Poor Academic Outcomes Associated with Mental Health Disorders

- Lower grades and poor attendance rates (Suldo, Thalji, & Ferron, 2011),
- Greater incidence of adolescent smoking (Lewis et al., 2011), and illicit substance use (Goodman, 2010),
- More than half of all students identified as having significant emotional or behavioral problems drop out, and of those that remain in school only about 42% graduate with a diploma (Bradley et al., 2008).
- Only 20% of students in special education with emotional and behavioral disorders pursue any type of post-secondary education (Wagner, Kutash, Duchnowski, & Epstein, 2005).
The 20/20 Problem:

Teacher and Parent Referral are Imperfect: In one study Head Start staff under-identified children with behavioral or emotional problems as a group, and those children with the highest risk for poor academic readiness were MOST likely to be unidentified and untreated. - Fantuzzo, Bulotsky, McDermott, Mosca, &Lutz, 2003
Preventing Mental, Emotional, and Behavioral Disorders Among Young People
Progress and Possibilities

Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Youth, and Young Adults: Research Advances and Promising Interventions

Mary Ellen O’Connell, Thomas Boat, and Kenneth E. Warner, Editors

Board on Children, Youth, and Families
Division of Behavioral and Social Sciences and Education

NATIONAL RESEARCH COUNCIL AND
INSTITUTE OF MEDICINE
OF THE NATIONAL ACADEMIES
Universal Screening Program Goals

“The goals and design of these initiatives should be targeted to relatively narrow and specific purposes, for example,
(1) improving school success for struggling students,
(2) preventing bullying and student harassment,
(3) improving teacher and peer relationships,
(4) increasing school safety and security, or
(5) learning to regulate and control behavior.” (p. 230)

O'Connell, M., Boat, T., & Warner, K. (2009)
Cowen and colleagues (1973) described the content of the AML as:

“These 11 items, 5 "aggressive-outgoing" (A), 5 "moody-internalized" (M), and 1 "learning disability" (L), comprise the scale. The teacher's task is to rate the frequency of occurrence of each of the 11 behaviors on 5-point scales, ranging from "seldom or never" (1) to "all of the time" (5). The measure is brief, objective, and concise, requiring only 30-60 sec. per child. An average-sized class can, thus, be rated in 20-30 min.” (p. 14)
Defining Behavioral and Emotional Risk (BER)

BER v. Mental health risk v. Behavioral Development

Under-controlled v. over-controlled (Peterson, 1961)

Academic problems (Reynolds & Kamphaus, 1992).

Pro-social, “relatable” items (Cowen, et al., 1973)
“The goal of this new manual, as with all previous editions, is to provide a common language for describing psychopathology. While DSM has been described as a “Bible” for the field, it is, at best, a dictionary, creating a set of labels and defining each. The strength of each of the editions of DSM has been “reliability” – each edition has ensured that clinicians use the same terms in the same ways. The weakness is its lack of validity.”
Disproportionate Impact

• A disproportionate number of boys of color is found eligible for special education services leading to poorer academic outcomes. (Donovan & Cross, 2002; Dunn, 1968; Ferri & Conner, 2005; Gartner & Lipsky, 1987; Mercer & Richardson, 1975; Semmel, Gerber, & MacMillan, 1994; Waitoller, Artiles, & Cheney, 2010; U.S. Department of Education, 2006)

• Disproportionality Starts at Referral. Bradshaw, et al., (2010) found that if a Black and White student have the same teacher rating scale scores and other results, the Black student would still have a 24% to 80% greater chance of receiving an Office Discipline Referral (ODR) compared to a White peer.
Screening May Mitigate Disproportionality

• Dowdy, Doane, Eklund and Dever (2011) found that teachers nominated significantly more males (73.3%) than females as at risk compared to using a brief teacher-rated BER screener (60.5%).

• Kamphaus and Reynolds (2007), and Kamphaus et al. (2010) found that use of the Teacher Form of the Behavioral and Emotional Screening System (BESS) reduced the disproportionality of boys to girls to 2:1 as compared to 3:1 to 8:1 in prior studies.
### INSTRUCCIONES PARA MARCAR TUS RESPUESTAS

- Usa solamente un lápiz No. 2.
- Asegúrate de marcar bien y llenar completamente el círculo.
- No hagas marcas sin sentido en este formulario.
- Borra bien y con cuidado cualquier marca que quieras cambiar.

- **Correcto** ✅
- **Incorrecto** ❌❌❌

### Tu nombre

<table>
<thead>
<tr>
<th>Primero</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>A A A A A A A A A</td>
<td>A A A A A A A A A A A</td>
</tr>
<tr>
<td>B B B B B B B B A</td>
<td>B B B A A A A A A A A</td>
</tr>
<tr>
<td>C C C C C C C C C</td>
<td>C C C C C C C C C C C</td>
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<tr>
<td>D D D D D D D D D</td>
<td>D D D D D D D D D D D</td>
</tr>
<tr>
<td>E E E E E E E E E</td>
<td>E E E E E E E E E E E</td>
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<td>F F F F F F F F F</td>
<td>F F F F F F F F F F F</td>
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<td>G G G G G G G G G</td>
<td>G G G G G G G G G G G</td>
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<tr>
<td>H H H H H H H H H</td>
<td>H H H H H H H H H H H</td>
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<tr>
<td>I I I I I I I I I</td>
<td>I I I I I I I I I I I</td>
</tr>
<tr>
<td>L L L L L L L L L</td>
<td>L L L L L L L L L L L</td>
</tr>
<tr>
<td>M M M M M M M M M</td>
<td>M M M M M M M M M M M</td>
</tr>
<tr>
<td>N N N N N N N N N</td>
<td>N N N N N N N N N N N</td>
</tr>
<tr>
<td>Q Q Q Q Q Q Q Q Q</td>
<td>Q Q Q Q Q Q Q Q Q Q Q</td>
</tr>
<tr>
<td>R R R R R R R R R</td>
<td>R R R R R R R R R R R</td>
</tr>
<tr>
<td>S S S S S S S S S</td>
<td>S S S S S S S S S S S</td>
</tr>
</tbody>
</table>

### Tu fecha de nacimiento

<table>
<thead>
<tr>
<th>Mes</th>
<th>Día</th>
<th>Año</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ene.</td>
<td>1</td>
<td>1900</td>
</tr>
<tr>
<td>Feb.</td>
<td>2</td>
<td>1901</td>
</tr>
<tr>
<td>Mar.</td>
<td>3</td>
<td>1902</td>
</tr>
<tr>
<td>Abr.</td>
<td>4</td>
<td>1903</td>
</tr>
<tr>
<td>May.</td>
<td>5</td>
<td>1904</td>
</tr>
<tr>
<td>Jun.</td>
<td>6</td>
<td>1905</td>
</tr>
<tr>
<td>Jul.</td>
<td>7</td>
<td>1906</td>
</tr>
<tr>
<td>Ago.</td>
<td>8</td>
<td>1907</td>
</tr>
<tr>
<td>Sep.</td>
<td>9</td>
<td>1908</td>
</tr>
</tbody>
</table>
BESS Student Form

Instructions:
Listed below are sentences that young people may use to describe how they think or feel or act. Read each sentence carefully.

Mark N if the sentence never describes you or how you feel.
Mark S if the sentence sometimes describes you or how you feel.
Mark O if the sentence often describes you or how you feel.
Mark A if the sentence almost always describes you or how you feel.

Give the best answer for you for each sentence, even if it is hard to make up your mind. There are no right or wrong answers. Please do your best, tell the truth, and respond to every sentence.

Before starting, please fill in the information in the boxes on the front page of this form.

<table>
<thead>
<tr>
<th>Mark:</th>
<th>N—Never</th>
<th>S—Sometimes</th>
<th>O—Often</th>
<th>A—Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am good at making decisions.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>2. I talk while other people are talking.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>3. I worry but I don't know why.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>4. I like the way I look.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>5. I feel out of place around people.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>6. I feel like I want to quit school.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>7. People get mad at me, even when I don't do anything wrong.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>8. I have trouble paying attention to the teacher.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
<tr>
<td>9. I am liked by others.</td>
<td>N</td>
<td>S</td>
<td>O</td>
<td>A</td>
</tr>
</tbody>
</table>

...(See handout for complete screener.)
More Risk

2012
- Normal: 91%
- Elevated: 8%
- Extremely elevated: 1%

2013
- Normal: 85%
- Elevated: 13%
- Extremely elevated: 2%
A change of risk level by gender from 2012 to 2013

Female:
- From Normal to Risk: 19
- From Risk to Normal: 7

Male:
- From Normal to Risk: 13
- From Risk to Normal: 6
In 10th Grade

A change of risk level by grade from 2012 to 2013

- 9th Grade: 2 (From Normal to Risk)
- 10th Grade: 19 (4 From Normal to Risk, 15 From Risk to Normal)
- 11th Grade: 7 (4 From Normal to Risk, 3 From Risk to Normal)
- 12th Grade: 5 (4 From Normal to Risk, 1 From Risk to Normal)
Student Case Study: Samantha

Results from BASC-2

Validity Index Summary

<table>
<thead>
<tr>
<th>F</th>
<th>Response Pattern</th>
<th>Consistency</th>
<th>L</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caution</td>
<td>Caution High</td>
<td>Caution</td>
<td>Acceptable</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Raw Score: 4</td>
<td>Raw Score: 102</td>
<td>Raw Score: 21</td>
<td>Raw Score: 3</td>
<td>Raw Score: 0</td>
</tr>
</tbody>
</table>

Samantha was identified through self-report screening
RQ2) Differences between groups

Spring 2011-12 data

<table>
<thead>
<tr>
<th></th>
<th>At-Risk Students</th>
<th>All Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Discipline Referrals</td>
<td>4.02</td>
<td>0.24</td>
</tr>
<tr>
<td>Attendance (# days missed)</td>
<td>10.90</td>
<td>5.42</td>
</tr>
<tr>
<td>Grades (GPA: 0.0 – 4.0)</td>
<td>2.85</td>
<td>3.59</td>
</tr>
</tbody>
</table>
### RQ2) Changes among at-risk students

#### At-risk student data 2011-12

<table>
<thead>
<tr>
<th></th>
<th>Fall 2011</th>
<th>Spring 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Discipline Referrals</td>
<td>2.26</td>
<td>1.74</td>
</tr>
<tr>
<td>Attendance (# days missed)</td>
<td>5.62</td>
<td>5.30</td>
</tr>
<tr>
<td>Grades (GPA: 0.0 – 4.0)</td>
<td>2.58</td>
<td>3.02</td>
</tr>
</tbody>
</table>
Qualitative Results

Themes Reflected the Three Underlying Constructs

• Acceptability: universal screening or not; responsible for screening; numerous benefits.

• Usability: Overall, relevant to their students’ difficulties and effective in identifying students needing for further testing/intervention

• Feasibility: short and remarked upon its ease of completion and readiness for implementation; barriers to screening (e.g., lack of support).
Recommendations
Levitt, Saka, Romanelli, & Hoagwood (2007)

–Young children’s mental health
  • Critical to obtain reports from adults
    (e.g., Walker & Severson, 1990).

–Youth in middle or high school
  • Youth becomes the key informant (e.g., Shaffer & Craft, 1999; Weist & Baker-Sinclair, 1997)
  • Parent and teacher reports add valuable information.
Psychometric Analysis of the BASC–2 Behavioral and Emotional Screening System (BESS) Student Form: Results from a High School Student Sample

Leigh M. Harrell-Williams & R.W. Kamphaus, Georgia State University

Abstract

This study aimed to re-assess the factor structure of the BASC–2 Behavioral and Emotional Screening System (BESS) Student Form (Kamphaus & Reynolds, 2007). Dowdy et al. (2011) reported a simple-structure four factor solution, with items loading on Personal Adjustment, Inattention/Hyperactivity, Internalizing Problems, and School Problems, using random samples from a national norming data set consisting of responses from children aged 6 to 11 as well as data collected from children aged 6 to 12 in elementary and middle schools in the Los Angeles Unified School District (LAUSD). In this study, responses collected from high school students in the Los Angeles Unified School District (LAUSD) were used in a Rasch-based confirmatory factor analysis, item analysis and rating scale analysis of the BESS Student Form items. Evidence from this sample supports the four factor structure of the BESS Student Form, but the reliability estimates for the four factors provide evidence for using the unidimensional structure in making a risk level decision based on the total T score produced.

Research Questions

1) Does the use of a high school-based sample of BESS Student Form responses result in the same factor structure solution identified in Dowdy et al. (2011), which used younger children?
2) Do the items on the BESS Student Form exhibit misfit?
3) Is the 4-point rating scale used on the BESS Student Form performing optimally?

The BESS Instrument

The Behavioral and Emotional Screening System (BESS, Kamphaus & Reynolds, 2007) Student Form contains 30 items measuring behavioral and emotional risk. Items are rated on a four-point ordinal scale: Never, Sometimes, Often, and Almost Always, with lower scores indicating fewer problems. Children and adolescents can complete the form in about 5 to 15 minutes, or 30 to 40 minutes for an entire classroom group. The BESS Student is scored by scanned data entry, and several validity indexes assess the quality of student responses (Levitt et al., 2007). The BESS yields total T-scores and percentile ranks for each child based on a U.S. national normative sample, which are used to indicate whether a particular student has normal (T < 60), elevated (T = 61 to 70) or extremely elevated risk (T > 71). Split-half reliability range from .90 to .93 and test-retest stability is .80 (Kamphaus & Reynolds, 2007).

The blueprint for creating adequate content coverage was based on previous research, which had identified the internalizing and externalizing behavior dimensions in factor analytic investigations dating back to at least the 1960’s, when Peterson (1961) first identified the over-controlled and under-controlled dimensions, which are now referred to as Internalizing and Externalizing. Two additional dimensions were identified in the BASC–2 Student Form item pool and incorporated into the BESS, Personal Adjustment and School Problems. Factor analysis was used with each of the four constructs to select 30 items for the BESS Student Form.

Acknowledgements:

Supported in part by grants from the Institute of Education Sciences (IES): R324B060005, Drs. Kamphaus & DiStefano R324B060006, Dr. Kamphaus

Pre-vious Factor Analysis Results

Using two samples from a large national norming dataset and one sample of elementary and middle school students from the LAUSD, Dowdy et al. (2011) used exploratory and confirmatory factor analysis to evaluate the factor structure of the BESS Student Form. A simple-structure four factor solution, with items loading on Personal Adjustment, Inattention/Hyperactivity, Internalizing Problems, and School Problems (as seen in Figure 1), was reported. Three items were flagged as problematic and removed from the final CFA analysis.

Table 1: Reliability and Between-Factor Correlations – 4 Factor Structure

<table>
<thead>
<tr>
<th>Number of Items in Analysis</th>
<th>Number of Factors</th>
<th>Deviance</th>
<th>Number of Parameters Estimated</th>
<th>AIC</th>
<th>BIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Four</td>
<td></td>
<td>30</td>
<td>249028.8</td>
<td>249217.8</td>
</tr>
</tbody>
</table>

Description of Data Collection & Sample

Data was collected at three high schools in regions 2, 3, and 4 of the Northern part of the Los Angeles Unified School District (LAUSD). Passive parental consent resulted in a participation rate of over 90% per school, for a total of 4,074 students. The BESS Student was completed in classroom groups on one day in September, 2012. Research teams members from and graduate students from the University of Santa Barbara used a prescribed protocol and script with each classroom group.

These schools are largely Latino/a (about 85% of the population). 54% of the sample was male. Distribution among grade levels was relatively even, with 25% of students as 8th graders, 26% as 10th graders, 27% as 11th graders, and 21% as 12th graders.

Methods

Confirmatory factor analysis: A unidimensional structure and the proposed four factor structure from Dowdy et al. (2011) are compared for best fit. The factor structures were estimated using the partial credit model framework of the Multidimensional Random Coefficients Multinomial Logit Model (Adams, Wilson, & Wang, 1997; Briggs & Wilson, 2003) as implemented in ConQuest (Wu et al., 2007). AIC and BIC were used to compare the competing factor structures, with smaller values of each indicating the best model.

Item fit analysis: Weighted and unweighted fit statistics for each item were evaluated by the criteria proposed by Wright & Linacre (1994). Rating scale Analysis: Linacre’s criteria (2004) for optimal rating scales were used to evaluate the current four category rating scale.

Results - CFA

As shown in Table 1 below, AIC and BIC both provide evidence for the four factor structure (Figure 2) over the unidimensional structure. Analyses were conducted using all 30 items on the BESS Student Form as well as only the 27 used in the final CFA in Dowdy et al. (2011). Three of the factors have EAP/PV reliabilities that are below .80, which is lower than generally accepted values for a diagnostic instrument. Reliability estimates are presented on the diagonals in Table 2, while between-factor correlations are shown on the off-diagonals.
Universal Screening for Emotional and Behavioral Problems: Fitting a Population-Based Model
G. THOMAS SCHANDING, JR and KERRI P. NOWELL
University of Houston, Houston, Texas, USA

Schools have begun to adopt a population-based method to conceptualizing assessment and intervention of students; however, little empirical evidence has been gathered to support this shift in service delivery. The present study examined the fit of a population-based model in identifying students’ behavioral and emotional functioning using a district screening of first- through fifth-grade students (n=2,706) in a diverse suburban school district. Teacher ratings of students’ emotional and behavior difficulties appeared to fit a population-based model well. Parent ratings of students’ difficulties (n=1468) did not fit the model but indicated students having fewer difficulties. There was significant agreement between parent
Early identification and intervention

► Must be linked—identification must come first to be efficacious, but is not useful without intervention.

► Early intervention is preventative and promotes resiliency—which promotes improved lifelong outcomes.

► Our science is clear that earlier intervention/prevention is better than later.
Proposed Solution: Universal Screening for Behavioral and Emotional Risk (BER)

• **According to the National Academy** (O’Connell et al., 2009): “For prevention, one of the goals of screening should be to identify communities, groups, or individuals exposed to risks or experiencing **early symptoms** that increase the potential that they will have negative emotional or behavioral outcomes and take action prior to there being a diagnosable disorder” (p. 223).

• **Screening studies** conducted in California in the 1950’s and 1960’s used similar item types and content to assess **early symptoms** (Cowen et al., 1973)
There are both moral and economic imperatives to ACT Early

ACTing early through identification and intervention with EBD of children and youth

1) Facilitates the positive development of youth.

2) Facilitates social and economic development of the community.

3) Its cheaper! We can pay now for early identification and preventive treatment, or pay as a society the rest of these children’s lives.