26.Defiant
- 29.BadFriends
- 18.HarmSelf
- 17.Dream
- 13.Confuse
- 12.Lies
- 16.Mean
- 14.Lik
- 19.DemAteen
- 10.Sip
- 10.Suit
- 17.Confuse
- 7.Bugs
- 6.Concentrate
- 6.Con

---

**Copyright 2001 T.M. Achenbach**

**B = Borderline clinical range; C = Clinical range**

**Broken lines = Borderline clinical range**
What assessment purpose(s) do we typically use broadband scales for?

But what about screening and progress monitoring?
# BASC-2 Behavioral and Emotional Screening System (BESS)

**Instructions:**
Listed below are phrases that describe how children may act. Please read each phrase, and mark the response that describes how this child has behaved recently (in the last several months).

- Mark **N** if the behavior **never** occurs.
- Mark **S** if the behavior **sometimes** occurs.
- Mark **O** if the behavior **often** occurs.
- Mark **A** if the behavior **almost always** occurs.

Please mark every item. If you don’t know or are unsure of your response to an item, give your best estimate. A “Never” response does not mean that the child “never” engages in a behavior, only that you have not observed the child to behave that way.

Before starting, please fill in the information in the boxes on the first two pages of this form.

<table>
<thead>
<tr>
<th>Mark: N—Never</th>
<th>S—Sometimes</th>
<th>O—Often</th>
<th>A—Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pays attention.</td>
<td>2. Disrupts the play of other children.</td>
<td>3. Is easily upset.</td>
<td>4. Hits other children.</td>
</tr>
<tr>
<td>25. Pouts.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**T score 61-70 = elevated risk**
**T score 71+ = highly elevated risk**

<table>
<thead>
<tr>
<th>Student</th>
<th>Test Date</th>
<th>Form Type</th>
<th>Validity Index Elevation</th>
<th>Scores</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>F</td>
<td>CI</td>
<td>RP</td>
</tr>
<tr>
<td>Frances, Ferris</td>
<td>10/06/2003</td>
<td>Child/Adol.</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Grace, Gary</td>
<td>01/26/2004</td>
<td>Child/Adol.</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Hughes, Hockum</td>
<td>10/15/2003</td>
<td>Child/Adol.</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Jebson, Jorge</td>
<td>10/08/2003</td>
<td>Child/Adol.</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Karmelson, Kandy</td>
<td>06/30/2003</td>
<td>Child/Adol.</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Krackus, Kurt</td>
<td>12/16/2003</td>
<td>Child/Adol.</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Long, Lenny</td>
<td>01/11/2004</td>
<td>Child/Adol.</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Lupe, Lora</td>
<td>06/23/2003</td>
<td>Child/Adol.</td>
<td>C</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>
**Definition of Prosocial Behavior**

Prosocial Behavior is behavior directed toward other people that involves effective communication skills, cooperative acts, self-control in difficult situations, and empathic or supportive responses to others who experience a problem. For example, children who consistently act in a prosocial manner compromise in conflict situations, invite others to join activities, volunteer to help others, and listen when others are speaking.

<table>
<thead>
<tr>
<th>Level</th>
<th>Prosocial Behavior</th>
<th>Secondary Student Performance Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Students at this performance level demonstrate most of the following:</td>
<td>• excellent skills to communicate and/or cooperate with others • excellent skills to initiate and sustain conversations/interactions with others • excellent self-control • a high level of personal concern for others Students at this performance level generally do not need additional instruction to improve their social skill level, and their current skill level is considered to be high for their age.</td>
</tr>
<tr>
<td>4</td>
<td>Students at this performance level demonstrate most of the following:</td>
<td>• a general competence when communicating or cooperating with others • adequate skills to initiate and sustain conversations/interactions with others • adequate self-control • an appropriate level of personal concern for others Students at this performance level may benefit from additional instruction to improve their social skills, but their current skill level is considered to be appropriate for their age.</td>
</tr>
<tr>
<td>3</td>
<td>Students at this performance level demonstrate most of the following:</td>
<td>• occasional difficulty communicating or cooperating with others • occasional difficulty initiating and sustaining conversations/interactions with others • somewhat less than expected self-control • minimal concern for others Students at this performance level are often in need of additional instruction to improve their social skills.</td>
</tr>
<tr>
<td>2</td>
<td>Students at this performance level demonstrate most of the following:</td>
<td>• frequent difficulty communicating or cooperating with others • frequent difficulty initiating and sustaining conversations/interactions with others • frequent poor self-control • little or no concern for others Students at this performance level are often in need of additional instruction to improve their social skills.</td>
</tr>
<tr>
<td>1</td>
<td>Students at this performance level demonstrate most of the following:</td>
<td>• very poor communication or cooperation skills • extreme difficulty initiating or sustaining conversations/interactions in an age-appropriate manner • poor self-control • little or no concern for others Students at this performance level often need remedial instruction and/or coaching to improve their social skills.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class Roster Scoring Summary</th>
<th>No.</th>
<th>Student Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>
Conners’ 3 (Conners, 2008)

- Short form (approx. 40 items)
  - Fewer items per scale
  - Recommended for progress monitoring

- ADHD Index
  - 10 items that best differentiate children with ADHD from those without a clinical diagnosis
  - Recommended for screening and progress monitoring

- Global Index
  - 10 best items from original Conners’ Rating Scales
  - Progress monitoring

Temper outbursts, Excitable/impulsive, Restless, Cries often, Inattentive, Fidgeting, Disturbs other children, Easily frustrated, Fails to finish things, Mood changes quickly
BASC Monitor for ADHD
Kamphaus & Reynolds (1998)

- 47 items designed to assess scales of Attention Problems, Hyperactivity, Internalizing Problems, Adaptive Skills
### Benefits & Limitations of Behavior Rating Scales

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>May be most helpful in diagnostic assessment.</td>
<td>May not be sensitive to incremental change.</td>
</tr>
<tr>
<td>Provide a common understanding of the specific behaviors that are indicative of a given cluster term.</td>
<td>May be feasible only for occasional use given time/cost.</td>
</tr>
<tr>
<td>May also be suited for use in screening and evaluative assessment practices.</td>
<td>Many clinically-focused (i.e., focus on problem rather than pro-social behavior).</td>
</tr>
<tr>
<td></td>
<td>Do not directly assess behavior – rater bias may be present.</td>
</tr>
</tbody>
</table>
Behavior rating scales – summary:

- **Screening** – yes, but scope and size of measures varies widely
- **Progress monitoring** – not likely
- **Diagnosis** – yes, most common use within clinical settings
- **Evaluation** – maybe, if the period of time is sufficient and constructs measured are relevant
Definition:
Data collected by an observer watching an environment/person for some period of time

Examples:
- Percentage of intervals observed to be actively engaged
- Frequency of positive peer initiations throughout the day
- Recording how long it takes to transition in the hallway (duration)
Studies suggest moderate to high levels of reported use

- 67% of school psychologist report using direct observation in 4 of their last 10 case (Shapiro & Heick, 2004), 63% to 73% of School Psychologist report moderate to frequent use (Riley-Tillman et. al, 2008).
Event-Based Techniques

**Frequency** - number of events in a period of time (e.g., 4 hits in a 6 hour day)

**Rate** - number of events per unit of time (e.g., 4 social initiations per hour)

**Percentage of opportunities** – use if behaviors follow specific cues (e.g., followed directions given on 40% of occasions)
Data recorded during pre-specified intervals of time, then summarized into *percentage of intervals of behavioral occurrences*.

Time-based techniques result in *approximations* of behavioral events because behavior is sampled in one of three basic ways:

- Whole interval recording
- Partial interval recording
- Momentary time sampling
Other techniques

**Duration**
- Total time (e.g., *actively engage in reading for 12 minutes*)
- Percent of time (e.g., *out of seat for 35% of the reading period*)
- Average time per event (e.g., *each temper tantrum lasted an average of 7.5 minutes*)

**Latency** – time for behavior to begin after prompt or antecedent cue provided (e.g., on average 2 minutes to begin task after teacher direction given)
Direct Observation Schemes
Volpe et al. (2005)

- **BASC-2 Student Observation System** (Reynolds & Kamphaus, 2004)
  - 15-minute observation w/ 30-second intervals

- **Academic Engaged Time Code of the SSBD** (Walker & Severson, 1990)
  - Time spent engaged in academic material
  - Let stopwatch run
  - Divide AET by Total Time

- **Behavioral Observation of Students in Schools** (Shapiro, 2004)
  - 15-minute observation w/ 15-second intervals
  - Active/Passive Engaged, Off-task motor/verbal/passive, Teacher-Directed Instruction
Additional Direct Observation Schemes
Volpe et al. (2005)

- **Direct Observation Form** (Achenbach, 1986)
  - 10-minute observation w/ 10-minute intervals
  - On/Off-Task

- **ADHD School Observation Code** (Gadow et al., 1996)
  - 15-minute observation w/ 15-second intervals
  - Interference, Motor Movement, Noncompliance, Non-physical aggression, Off-task

- **Classroom Observation Code** (Abikoff & Gittelman, 1985)
  - 30-minute observation
  - Interference, Minor Motor Movement, Gross Motor Standing/Vigorous, Physical/Verbal Aggression, Solicitation of Teacher, Off-Task, Noncompliance, Out of Chair, Absence of Behavior

- **State-Event Classroom Observation System** (Saudargas, 1997)
  - 20-minute observation w/ 15-second intervals
  - School Work, Looking Around, Social Interaction with Child/Teacher, Out of Seat, Raise Hand, Calling Out, Approach Teacher
How might SDO data be used?

- Screening
- Diagnosis
- Evaluation
- Progress Monitoring
A single SDO is rather feasible – 10-15 min.

Feasibility though decreases as observation numbers increase

- Assuming a min number of observations (5), this balloons to 50-75 minutes of observation with additional entry/exit time.
- Over 100 cases (a rather typical school psychologist yearly load), this is 5,000 – 7,500 minutes, or 83 – 125 hours.
Dawn’s Percentage of Off-Task Behavior in History Class

Baseline | Function-Based SM | Not function-Based SM | Function-Based SM | Not function-Based SM | Function-Based SM

Percentage of Off-Task Behavior

Day

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
Progress Monitoring: Number of call-outs

Sample Intervention Graph

Number of Times the Student is Reported to Call Out vs. Days

Pre-Intervention vs. Intervention
Example: Comparison w/ peers

DR for Off-Task = 43/17 = 2.5 x
Benefits & Limitations of SDO

- Highly flexible
- Useful in progress monitoring
- Directness
- Standardized procedures
- Minimal cost for materials

- Potential reactivity
- Observer error/drift
- Limited feasibility re: training and intrusiveness
- Difficult to monitor low frequency behaviors
- Generalizability
Systematic Direct Observation—summary:

- **Screening** – not likely in universal assessment
- **Progress monitoring** – yes
- **Diagnosis** – maybe, particularly if within FBA
- **Evaluation** – not likely
Direct Behavior Rating

Definition:
A tool that involves a brief rating of a target behavior following a specified observation period (e.g. class activity) by those persons who are naturally occurring in the context of interest.

Examples:
- Behavior Report Card
- Home-School Note
- Daily Progress Report
- Good Behavior Note
- Check-In Check-Out Card
Example DBR scales

**Single Item Scale**

Academically Engaged

% of Total Time

0  1  2  3  4  5  6  7  8  9  10

0%  50%  100%

Interpretation: The student displayed academically engaged behavior during 80% of the observation period.

**Multi-Item Scale**

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the student follow class rules?</td>
<td>0</td>
<td>[ ] 1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Did the student follow teacher directions?</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>( ) 2</td>
<td></td>
</tr>
<tr>
<td>Did the student do his/her best work?</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>( ) 2</td>
<td></td>
</tr>
</tbody>
</table>

Total number of points earned: 5

Interpretation: The student earned 84% (5/6) of possible points during the observation period.
Example: DBR-like Tool

Behavior Report Card

Student: ___________________  Date: ___________________
Teacher: ___________________  Classroom: ___________________

Directions: Review each of the Behavior Report Card items below. For each item, rate the degree to which the student showed the behavior or met the behavior goal.

The student focused his or her attention on teacher instructions, classroom lessons and assigned work.

Circle the degree to which the student met the behavioral goal:

1  2  3  4  5  6  7  8  9

Never/Seldom  Sometimes  Usually/Always

The student sat in class without fidgeting or squirming more than most peers.

Circle the degree to which the student met the behavioral goal:

1  2  3  4  5  6  7  8  9

Never/Seldom  Sometimes  Usually/Always

The student remembered academic instructions and directions without needing extra reminders.

Circle the degree to which the student met the behavioral goal:

1  2  3  4  5  6  7  8  9

Never/Seldom  Sometimes  Usually/Always
## Example: DBR-like Tool

<table>
<thead>
<tr>
<th>Student</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>😊 😞 😞</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>😊 😞 😞</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>😊 😞 😞</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>😊 😞 😞</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(specify behavior here)
## DBR Form

<table>
<thead>
<tr>
<th>Date:</th>
<th>Student:</th>
<th>Activity Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>M T W Th F</td>
<td>Rater:</td>
<td></td>
</tr>
</tbody>
</table>

**Observation Time:**
Start: __________
End: __________

**Behavior Descriptions:**
- **Academically Engaged:** Actively or passively participating in the classroom activity. For example: writing, raising his/her hand, answering a question, talking about a lesson, listening to the teacher, reading silently, or looking at instructional materials.
- **Disruptive Behavior:** Student action that interrupts regular school or classroom activity. For example: out of his/her seat, fidgeting, playing with objects, acting aggressively, talking/yelling about things that are unrelated to classroom instruction.

(If desired) Optional Behavior is __________

### Directions:
Place a slash (/) along the line that best reflects: (a) % of total time student was academically engaged and (b) % of total time or total # of times student exhibited disruptive behavior during the observation period. If desired, an additional behavior may be included by providing a definition above and then rating on the “optional behavior” line.

### Academically Engaged

<table>
<thead>
<tr>
<th>% of Total Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
</tr>
<tr>
<td>Never</td>
</tr>
</tbody>
</table>

### Disruptive Behavior

<table>
<thead>
<tr>
<th>% of Total Time or # of Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
</tr>
<tr>
<td>Never</td>
</tr>
</tbody>
</table>

### Optional Behavior

<table>
<thead>
<tr>
<th>% of Total Time or # of Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
</tr>
<tr>
<td>Never</td>
</tr>
</tbody>
</table>

---

**Example:**

**Standard Form for Single-item DBR scales**

Download:
www.directbehaviorratings.com

© Chafoules, Riley-Tilman, Clariz, & Sagi
Permission granted to photocopy for personal use
Academic Engagement: Actively or passively participating in the classroom activity.

Respectful: Compliant and polite behavior in response to adult direction and/or interactions with peers and adults.

Disruptive Behavior: A student action that interrupts regular school or classroom activity.

KEYS TO SUCCESS

- Academically Engaged
- Respectful
- Non-Disruptive
How do I use the DBR form?

1) Complete top portion of the form
   ✓ Student’s name, Date, Rating period(s)
   ✓ Review behavior definitions and rating directions

2) Have the form ready for completion following each pre-identified activity period
   ✓ e.g., Reading block, independent seat work

3) Immediately following the activity period, complete the ratings
   ✓ Do not complete the rating if you aren’t confident you directly observed the student for a sufficient amount of time
When rating, remember...

- Ratings should correspond to the proportion of time that you actually observed the student display the target behavior.
  - Complete immediately following the activity period.
  - Do not complete if you did not observe for a sufficient amount of time.
- When rating, each behavior should be considered independently of the other targets. That is, total ratings across behaviors do not have to equal 100%.
  - For example, a student may be engaged 50% of the time, and disruptive 20%. A student may also be engaged for 100% of the time, and disruptive for 10%.
How might DBR data be used?

- Screening
- Diagnosis
- Evaluation
- Progress Monitoring
Example: DBR in Screening

“Local” Cut-Points

Normative Cut-Points...
Directions for Direct Behavior Rating (DBR)

1. Determine the behaviors of interest, either by selecting from among the possible pre-defined target behaviors or identify your own target behavior.
2. Decide who, where, and how often to collect behavior ratings with DBR (e.g., daily, AM, PM). Ratings can be completed in a matter of seconds.
3. Observe and estimate the amount of time that the behavior occurs during an observation period (e.g., full day, half day, class period).
4. Collect multiple ratings across multiple occasions (see below).
5. Plot data graphically, and evaluate child behavior.

© Chafouleas, Riley-Tillman & Christ
How Often?

We recommend (5 to) **10 datapoints** per phase, but the emphasis is on ideographic analysis and high/low stakes decisions.
Example DBR Data Profile

DBR Afternoon (11/13 to 1/8)
Your Rating: 8 10 0

Correct Score: 9 10 0
Benefits & Limitations of DBR

- Highly flexible
- Useful in progress monitoring
- Directness
- Potential for standardized procedures
- Minimal cost for materials

- Generalizability
- Rater bias is likely present
- Training requirements unknown
- Limited psychometric knowledge beyond DBR-SIS
Direct Behavior Rating – summary:

- **Screening** - maybe
- **Progress monitoring** - yes
- **Diagnosis** – maybe, particularly if within FBA
- **Evaluation** – not likely
Review: Methods of Social Behavior Assessment

- Extant data
- Standardized behavior rating scales
- Systematic direct observation
- Direct Behavior Rating

Which to use? Consider...

Psychometric adequacy
Usability
Contextual relevance
Why do I need data?

At what level should the problem be solved? (Primary, Secondary, Tertiary)

What is the purpose of assessment? (Screening, Progress Monitoring, Evaluation, Diagnosis)

Which data do I need?

Which tools are best matched to assess the behavior of interest? *Contextual relevance*

What decisions will be made using these data? *Psychometric Adequacy*

What resources are available to collect data? *Usability*

Which tools can answer these questions?

Adapted from Chafouleas, Riley-Tillman, & Sugai, 2007
SUMMARY: Behavior Assessment Methods within RTI

ALL BELOW, with emphasis on functional assessment data

EXTANT DATA

BEHAVIOR RATING SCALES

SYSTEMATIC DIRECT OBSERVATION

DIRECT BEHAVIOR RATING

EXTANT DATA

BEHAVIOR RATING SCALES developed for universal screening

DIRECT BEHAVIOR RATING
Conclusion: Assessment Challenges in Domains of Social Behavior

- How do we develop school “buy-in” and capacity regarding roles in prevention related to social behavior and mental health?
  - How do we facilitate capacity for schools to include universal screening?
- How can schools integrate a common logic and language within the domains of social behavior?
- How do we forge new directions in the development and evaluate of assessments that are *technically adequate, contextually relevant, and usable* in schools?
Further information:

Note. This presentation can be downloaded from www.directbehaviorratings.com

sandra.chafouleas@uconn.edu
rileytillmant@ecu.edu
a.briesch@neu.edu