

Online Role-Play Simulations with Intelligent Avatars Early Detection of Native Youth Psychological Distress

Glenn Albright, Ph.D, Baruch College of the City University of New York

Jami Bartgis, Ph.D , University of Oklahoma, Indian Country Child

Trauma Center

Jennifer Spiegler, Kognito

Sutton King, Kognito

Disclosures

Glenn Albright - Co-Founder & Director of Research - Kognito
Jennifer Spiegler - SVP Strategic Partnerships - Kognito
Sutton King - Research Coordinator - Kognito

Agenda

- Background
- About Kognito
- Kognito Behavior Change Model
 - Advantages of Virtual Humans
 - Instructional Design
 - Social Cognition and Neuroscience of Conversations
- Simulation Demo
- Research Findings
- Simulations Freely Available to Indian Country
- What's in the Works
- Q&A

Barriers to Mental Wellness in Indian Country

Family Level

- Overburdened by health disparities, including suicide
- Historical/Intergenerational trauma as a unique risk factor

System Level

- Lack of adequate funding
- High stress/turnover
- Remote locations
- Lack of culturally tailored interventions

Need for culturally-based sustainable solutions

Instructional Approaches to Change Attitudes and Behaviors

Handouts: Flyers and Brochures

YOUR 5 MINUTES COULD BE A LIFELINE FOR SOMEONE ELSE

TAKE 5 TO SAVE LIVES

f /take5tosavelives
t @take5savelives
#take5
#WSPD

Today is World Suicide Prevention Day, and I'm Taking 5 to Save Lives! Join the movement by **SHARING THIS POST** & going to: Take5toSaveLives.org

- 1 LEARN THE SIGNS
- 2 JOIN THE MOVEMENT
- 3 SPREAD THE WORD
- 4 SUPPORT A FRIEND
- 5 REACH OUT

Take5toSaveLives.org

The flyer features a graphic of five hands of different colors (yellow, purple, blue, red, teal) arranged in a staircase pattern, with numbers 1 through 5 on each hand corresponding to the list of steps.

PowerPoints

Presentation Overview

- Overview of Suicide Prevalence
- Purpose of Crisis Management
- Definition of a Crisis
 - Crisis Prevention
 - Identifying a Crisis / Symptoms of a Crisis
 - Crisis Intervention
 - Safety Contracts
 - Proper Utilization of Resources
 - Crisis Resolution
 - Crisis Follow-up
- Crisis Assessment & Documentation
 - Interviewing Skills
 - Mental Status Examination
 - Level of Risk



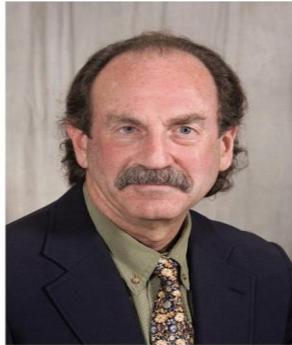
Lectures & Videos

2015 Patricia F. Waller Lecture

Suicide prevention is a winnable battle...if...

Suicide was the leading cause of injury death in North Carolina in 2012 and 2013. And it's not just a problem in the Tar heel state. Suicide rates have risen steadily across the country since 1999.

Join us for a presentation by Eric Caine, M.D., a leading researcher in the field of risk factors for suicide and ways to prevent suicide. He will discuss the necessity of considering how best to develop collective, community-based programs that deal with both individual and contextual factors that contribute to suicide. These programs are built upon an understanding of the social geography of communities, identifying where we can engage distinct populations and the social ecology of groups bearing specific risks.



Monday, April 13

Lecture 1:00 p.m.
Reception to follow

This lecture is free and open to the public.

George Watts Hill Alumni Center
150 Stadium Drive, UNC Chapel Hill Campus

Paid visitor parking is available in the Rams Head Deck.

Eric D. Caine, M.D.

John Romano Professor and Chair
Department of Psychiatry, University of Rochester Medical Center, and
Director, Injury Control Research Center for Suicide Prevention (ICRC-S)

Sponsored by:



UNC
INJURY PREVENTION
RESEARCH CENTER



UNC
COLLEGE OF
ARTS & SCIENCES
Department of Psychology

Modeling or Observational Learning



Story-Based Approach



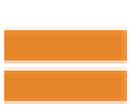
Role-Play: Most Effective

- Utilize story approach to set context
- High fidelity (instruction, setting, repeatability, etc.)
- Culturally sensitive
- Immediate feedback
- Changing attitudes and behaviors

About Kognito

Creates simulations featuring
virtual humans to enable
conversations that make a
difference

Leading to meaningful changes in social, emotional, and
physical health.

 **Kognito**



Kognito: A Developer of Immersive Role-Play Simulations with Virtual Humans

- User assumes role of an avatar and engages in conversations with virtual humans
- Goal is to learn to bring about behavior change in **others and/or in yourself**
- Practice Conversations
- Intelligent, emotionally responsive avatars in distress
- Adapt behaviors based on role-playing



Addresses What Users Want?

- Engaging, no “page-turners”
- 24/7, online and mobile
- Just-in-time
- Expand the scope of traditional mental health & awareness training
- Private learning experience



Why Virtual Humans?

Engagement Benefits

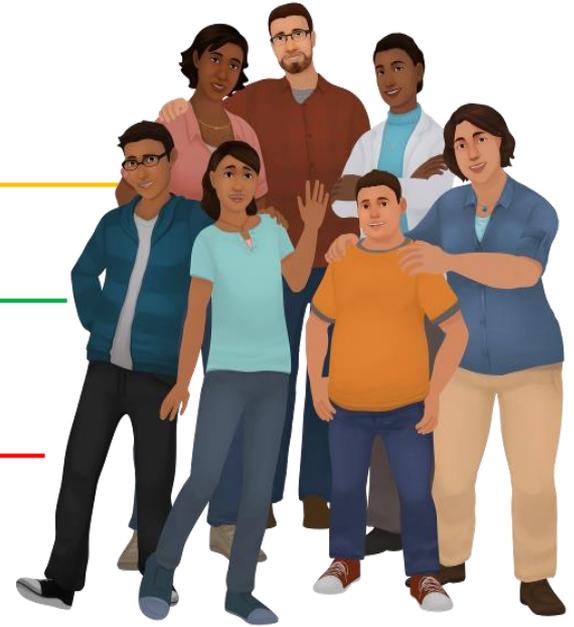
- Adjust level of realism to target audience
- VH appearance, gender, voice, language
- Decrease in transference reactions

Instructional Benefits

- Safe to experiment
- Openness to feedback
- Situated learning
- Reduction in social evaluative threat when compared to videos or in workshop role-plays

Cost Benefits

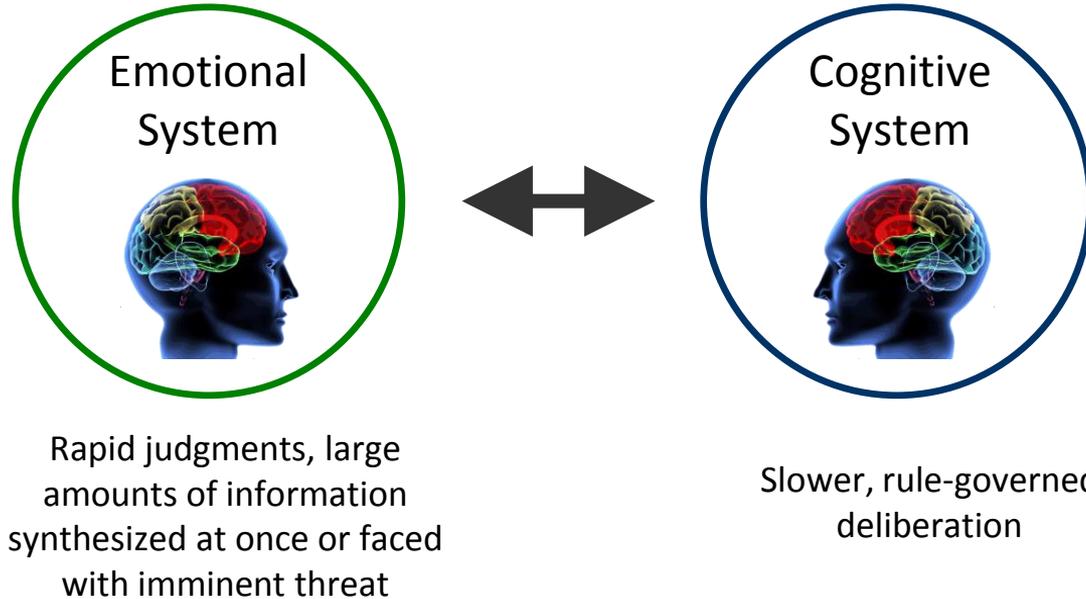
- Easy to update (“virtual humans don’t age”) resulting in lower cost of ownership and longer shelf life



Virtual AI/AN Characters



Learning Model: Basic Neuroscience of Effective Conversations



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

Motivational Interviewing

Similar to Strength Based Training

Collaborative, person-centered way of talking to bring out and strengthen a person's motivation for change. "... It's a way of being with people" (Miller and Rollnick, 2009).

Numerous meta-analyses from weight loss, smoking cessation, adolescent substance abuse, problem drinking and primary care.

Core MI Skills (OARS)

- **O**pen-ended questions
- **A**ffirming
- **R**eflective listening
- **S**ummarizing

Four Principles

- Express Empathy
- Develop Discrepancy
- Roll with Resistance
- Support Self-Efficacy

Communication Skills: Empathy

Empathy

The capacity to feel emotions of another human Being



Empathic Accuracy or Cognitive Empathy

Ability to correctly assess/identify emotions of others



Emotional Regulation/Emotional Self-Regulation

- Focusing attention on a task while regulating emotions that drive inappropriate behaviors

Strategies:

- Situational Modification
- Reappraisal Strategy*



Mentalizing or Theory of the Mind

Ability to attend to the minds of others and accurately assess what they think or know as independent agents



DEMONSTRATION

Study Methods

- 983 AI/AN students and educators
- 86 matched pairs
 - Pre/post 3-month
 - 19 middle/high schools
 - 42 colleges
 - 19 states
- Repeated Measures ANOVA
- At-Risk Modules
 - University & College Faculty
 - College Students
 - High School Educators
 - Middle School Educator

Methodology

1. Pre-Training Survey

- Gatekeeper Behavior Survey (GBS)
- Self-reported helping behaviors

2. Completed one of four simulations

3. Post Training Survey – GBS & means efficacy and demographics

4. Three Month Follow-up Survey – GBS & helping behaviors

Gatekeeper Behavior Scale – 11 items

Preparedness

- How prepared are you to:
 1. Recognize when a student veteran's behavior is a sign of psychological distress?
 2. Recognize when a student veteran's appearance is a sign of psychological distress?
 3. Discuss with a student veteran your concern about signs of psychological distress they are exhibiting?
 4. Motivate student veterans exhibiting signs of psychological distress to seek help?
 5. Recommend mental health support services (such as the counseling center) to a student veteran exhibiting signs of psychological distress?

Likelihood

- How likely are you to:
 1. Discuss your concerns with a student veteran's exhibiting signs of psychological distress?
 2. Recommend mental health/ support services (such as the counseling center) to a student veteran exhibiting signs of psychological distress?

Self-Efficacy

- Please rate how much you agree/disagree with the following statements:
 1. I feel confident in my ability to discuss my concern with a student veteran exhibiting signs of psychological distress
 2. I feel confident in my ability to recommend mental health support services to a student veteran exhibiting signs of psychological distress
 3. I feel confident that I know where to refer a student veteran for mental health support
 4. I feel confident in my ability to assist a student veteran seeking help

Demographics

Race/Ethnicity ^a	Faculty/Staff (N = 1505)	Students (N= 531)	High School Educators^b (N = 775)	Middle School Educators (N = 484)
American Indian or Alaska Native	2.7%	3.6%	1.3%	3.3%
White/Caucasian	87.6%	81.4%	65.9%	88.4%
Black or African American	9.2%	12.4%	3.5%	9.9%
Asian	4.3%	11.5%	1.5%	1.7%
Native Hawaiian or other Pacific Islander	0.5%	1.0%	0.6%	0.6%
Hispanic	6.2%	1.7%	15.2%	22.7%

Number of Users by Race and Type of KGS Completed

^a Participants could choose more than one category. Hispanic is a separate item from race, as it is considered an ethnicity. ^b Some participants were not asked demographic questions

Demographics

Demographic Information for Each KGS

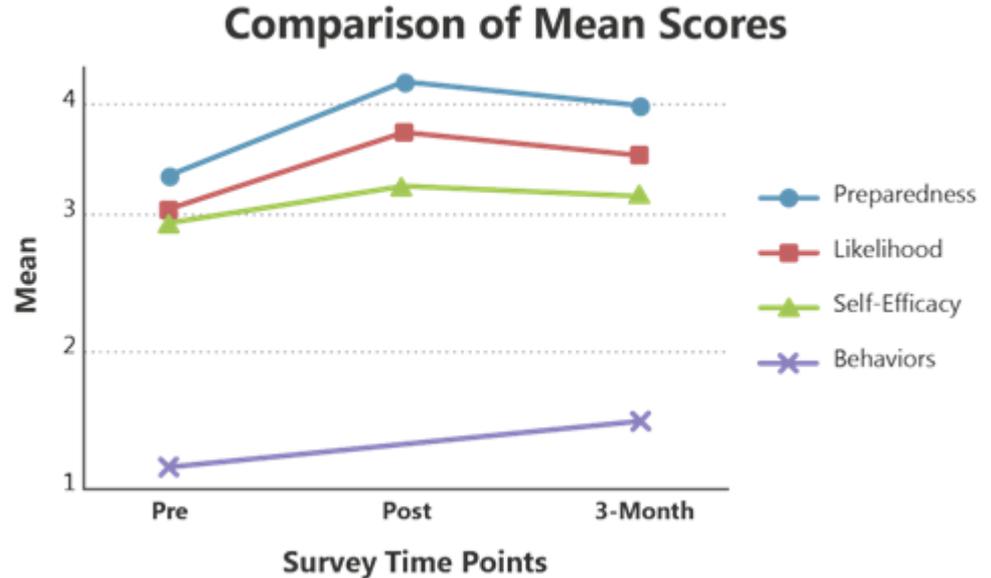
	Faculty/Staff (N=41)	Students (N=19)	High School Educators (N=10)	Middle School Educators (N=16)
<u>Gender</u>				
Male	21.9%	15.8%	40.0%	18.7%
Female	78.1%	84.2%	60.0%	81.3%
<u>Age</u>				
(in years) 25 and younger	11.1%	89.5%	0.0%	6.2%
26-35	11.1%	0.0%	55.6%	12.5%
36-45	22.2%	10.5%	11.1%	43.8%
46-55	33.3%	0.0%	33.3%	18.7%
Older than 55	22.2%	0.0%	0.0%	18.8%
<u>Years of Working in Education or Student Rank</u>				
< 3	20.0%	37.0% Freshman	40.0%	12.5%
3-5	30.0%	10.5% Sophomore	20.0%	18.8%
6-10	20.0%	31.6% Junior	30.0%	31.2%
> 11	30.0%	15.8% Senior; 5.2% Graduate Student	10.0%	37.5%

Means Efficacy

Please indicate to what extent you think that the course is:	To a Very Great Extent	To a Great Extent	To Some Extent	To a Little Extent	Not at All/ To a Very Little Extent
A useful tool	29.8%	48.8%	20.2%	1.2%	0.0%
Well constructed	31.3%	59.0%	9.6%	0.0%	0.0%
Easy to Use	47.1%	43.5%	5.9%	2.4%	1.2%
Likely to help you with students in psychological distress	36.0%	46.7%	16.0%	1.3%	0.0%
Based on scenarios that are relevant to you and your students	38.5%	36.9%	20.0%	4.6%	0.0%
Aid you in getting timely help to your students	28.6%	41.7%	27.4%	2.4%	0.0%

Significant Findings

- Increase preparedness to help student in distress
- Increase in participants likelihood to help
- Increase in self-efficacy to intervene



Advantages & Limitations

- **Advantages:**

- No risk, private, encourages exploration.
- Addresses role-play social evaluative threat or embarrassment
- Sustainable
- Customized resource page
- Cost effective
- Reach geographically dispersed populations
- High fidelity – not dependent on skill and experience of trainer
- Mobile applications
- Institutional advantages

-

Limitations:

Quasi experimental design

Self-reported behavior

Selection bias

Sample size

Cultural adaptations

Simulations Available Free in Indian Country



- 60-90 minutes (**Two Class Periods**)
- Listed in (NREPP)
- Listed in SPRC/AFSP Best Practices Registry

- Peer support for high school students
30-45 minutes (**One Class Period**)
- Listed in SPRC/AFSP Best Practices Registry

For Free Access: Contact
TribalYouthTACenter@OUHSC.edu

Law Enforcement Professionally Culturally Tailored

- The Indian Country Child Trauma Center (ICCTC) in partnership with Kognito, awarded by the OJJDP
- Teaches Tribal LEP's youth trauma-informed policing
- Teaches historical trauma, intergenerational trauma and present day trauma



Group Exercise

- Please break into groups of 3-4
- List as many barriers that exist when implementing technology based mental health support programs within Indian Country
- How might we overcome these barriers?





Q&A

Contact

Glenn Albright, Ph.D. - Glenn.albright@baruch.cuny.edu

Jami Bartgis, Ph.D. – Jami-Bartgis@ouhsc.edu

Jennifer Spiegler - Jennifer@kognito.com

Sutton King - Sutton@kognito.com