A Brief Intervention Strategy for School Mental Health Clinicians (BRISC): Findings from a Multi-Site Efficacy Study

Eric Bruns, PhD¹, Elizabeth McCauley, PhD¹, Kristy Ludwig, PhD¹, Mike Pullmann, PhD¹, Chayna Davis, PhD¹, Kristine Lee, BA¹, Cheryl Holm-Hansen, PhD², Mark Sander, PsyD³, & Sharon Hoover, PhD⁴

¹University of Washington, ²Wilder Foundation, ³Hennepin County/Minneapolis Public Schools, ⁴University of Maryland, Baltimore
Acknowledgements
Acknowledgements & Disclosures

Thanks to:

- Institute of Education Sciences R305A120128, R305A160111
- School Mental Health Ontario
- Seattle Children’s Hospital Research Institute
- Loeb Family Foundation-SCHRI
- 15 School districts in 3 states!

Disclosures: No Conflicts of Interest to Report
Agenda for the Presentation

- **Why** and **How** BRISC was developed
- **What** BRISC is – core assumptions and elements
- **Results** from a three-state efficacy study
- **Reflections** from our local leads: Drs. Hoover and Sander
The Case for School Mental Health is Strong

- **1 in 5** students have an MH diagnosis
- As many as **3 in 5** report distress that interferes with school and life
- Only **20%** of youth get needed MH services
- Schools offers *accessible* services, particularly for historically underserved youth
- SMH reduces stigma
- SMH service lead to improvements:
  - Mental health
  - Academic outcomes
    - e.g., attendance & grades
Access ≠ Effectiveness

1. Access & Utilization of Services
2. Enhancing Service Quality

MIND THE GAP
However, SMH “as usual” has much potential for improvement

- Strong evidence for targeted psychosocial interventions—anxiety, depression, oppositionality/aggression
- Evidence based strategies not widely used in school based care
- EBP developers have paid insufficient attention to the school context and how it might influence effective service delivery
What is needed?

• Approaches that serve more students in need
• Approaches that mesh with MTSS/PBIS models
• Approaches that integrate school success goals
• “Response to Intervention” models—provide care as needed, not one size fits all
What is BRISC?

Core Assumptions and Elements
BRISC Aims to Overcome Shortcomings Of “School MH As Usual”

<table>
<thead>
<tr>
<th>School-Based Usual Care</th>
<th>BRISC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention is often crisis-driven (Langley et al., 2010)</td>
<td>Structured / systematic identification of treatment targets</td>
</tr>
<tr>
<td>Often focused on providing nondirective emotional support (Lyon et al., 2011b)</td>
<td>Focused on skill building / problem solving</td>
</tr>
<tr>
<td>Interventions do not systematically use research evidence (Evans &amp; Weist, 2004; Rones &amp; Hoagwood, 2000)</td>
<td>All intervention elements are evidence-based</td>
</tr>
<tr>
<td>Standardized assessments are used infrequently (Weist, 1998; Lyon et al., 2011a)</td>
<td>Utilizes standardized assessment tools for progress monitoring</td>
</tr>
</tbody>
</table>
Core Assumptions

BRISC helps SMH provider:

- **Engage** with student by asking about their immediate concerns
- **Assess** issues student wants help with AND nature of student’s needs
- **Teach** basic tools to empower students

Provides a structured triage approach to assess and inform intervention planning.
BRISC IS AN ENGAGEMENT, ASSESSMENT, BRIEF INTERVENTION, AND TRIAGE TOOL

It is not designed to be a comprehensive treatment approach.
Core BRISC Process

- Engage, Assess
- ID Top Problems
- Collaborative Problem Solving
- Did student successfully implement problem solving?

If NO: What was the BIGGEST BARRIER to moving forward?

- Wrong Problem/Solution
- Can’t Manage Stress/Mood
- Unable to Express Needs
- Stuck in Negative Thinking

THEN: Individualized, skill-based response

- Revisit Problem List/PS Steps
- Stress and Mood Management Guide
- Communication Guide
- Realistic Thinking Guide

NO

YES

More to Work on
Choose a New Problem
Done with Counseling
BRISC Protocol Overview

Session 1: Engagement, Informal Assessment “What’s Up?”, and Problem Identification
Session 2: Problem Solving
Session 3: Continued Problem Solving – teaching skills as needed:
   – Stress and Mood Management
   – Realistic Thinking
   – Communication Skills
Session 4: Review Student’s Needs & Plan for Next Steps
Stepped Care: Determining Next Steps

1. Come back if you need it
2. Supportive monitoring
3. Continue with school mental health (if possible)
4. Referral to outside services
5. Referral to other school-based services
BRISC GOAL 3 Efficacy Study
Institute of Education Sciences
R305A160111
BRISC Efficacy Study: Research Design/Methods

- Cluster randomized trial
- Stratified random assignment of schools to BRISC or SMH as usual (SAU)
  - Each school has 1-2 clinicians
- Clinicians referred students to the study who sought or were referred to SMH services
- Research team:
  - Conducted primary data collection with students and parents
  - Administered implementation measures and surveys to clinicians
  - Compiled school records (analyses pending)
  - Compiled session audiorecordings for both groups (analyses pending)
BRISC Efficacy Study: Measures/Analyses

• **BRISC only:**
  – BRISC Fidelity
  – Clinician perceptions of acceptability and feasibility of BRISC

• **SAU and BRISC – Data collected at BL, 2, and 6 mos:**
  – Services received over time – SMH, inpatient, outpatient
  – Student perceptions of care, therapeutic alliance
  – Mental health outcomes using standardized measures
  – Resolution of Student Identified “Top Problems”
  – Student academic outcomes – Self-report and from school records

• Content of treatment sessions – use of evidence-based techniques

• **Data Analytic Strategy:** Multilevel growth modeling.
Participating Research Sites

- **Washington:** 21 schools, n = 139
- **Minnesota:** 17 schools, n = 170
- **Maryland:** 14 schools, n = 148

**Total Sample:**
- 457 Students
- 382 Parents or guardians
- 75 Mental health providers
- 52 High schools
- 15 Participating school districts
Figure 6. Enrollments by school.

Number of Study Enrollments by School/State/Condition

[Bar chart showing enrollments by school and state/condition.]
Study enrollment by condition

Total enrollment by condition

SAU
198

BRISC
259
Table 1.

Student participant demographics as a whole sample and by condition (BRISC, TAU).

<table>
<thead>
<tr>
<th>Participant Demographics</th>
<th>Whole Sample</th>
<th>BRISC</th>
<th>TAU</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>91</td>
<td>35.1</td>
<td>58</td>
<td>29.3</td>
</tr>
<tr>
<td>Female</td>
<td>165</td>
<td>63.7</td>
<td>140</td>
<td>70.7</td>
</tr>
<tr>
<td>Endorsed another gender</td>
<td>3</td>
<td>1.2</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>259</td>
<td>100.0</td>
<td>198</td>
<td>100.0</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Am. Indian or Alaskan Native</td>
<td>2</td>
<td>0.8</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>Asian</td>
<td>11</td>
<td>4.2</td>
<td>10</td>
<td>5.1</td>
</tr>
<tr>
<td>Black or African Am.</td>
<td>90</td>
<td>34.7</td>
<td>39</td>
<td>19.7</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>2</td>
<td>0.8</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>White or Caucasian</td>
<td>88</td>
<td>34.0</td>
<td>83</td>
<td>41.9</td>
</tr>
<tr>
<td>Latino as race only*</td>
<td>29</td>
<td>11.2</td>
<td>29</td>
<td>14.6</td>
</tr>
<tr>
<td>Multiracial</td>
<td>33</td>
<td>12.7</td>
<td>24</td>
<td>12.1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1.5</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0.0</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>259</td>
<td>100.0</td>
<td>198</td>
<td>100.0</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td>49</td>
<td>18.9</td>
<td>49</td>
<td>24.7</td>
</tr>
<tr>
<td>Non-Latino</td>
<td>209</td>
<td>80.7</td>
<td>146</td>
<td>73.7</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>0.4</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>259</td>
<td>100.0</td>
<td>198</td>
<td>100.0</td>
</tr>
<tr>
<td>Grade Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9th grade</td>
<td>85</td>
<td>32.8</td>
<td>55</td>
<td>27.8</td>
</tr>
<tr>
<td>10th grade</td>
<td>59</td>
<td>22.8</td>
<td>55</td>
<td>27.8</td>
</tr>
<tr>
<td>11th grade</td>
<td>65</td>
<td>25.1</td>
<td>34</td>
<td>17.2</td>
</tr>
<tr>
<td>12th grade</td>
<td>50</td>
<td>19.3</td>
<td>34</td>
<td>17.2</td>
</tr>
<tr>
<td>Total</td>
<td>259</td>
<td>100.0</td>
<td>198</td>
<td>100.0</td>
</tr>
<tr>
<td>Free/Reduced Lunch Eligibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eligible</td>
<td>161</td>
<td>62.2</td>
<td>117</td>
<td>59.1</td>
</tr>
<tr>
<td>Not Eligible</td>
<td>87</td>
<td>33.6</td>
<td>76</td>
<td>38.4</td>
</tr>
<tr>
<td>Missing</td>
<td>11</td>
<td>4.2</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>259</td>
<td>100.0</td>
<td>198</td>
<td>100.0</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BRISC</td>
<td>16.32 ± 1.28</td>
<td>16.24 ± 1.14</td>
<td>16.28 ± 1.22</td>
<td></td>
</tr>
<tr>
<td>TAU</td>
<td>16.32 ± 1.28</td>
<td>16.24 ± 1.14</td>
<td>16.28 ± 1.22</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>16.32 ± 1.28</td>
<td>16.24 ± 1.14</td>
<td>16.28 ± 1.22</td>
<td></td>
</tr>
</tbody>
</table>

* Latino as race only, as specified by youth
Follow up Data Collection Success: Some Differential Attrition

Table 3. Survey assessment completions. Total enrollment is 389. Does not include active participants.

<table>
<thead>
<tr>
<th>Condition</th>
<th>BL</th>
<th>% Retention</th>
<th>BL</th>
<th>% Retention</th>
<th>BL</th>
<th>% Retention</th>
<th>BL</th>
<th>% Retention</th>
<th>BL</th>
<th>% Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRISC</td>
<td>228</td>
<td>100.0</td>
<td>200</td>
<td>87.7</td>
<td>186</td>
<td>81.6</td>
<td>167</td>
<td>73.2</td>
<td>155</td>
<td>68.0</td>
</tr>
<tr>
<td>TAU</td>
<td>160</td>
<td>100.0</td>
<td>149</td>
<td>93.1</td>
<td>143</td>
<td>89.4</td>
<td>138</td>
<td>86.3</td>
<td>132</td>
<td>82.5</td>
</tr>
</tbody>
</table>
Results
Fidelity
Treatment Processes
# Summary of Fidelity Results

<table>
<thead>
<tr>
<th></th>
<th>Percent of items meeting fidelity</th>
<th>Overall quality of session (1 is low, 5 is high)</th>
<th>Engagement (1 is absolutely unresponsive, 5 is extremely responsive)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session 1</strong></td>
<td>M 94.2</td>
<td>SD 10.8</td>
<td>M 3.7</td>
</tr>
<tr>
<td><strong>Session 2</strong></td>
<td>M 90.8</td>
<td>SD 17.3</td>
<td>M 3.4</td>
</tr>
<tr>
<td><strong>Session 3</strong></td>
<td>M 77.4</td>
<td>SD 17.2</td>
<td>M 3.0</td>
</tr>
<tr>
<td><strong>Session 4</strong></td>
<td>M 90.1</td>
<td>SD 17.5</td>
<td>M 3.2</td>
</tr>
</tbody>
</table>
Therapeutic Alliance Scale for Adolescents (TASA)
Multidimensional Adolescent Satisfaction Scale (MASS)
Results
School MH Engagement and MH Services Received
BRISC students were more likely to engage in SMH at 2 mos, but less likely at 6 mos
Next Steps after 4 sessions: BRISC clinicians report more treatment closure

- Concluded SMH
- Referred to school svc(s)
- Referred to more intensive MH svc
- Continued with BRISC/SAU
- Other/missing

<table>
<thead>
<tr>
<th>Outcome</th>
<th>BRISC</th>
<th>SAU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concluded SMH</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Referred to school svc(s)</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>Referred to more intensive MH svc</td>
<td>30%</td>
<td>10%</td>
</tr>
<tr>
<td>Continued with BRISC/SAU</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Other/missing</td>
<td>20%</td>
<td>10%</td>
</tr>
</tbody>
</table>
BRISC students showed less use of all MH services over time.

Both groups declined over time, $p < 0.05$.

BRISC group declined at a faster rate, $p = 0.01$.

Both groups declined over time, $p < 0.01$.

BRISC group declined at a faster rate, $p = 0.01$. 
Results

Clinician Perceptions
On a scale of 1 to 10, with **1 being not at all motivated and 10 extremely motivated**, how motivated are you to continue to use BRISC?

![Bar chart showing motivation levels]

- **n = 22**
- **Mean = 7.32**
- **SD = ±1.76**
Data collected from BRISC clinicians ONLY

On a scale of 1 to 10, where 1 means much less effective and 10 means much more effective, how would you rate your effectiveness as a clinician when you use the BRISC intervention?

Effectiveness as a clinician when using the BRISC intervention

- Number of clinicians endorsed
- Much less effective
- Much more effective

- n = 22
- Mean = 7.27
- SD = ±1.28
To what extent are you satisfied with the content of BRISC, where 0 means not at all and 4 means extremely?

Satisfied with the content of BRISC

Number of clinicians endorsed: 11

- Not at all: 0
- 1
- 2
- 3: 11
- 4: 4

n = 22
Mean = 3.23
SD = ±0.69
Data collected from BRISC clinicians ONLY

How well organized and delivered did you find the content of BRISC, where 0 means not at all and 4 means extremely?

- **n = 22**
- **Mean = 3.41**
- **SD = ±0.73**
Data collected from BRISC clinicians ONLY

How comfortable are you with using BRISC, where 0 means not at all and 4 means extremely?

How comfortable are you with using BRISC

<table>
<thead>
<tr>
<th>Number of clinicians endorsed</th>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>Mean = 3.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD = ±0.66</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Qualitative Feedback from BRISC Clinicians

Overall comments on BRISC

- Thought it was a great model. I love the approach.
- I'm glad I was trained in BRISC and that I was able to use it as a tool in my toolbox with students.
- The students all reported that [the problem solving approach] was useful.
- BRISC was a very useful way to engage students that maybe didn't need ongoing therapy. It helped us to reach out to our referrals more effectively. The skills used were applicable for our clients, and it was a fun intervention to implement.
- I found the BRISC to be helpful for students, but often the students I work with need additional work rather than just Problem-Solving skills.

Comments on the Progress Monitoring focus

- The kids seemed to respond well to it, and it helped to keep them on track and consistent.
- The assessments were easy to administer, and I think they demonstrated a lot of growth for our clients.
- Monitoring stress themselves was powerful but PHQ and GAD did not seem to make as much of an impact on the clients when processing it.

Clinician perspectives: BRISC Support & Consultation

- It was helpful to know I was on track and to hear other options for how to respond.
- The phone consultation was very helpful, hearing the challenges of the other clinicians, and receiving encouragement and advice.
- Amazing, so great to just have someone to talk to and run questions about the process by.
- Kristy was great. Helpful to answer questions and give different perspectives on how to approach model.
- Almost everything [Elizabeth] said and did was helpful. Thank you so very much Elizabeth, I felt honored to coordinate care with you. I have learned a great deal from you. I hope our paths keep crossing in life.
Qualitative Feedback from BRISC Clinicians

Overall comments on BRISC: Concerns

A representative comment from many clinicians:

- I think that this is a good intervention for the school guidance counselors, who are dealing with the academic challenges of the students. Not as good for the students who are experiencing severe mental health issues.
- BRISC seems more appropriate for social workers, school counselors and therapists working for a level 2 students. It is a good triage tool but its helpfulness if minimized when working with a level 3 student.

Challenges with Consultation

- After having gone through one full 4 session series with a client it was pretty easy and calls no longer felt necessary. Would have preferred to have the option of contacting Elizabeth for feedback as needed or every other month, instead of needing to clear calendars for calls no matter what.
- It was hard to take time out of the day for the consultation, I have a lot of students on my caseload.
- Often it took away time from other aspects of my job.

Recommendations for BRISC support in the future

Most clinicians thought the approach was useful as is, but some had suggestions:

- Maybe more BRISC training days sprinkled throughout the study
- It would have been helpful to potentially hear other recorded BRISC sessions from other clinicians and see how they approached certain topics of the curriculum
- Fewer consult call requirements
- Have more time slots for the coaching calls. Also, somehow, make the initial interviews easier to coordinate
- Make the training easier and the session instructions simpler
- Clearly communicate student requirements/qualifications and be more flexible with some of the qualifications
Results

Student Outcomes
Youth Top Problems Assessment (YTPA)

Both groups improved over time $p < 0.01$

BRISC group improved at a faster rate $p < 0.01$

$\text{YTPA: Mean score}$
Generalized Anxiety Disorder 7-item (GAD-7) & Patient Health Questionnaire (PHQ-9)

Both groups improved over time $p < 0.01$

Both groups improved over time $p < 0.01$
Among students with Anxiety at baseline, anxiety improved more for BRISC group

BRISC students less likely to have anxiety at 6 months at p<.05
Columbia Impairment Scale (CIS)

Both groups improved over time

\[ p < 0.01 \]
Among students with clinical levels of impairment, greater improvement for BRISC group

BRISC students less likely to be in clinical range at 6 months at p=.07
Brief Problem Checklist (BPC)

Both groups improved over time
- $p < 0.05$

Both groups improved over time
- $p < 0.01$

Both groups improved over time
- $p < 0.01$
Academic Questionnaire (AQ)

**AQ: Total number of days in which a negative event happened**

**AQ: Total number of days in which a positive event happened**
Race x Condition - BPC

BPC: Internalizing

BPC: Externalizing

BPC: Total Score
Race x Condition - GAD-7 & PHQ-9

GAD-7: Total sum score

PHQ-9: Total sum score

GAD-7: Score in anxiety categories

PHQ-9: Score in depression categories
Discussion
Findings, implications, next steps
SMH clinicians provided mostly positive feedback on BRISC

• SMH Clinicians assigned to BRISC:
  – Were able to provide BRISC with fidelity
  – Gave positive ratings of feasibility, learnability, acceptability
    • Some clinicians concerned about applicability to students with high levels of need
  – Reported students responded well to engagement, assessment, problem solving activities
  – Reported significantly greater rates of treatment completion after 4 sessions
    • ...and higher rates of referral to specialized/intensive MH
Student level outcomes of BRISC were encouraging

• Students assigned to BRISC schools/clinicians:
  – Were more likely to report receiving SMH services at 2 mos
  – Were less likely to still be in SMH at 6 mos
  – Were less likely to receive a range of other MH services (incl. community and inpt) at 6 mos
  – Reported significantly greater “top problem” resolution over time
  – Were significantly more likely to move out of clinical range for anxiety and MH impairment
Implications

- Training SMH providers on a structured engagement, assessment, brief intervention, and triage strategy may promote greater efficiency, problem resolution, and MH outcomes
  - However, fit between this strategy and the practitioner’s role is key
  - Ensuring “fit” to the school and MH organization is critical – as is developing readiness
Future Directions

• Analyses remain:
  – Differences in treatment processes between groups
  – Analyses by SMH clinician fidelity, youth/parent/school characteristics

• Refinement of BRISC model
  – Including adaptation to school staff

• Development of easily accessible training and consultation options
Thank you!

- ebruns@uw.edu
- shoover@som.umaryland.edu
- Mark.sander@Hennepin.us
- @SMARTctr; @ericjbruns