Engaging High School Teachers in Connecting Students to Mental Health Care Using an Online Professional Development Simulation

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Disclosure

Glenn Albright and Jennifer Spiegler report that they have an employment agreement with Kognito, the company that developed the *At-Risk for High School Educators* simulation.

Shashank Joshi, Mina Fazel, Nancy Lever and Nadia Jassim report no disclosures or conflicts related to this study.
Agenda

• Problem
• The Simulation
• Learning Model
• Demo
• Study Outcomes
• Implementation Example: Maryland
• Q & A
The Statistics

- Suicide rate among US adolescents has tripled over the past 60 years
- Suicide is the 2nd leading cause of death in this age group
- There are significant comorbidities among US adolescents:
  - Anxiety disorders which is the most prevalent condition (31.9%)
  - Behavior disorders (19.1%)
  - Mood disorders (14.3%)
  - Substance use disorders (11.4%)
The Statistics

- Untreated mental illness can significantly impact:
  - Academic attendance and success
  - Concentration
  - Test anxiety
  - Peer and family relationships
  - Self-esteem
- Barriers to Help Seeking:
  - Lack of awareness and understanding of how psychological disorders might present in students by teachers, peers, and support staff
  - Cultural factors that involve stigma or perceived stigma of help seeking behaviors
Need for School Gatekeepers

Classroom teachers and school staff can serve a critical gatekeeping function in the early identification and referral of adolescents experiencing psychological distress.\(^1\)

While effective at identifying externalizing disorders, teachers have difficulty identifying students with internalizing disorders.\(^2\)

**Gatekeepers:**

1. Identify when a student is in psychological distress
2. Approach and talk with a student about your concerns
3. Make a referral to Mental Health Support Services

\(^2\)Cunningham JM and Suldo SM. School Ment Health 2014;6(4)237-250
Gatekeeper Training Modalities

1. Handouts
2. Lecture/Didactic/Powerpoint
3. Story-based Approaches
4. Modeling
5. Role-play
Kognito’s At-Risk for High School Educators

- 3 virtual role-play scenarios
- Online and self-paced
- Est 60 min to complete
- Developed with input from school mental health experts and hundreds of teachers
- Blended learning options – discussion guide
- Customization options
- Over 100,000 trained to date
Underlying Learning Methodologies for Teaching Effective Gatekeeper Skills
Gatekeeper Conversations Can Be Hard

To manage challenging conversations the cognitive system needs to monitor & regulate the emotional system.
Learning Model

Evidenced-Based Communication Tactics Drawn From Components of Neuroscience, Social Cognition, Adult Learning Theory and Applied Game Mechanics

• Motivational Interviewing
  • Providing affirmation
  • Asking open-ended questions
  • Reflective listening
  • Summarizing client statements

• Emotional Regulation
• Mentalizing or Theory of the Mind
• Empathy
• Empathic Accuracy or Cognitive Empathy
Why Virtual Humans?

Instructional Benefits:
• Safe to self-disclose, experiment
• Increase in engagement, openness
• Decrease in transference reactions
• Decrease social evaluative threat

Other benefits:
• Personalization of experience
• Reach geographically dispersed areas
• Support multiple languages
• Reduce costs of updates
Simulation Demo
Between Group Design:

- All participants completed a pre-survey (baseline) assessment.
- Treatment group completed the simulation then post and 3 month follow-up surveys.
- Compared intervention group’s post-training Gatekeeper Behavior Scale responses to baseline responses in the wait-list control.
  - Hotelling’s $T^2$ for overall scale comparison.
  - Independent sample $t$-tests to compare intervention and control on subscales and each item.
Total Enrolled (N=31,144)

Post-Hoc Random Assignment

Assigned to treatment group (n=15,460)
- Completed baseline survey (n=15,460)
  - Received experimental manipulation (n=15,460)
  - Completed post survey (n=15,460)
  - Completed follow-up survey (n=15,460)

Assigned to waitlist control group (n=15,684)
- Completed baseline survey (n=15,684)

Median completion time $x=104$ min
Measures

The Gatekeeper Behavior Scale (GBS) assessed educator attitudes\(^1\)

- **Preparedness (5 items)** (e.g. How would you rate your preparedness to recognize when a student’s behavior is a sign of psychological distress?)
- **Likelihood (2 items)** (e.g. How likely are you to have a discussion with a student about the signs of psychological distress they are exhibiting?)
- **Self-efficacy (4 items)** (e.g. I feel confident in my ability to have a discussion with a student exhibiting signs of psychological distress.)

Measures

Means efficacy was used to measure individuals’ belief in the utility of the tools available for performing a job\(^2\)

- **Means Efficacy (7 items)** (e.g. To what extent do you think the simulation is a useful tool?)
- **Changes in behavior from pre- to follow-up (3 items)** (In the past two academic months, approximately how many students have you: been concerned about; approached; referred to support services?)

### At-Risk High School Educators: Demographics (N=31,144)

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>19862</td>
<td>65.3</td>
</tr>
<tr>
<td>Male</td>
<td>10391</td>
<td>34.2</td>
</tr>
<tr>
<td>Transgender</td>
<td>40</td>
<td>0.1</td>
</tr>
<tr>
<td>Other</td>
<td>116</td>
<td>0.4</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>19655</td>
<td>66.3</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>2392</td>
<td>8.1</td>
</tr>
<tr>
<td>Hispanic</td>
<td>6263</td>
<td>21.1</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>201</td>
<td>0.7</td>
</tr>
<tr>
<td>Asian</td>
<td>546</td>
<td>1.8</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
<td>64</td>
<td>0.2</td>
</tr>
<tr>
<td>Multiple ethnicities</td>
<td>505</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>Primary Role</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher</td>
<td>21132</td>
<td>71.6</td>
</tr>
<tr>
<td>School Administrator</td>
<td>1669</td>
<td>5.7</td>
</tr>
<tr>
<td>Mental Health Professional/ Social Worker</td>
<td>1598</td>
<td>5.4</td>
</tr>
<tr>
<td>Administrative Assistant/Clerical</td>
<td>1175</td>
<td>4.0</td>
</tr>
<tr>
<td>Other (e.g., student teacher, teacher’s aide, healthcare provider, support staff)</td>
<td>3927</td>
<td>13.3</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M= 42.28, SD= 12.11</td>
<td></td>
</tr>
<tr>
<td><strong>Years working in education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M= 11.07, SD= 9.55</td>
<td></td>
</tr>
</tbody>
</table>
Satisfaction

- 95% rated simulation as “excellent”, “very good” or “good”

- 98% of participants agreed or strongly agreed that all educators in their school should take the simulation

- 95% indicated that they would recommend the simulation to a colleague
## Means Efficacy

<table>
<thead>
<tr>
<th>Means Efficacy Measure</th>
<th>% of Participants who Endorsed Each Option as “Great” or ”Very Great”</th>
</tr>
</thead>
<tbody>
<tr>
<td>A useful tool?</td>
<td>80.1%</td>
</tr>
<tr>
<td>Well constructed?</td>
<td>84.3%</td>
</tr>
<tr>
<td>Easy to use?</td>
<td>83.2%</td>
</tr>
<tr>
<td>Likely to help you with troubled students?</td>
<td>79.7%</td>
</tr>
<tr>
<td>Based on scenarios relevant to you and your students?</td>
<td>79.9%</td>
</tr>
<tr>
<td>Able to aid you in getting timely help to your students?</td>
<td>79.1%</td>
</tr>
</tbody>
</table>
Attitudinal Measures Preparedness, Likelihood & Self-Efficacy Gatekeeper Behavior Scale (N=31,144, p<.001)

**Preparedness Composite**
Preparedness to identify, approach, and talk to and refer to mental health support services

**Likelihood Composite**
Likelihood to discuss concerns and recommend support services

**Self-Efficacy Composite**
Confidence in their ability to discuss concerns, recommend support services, and help a suicidal student seek help
Part of the role of educators is to connect students experiencing psychological distress with mental health support services.
Attitudinal Measure: Preparedness by Race/Ethnicity (p<.001)
Attitudinal Measure: Likelihood by Race/Ethnicity (p<.001)
Attitudinal Measure: Self-Efficacy by Race/Ethnicity (p<.001)
Gatekeeper Behavioral Change (n=1724, p<.05)

In the past two academic months, approximately how many students have you...

- Referred to school support services
- Approached to discuss your concern
- Been concerned about

*Control* | *Treatment (Simulation)*
---|---
1.0 | 1.2
1.4 | 1.6
1.8 | 2.0
2.2 | 2.4

*n=1724 due to high level of attrition between those who took the post survey and the follow up survey*
Gatekeeper Behavioral Change: Teacher Subsample
(n=1120, p<.001)

In the past two academic months, approximately how many students have you...

- Referred to school support services
- Approached to discuss your concern
- Been concerned about

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Treatment (Simulation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred to school support services</td>
<td>1.00</td>
<td>1.50</td>
</tr>
<tr>
<td>Approached to discuss your concern</td>
<td>1.25</td>
<td>1.75</td>
</tr>
<tr>
<td>Been concerned about</td>
<td>1.00</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Control

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Treatment (Simulation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred to school support services</td>
<td>1.00</td>
<td>1.50</td>
</tr>
<tr>
<td>Approached to discuss your concern</td>
<td>1.25</td>
<td>1.75</td>
</tr>
<tr>
<td>Been concerned about</td>
<td>1.00</td>
<td>2.00</td>
</tr>
</tbody>
</table>
Limitations

- Those who dropped out have higher Preparedness, Likelihood, and Self-Efficacy scores than those who remained to complete the post-test
- Self-reported data
- Gaining access to the schools’ support services (counseling) referral records would have allowed us to further measure the impact of the intervention
Implementation: Howard County, Maryland

- Statewide access to Kognito At-Risk Modules for K-12 educators through SAMHSA 5-year Garrett Lee Smith (GLS) Grant
- State policy (HB-0920 – Lauryn’s Law Expansion) requiring all certificated staff to complete suicide prevention training
  - Lauryn’s Law first passed in 2015
Implementation Strategies: Howard County Public Schools

- Stakeholder Buy-In
  - Recommended by Board of Education for all HCPSS staff and supported by Executive Leadership
- Develop implementation plan for roll out
- Advertising/Marketing to teachers
- Addressing questions and concerns through FAQ fact sheets
- Providing time for educators to take training and setting deadlines
- Offering continuing education credits as an incentive
The HCPSS Mental Health Task Force identified a need for classroom teachers to receive training in how to recognize warning signs of students experiencing mental health concerns. The September 17, 2015 BOE Report recommended and supported implementation of the “At-Risk for Educators: Recognize Students in Distress and Connect Them With Help” developed by Kognito and included in the SAMHSA National Registry of Evidence-Based Programs and Practices. Key program features are:

- One-hour avatar-based online training simulation that prepares educators to identify, approach and refer students exhibiting signs of suicidal ideation, substance use/abuse, and psychological distress, including depression and anxiety.
- Practice and role-play real-life situations with fully animated and emotionally responsive virtual humans (avatars) to help educators learn effective communication tactics for managing these challenging conversations.
- The training is funded by the University of Maryland Center for School Mental Health and is endorsed by the Maryland State Department of Education. The link for the training program is https://md.kognito.com

### 2015 Building the Foundation

<table>
<thead>
<tr>
<th>Role</th>
<th>Date</th>
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<tbody>
<tr>
<td>School Psychologists</td>
<td>January 13th</td>
</tr>
<tr>
<td>Pupil Personnel Workers</td>
<td>February 4th</td>
</tr>
<tr>
<td>Cluster Nurses</td>
<td>February 24th</td>
</tr>
<tr>
<td>Alternative Education</td>
<td>March 18th</td>
</tr>
<tr>
<td>Special Education Full Staff</td>
<td>April 27th</td>
</tr>
<tr>
<td>Elementary School Counselors</td>
<td>December 12th</td>
</tr>
<tr>
<td>Middle School Counselors</td>
<td>November 18th</td>
</tr>
<tr>
<td>High School Counselors</td>
<td>January 14th &amp; 15th</td>
</tr>
<tr>
<td>Overview for School Administrators</td>
<td>November 2015</td>
</tr>
<tr>
<td>Curriculum &amp; Instruction</td>
<td>TBD</td>
</tr>
</tbody>
</table>

### 2016 School Implementation

- **Who:** All Certified Staff
  - **When:** January - June 2016

- **Who:** Additional School Staff
  - **When:** August - December 2016

- **Options for Completion:**
  - Two 30-minute PIP or Other Planning Time
  - Before/After School Faculty Meeting
  - School-based Professional Learning Day

- Earn one CPD/CEU from Kognito for training.

**Updated 11.6.15**
At-Risk Training for Educators: 
Recognize Students in Distress and Connect Them With Help

FREQUENTLY ASKED QUESTIONS

The Howard County Public School System (HCPSS) has adopted the “At-Risk for Educators” training developed by Kognito for completion by all certified staff. This one-hour, avatar-based, interactive, online program is designed to provide training in how to recognize warning signs of students experiencing mental health concerns such as suicidal ideation, substance use/abuse and psychological distress, including depression and anxiety. Below are responses to frequently asked questions about this training:

1. What is Kognito?
   Founded in 2003, Kognito works with learning experts, psychologists, instructional designers, software engineers and others to transform health and mental health through challenging conversations. Kognito is the only company with digital simulations listed in the SAMHSA National Registry of Evidence-Based Programs and Practices (NREPP).

2. Is there a cost for this training?
   No. The University of Maryland Center for School Mental Health (CSMH) is supporting this training for all Maryland educators. The Maryland State Department of Education (MSDE) has endorsed this training for the entire school workforce.

3. How long does it take to complete the training?
   The training takes an average of 45-60 minutes to complete. Typically the elementary module can be completed in 45 minutes while the high school module requires 60 minutes.

4. Am I required to complete the training in one session?
   No. Conversations regarding mental health can be difficult and/or challenging. It is important that you take breaks during the training as needed.
## Results: Howard County Public School System Utilization Rates

<table>
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<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elem</strong></td>
<td>NA</td>
<td>140</td>
<td>259</td>
<td>2282</td>
<td>31</td>
<td>63</td>
<td>2775</td>
</tr>
<tr>
<td><strong>Middle</strong></td>
<td>1</td>
<td>191</td>
<td>184</td>
<td>945</td>
<td>12</td>
<td>4</td>
<td>1337</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>5</td>
<td>231</td>
<td>162</td>
<td>1815</td>
<td>37</td>
<td>28</td>
<td>2278</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6</td>
<td>562</td>
<td>605</td>
<td>5042</td>
<td>80</td>
<td>95</td>
<td>6390*</td>
</tr>
</tbody>
</table>

*78.5% of ALL HCPSS Staff (Total = 8,136)
Implementation: Baltimore County Public Schools

• National Institute for Justice grant – Violence prevention in schools
• Strategy – incentivize teachers to take Kognito (approximately $29)
• Teachers and school staff in 20 schools in a Maryland school district (N= 1573)

• Part of a larger initiative:
  • A randomized controlled trial of the impact of the Comprehensive Emotional and Behavioral Health Crisis Response and Prevention Intervention (EBH-CRP) on school safety, funded by the Department of Justice, National Institute of Justice.
  • Kognito At-Risk training was identified as a universal prevention intervention in the multi-tiered EBH-CRP.
Baltimore County Public Schools Participants

- 20 schools in the Intervention condition in the EBH-CRP randomized controlled trial participated in the Kognito At-Risk pilot training and incentive program (N=1573).
  - 2 high schools, 5 middle schools and 13 elementary schools.

- School staff in the 20 schools in the EBH-CRP Comparison group served as the comparison group for the pilot training and incentive program (N=1459).
  - 2 high schools, 4 middle schools, and 14 elementary schools.
### Results: Baltimore County Public Schools

<table>
<thead>
<tr>
<th>Intervention Group</th>
<th>Completed Courses</th>
<th>Total School Staff Eligible</th>
<th>Percentage Of Eligible School Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>500</td>
<td>847</td>
<td>59%</td>
</tr>
<tr>
<td>Middle School</td>
<td>175</td>
<td>387</td>
<td>45%</td>
</tr>
<tr>
<td>High School</td>
<td>157</td>
<td>339</td>
<td>46%</td>
</tr>
<tr>
<td>Total Intervention Group</td>
<td>832</td>
<td>1573</td>
<td>53%</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Comparison Group</th>
<th>Completed Courses</th>
<th>Total School Staff Eligible</th>
<th>Percentage Of Eligible School Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>2</td>
<td>780</td>
<td>0.26%</td>
</tr>
<tr>
<td>Middle School</td>
<td>1</td>
<td>376</td>
<td>0.26%</td>
</tr>
<tr>
<td>High School</td>
<td>0</td>
<td>303</td>
<td>0%</td>
</tr>
<tr>
<td>Total Comparison Group</td>
<td>3</td>
<td>1459</td>
<td>0.21%</td>
</tr>
</tbody>
</table>
Implementation Strategies for Future Users: Lessons Learned

- Buy-in and communication from school leadership with clear deadlines
- FAQ fact sheet available
- Accompanying the “At-Risk for Educators” with an in-person presentation on school suicide prevention policy
- Point of Contact at each school to support the roll-out
- Allocated time to complete training
- Monetary incentive (even minor)
Q&A

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<table>
<thead>
<tr>
<th>Subscale</th>
<th>Number</th>
<th>Item</th>
<th>Response scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preparedness</strong></td>
<td></td>
<td>How would you rate your preparedness to:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Recognize when a student’s behavior is a sign of psychological distress;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Recognize when a student’s physical appearance is a sign of psychological distress;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Discuss with a student your concern about the signs of psychological distress they are exhibiting;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Motivate students exhibiting signs of psychological stress to seek help;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Recommend mental health support services (such as the counseling center) to a student exhibiting signs of psychological distress.</td>
<td></td>
</tr>
<tr>
<td><strong>Likelihood</strong></td>
<td>6</td>
<td>How likely are you to discuss your concerns with a student exhibiting signs of psychological distress?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>How likely are you to recommend mental health/support services (such as the counseling center) to a student exhibiting signs of psychological distress?</td>
<td></td>
</tr>
<tr>
<td><strong>Self-Efficacy</strong></td>
<td></td>
<td>Please rate how much you agree/disagree with the following statements:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>I feel confident in my ability to discuss my concern with a student exhibiting signs of psychological distress.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>I feel confident in my ability to recommend mental health support services to a student exhibiting signs of psychological distress.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>I feel confident that I know where to refer a student for mental health support.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>I feel confident in my ability to help a suicidal student seek help.</td>
<td></td>
</tr>
</tbody>
</table>