Kognito Family of Heroes

Kognito Family of Heroes is a 1-hour, online role-playing training simulation for military families of servicemembers recently returned from deployment (within the past 4 years). The training is designed to: (1) increase awareness of signs of postdeployment stress, including posttraumatic stress disorder (PTSD), traumatic brain injury (TBI), depression, and suicidal ideation, and (2) motivate family members to access mental health services when they show signs of postdeployment stress. Targeted primarily to family members (e.g., spouses and parents), who often have the most contact with veterans, the training also can be appropriate for friends, caregivers, or colleagues of veterans. Through the training, family members learn:

- What to expect when a veteran returns from deployment

- What postdeployment stress is and how to identify it

- How to de-escalate arguments and negotiate family responsibilities

- How to talk with a veteran about seeking professional help

- How to find support services appropriate for veterans and their families

The training engages users in practice conversations with avatars that act and respond like real veterans experiencing postdeployment stress. In one such role-play conversation, users assume the role of the wife of a veteran who is experiencing PTSD and mild TBI and learn skills to de-escalate an argument. In another scenario, users assume the role of a mother whose son is exhibiting signs of depression and thoughts of suicide and learn skills to motivate the son to seek support services. These simulations are authored and delivered using Kognito's proprietary Human Interaction Game Engine, which is based on research in social cognition, neuroscience, and motivational interviewing. Additional features of the course include a local resources button with information on nearby medical centers, VA hospitals, and community clinics; links to other resources for veterans and military families; and a printable summary of key techniques discussed in the training.

Kognito provides the course under licensing agreements to military units, veterans service organizations, and State agencies, which typically make the course available to servicemembers and their families at no cost. One member of the institution usually serves as an administrator for the course. Program setup requires 1 hour of the administrator's time and is conducted via an online meeting. Depending on the institution's infrastructure, goals, and overall suicide prevention strategy, administrators can expect to spend 2-8 hours per month disseminating and promoting the course to users.

Family of Heroes is part of a suite of online role-play training simulations offered by Kognito. Other courses are available for a variety of other target populations (See Adaptations section below).

Descriptive Information

Areas of Interest	Mental health promotion
Outcomes	**Review Date: July 2012** 1: Preparedness to recognize signs of postdeployment stress 2: Preparedness to discuss concern with veteran and motivate him or her to seek help at a VA hospital or Vet center 3: Self-efficacy in motivating veteran to seek help at a VA hospital or Vet center 4: Intention to approach veteran to discuss concerns 5: Intention to mention the VA as a helpful resource
Outcome Categories	Mental health Suicide
Ages	18-25 (Young adult) 26-55 (Adult) 55+ (Older adult)
Genders	Male Female
Races/Ethnicities	American Indian or Alaska Native Asian Black or African American Hispanic or Latino White
Settings	Home
Geographic Locations	Urban Suburban Rural and/or frontier
Implementation History	Kognito Interactive developed Family of Heroes in collaboration with the Department of Veterans Affairs NY/NJ Veterans Healthcare Network. Since the program's release in November 2011, a number of organizations have purchased a license to make the training freely available to families, caregivers, friends, colleagues, and coworkers of veterans within their geographic areas. Organizations providing the training include

	the Kentucky National Guard, the Air Force Space Command (serving military families and servicemembers in California, Colorado, Florida, Georgia, Illinois, and Texas), the VA of New York/New Jersey, the Virginia Department of Health, the Arizona Department of Health Services, and the Ohio Suicide Prevention Foundation. More than 62,000 people have accessed the course as of April 2013.
NIH Funding/CER Studies	Partially/fully funded by National Institutes of Health: No Evaluated in comparative effectiveness research studies: No
Adaptations	The program is fully narrated and includes text captions in English to accommodate the hearing and visual impaired and to support Section 508 compliancy. Three variations of the course are available that reflect differences in information about available mental health resources (VA, State, or military). Kognito Family of Heroes is part of a suite of online role-play training simulations that support large-scale, universal mental health promotion and suicide prevention, as well as early intervention of suicidal ideation and mental illness (see http://www.kognito.com/products/ for a complete list). Each course is developed for a specific group of learners. In addition to Family of Heroes, which targets the unique needs of veterans' families, other courses are available for higher education faculty, K-12 educators, and medical professionals.
Adverse Effects	No adverse effects, concerns, or unintended consequences were identified by the developer.
IOM Prevention Categories	Universal

Quality of Research

Review Date: July 2012

Documents Reviewed

The documents below were reviewed for Quality of Research. The research point of contact can provide information regarding the studies reviewed and the availability of additional materials, including those from more recent studies that may have been conducted.

Study 1

Albright, G., Goldman, R., Shockley, K. M., McDevitt, F., & Akabas, S. (2012). Using an avatar-based simulation to train families to motivate veterans with post-deployment stress to seek help at the VA. Games for Health: Research, Development, and Clinical Applications, 1(1), 9-16.

Outcomes

Outcome 1: Preparedness to recognize signs of postdeployment stress	
Description of Measures	This outcome was measured using a single survey item that asked participants to rate their preparedness to "recognize when your veteran's behavior or appearance is a sign of post-deployment stress." Responses were on a 4-point Likert scale. Surveys were completed at pretest (intervention and control groups), posttest (intervention group only), and 1-month follow-up (intervention and control groups).
Key Findings	In a randomized trial, family members, partners, or friends of veterans who returned from deployment within the last 4 years were assigned to the intervention group or a no-treatment control group. From pretest to follow-up, the intervention group showed a significantly greater change in preparedness to recognize signs of postdeployment stress compared with the control group (p < .05).
Studies Measuring Outcome	Study 1
Study Designs	Experimental
Quality of Research Rating	2.4 (0.0-4.0 scale)

Outcome 2: Preparedness to discuss concern with veteran and motivate him or her to seek help at a VA hospital or Vet center	
Description of Measures	This outcome was measured using three survey items that asked participants to rate their preparedness to (1) "approach your veteran and discuss your concerns, if he/she is showing signs of post-deployment stress," (2) "motivate your veteran to seek help at a VA hospital or Vet center, if he/she is showing signs of post-deployment stress," and (3) "refer your veteran for help at a VA hospital or Vet center, if he/she is showing signs of post-deployment stress." Responses were on a 4-point Likert scale, and items were averaged to produce a single score. Surveys were completed at pretest (intervention

and control groups), posttest (intervention group only), and 1-month follow-up (intervention and control groups).

Key Findings	In a randomized trial, family members, partners, or friends of veterans who returned from deployment within the last 4 years were assigned to the intervention group or a no-treatment control group. From pretest to follow-up, the intervention group showed a greater change in preparedness to approach, motivate, and refer a veteran with postdeployment stress compared with the control group ($p < .05$).
Studies Measuring Outcome	Study 1
Study Designs	Experimental
Quality of Research Rating	2.4 (0.0-4.0 scale)

Outcome 3: Self-efficacy in motivating veteran to seek help at a VA hospital or Vet center

Description of Measures	This outcome was measured using two survey items that asked participants to rate their level of agreement with the following statements: "I feel confident in my ability to have conversations with my veteran about concerns I have about his/her post-deployment stress" and "I feel confident in my ability to assist my veteran in seeking help at a VA hospital or a Vet center." Responses were on a 4-point Likert scale, and items were averaged to produce a single score. Surveys were completed at pretest (intervention and control groups), posttest (intervention group only), and 1-month follow-up (intervention and control groups).
Key Findings	In a randomized trial, family members, partners, or friends of veterans who returned from deployment within the last 4 years were assigned to the intervention group or a no-treatment control group. From pretest to follow-up, the intervention group showed a greater increase in self-efficacy, or confidence in their ability to motivate a veteran to seek help at a VA hospital or Vet center, compared with the control group ($p < .05$).
Studies Measuring Outcome	Study 1

Study Designs	Experimental
Quality of Research Rating	2.5 (0.0-4.0 scale)

Outcome 4: Intention to approach veteran to discuss concerns

Description of Measures	This outcome was measured using the following survey question: "As a result of this course, how likely are you to approach your veteran and discuss your concern if he/she begins to or is showing signs of post-deployment stress?" The version of this question asked of the control group omitted the "as a result of this course" stem. Responses were on a 4-point Likert scale ranging from not likely to very likely. Surveys were completed at pretest (intervention and control groups), posttest (intervention group only), and 1-month follow-up (intervention and control groups).
Key Findings	In a randomized trial, family members, partners, or friends of veterans who returned from deployment within the last 4 years were assigned to the intervention group or a no-treatment control group. From pretest to follow-up, the intervention group showed a greater change in intention to approach their veteran to discuss concerns compared with the control group (p < .05).
Studies Measuring Outcome	Study 1
Study Designs	Experimental
Quality of Research Rating	2.4 (0.0-4.0 scale)

Outcome 5: Intention to mention the VA as a helpful resource

Description of Measures	This outcome was measured using the following survey question: "As a result of this course, if you speak to your veteran about your concern regarding their post-deployment stress, how likely are you to mention the VA as a resource that can assist them?" The version of this question asked of the control group omitted the "as a result

	of this course" stem. Responses were on a 4-point Likert scale ranging from not likely to very likely. Surveys were completed at pretest (intervention and control groups), posttest (intervention group only), and 1-month follow-up (intervention and control groups).
Key Findings	In a randomized trial, family members, partners, or friends of veterans who returned from deployment within the last 4 years were assigned to the intervention group or a no-treatment control group. From pretest to follow-up, the intervention group showed a greater change in intention to mention the VA as a resource to a veteran with postdeployment stress compared with the control group (p < .05).
Studies Measuring Outcome	Study 1
Study Designs	Experimental
Quality of Research Rating	2.4 (0.0-4.0 scale)

Study Populations

The following populations were identified in the studies reviewed for Quality of Research.

Study	Age	Gender	Race/Ethnicity
Study 1	18-25 (Young adult) 26-55 (Adult) 55+ (Older adult)	67% Female 33% Male	66% White 21.3% Black or African American 7.4% Hispanic or Latino 4.3% Asian 1.1% American Indian or Alaska Native

Quality of Research Ratings by Criteria (0.0-4.0 scale)

External reviewers independently evaluate the Quality of Research for an intervention's reported results using six criteria:

1. Reliability of measures
2. Validity of measures
3. Intervention fidelity

4. Missing data and attrition

5. Potential confounding variables

6. Appropriateness of analysis

For more information about these criteria and the meaning of the ratings, see [Quality of Research](#).

Outcome	Reliability of Measures	Validity of Measures	Fidelity	Missing Data/Attrition	Confounding Variables	Data Analysis	Overall Rating
1: Preparedness to recognize signs of postdeployment stress	1.5	2.3	2.3	2.5	2.0	3.8	**2.4**
2: Preparedness to discuss concern with veteran and motivate him or her to seek help at a VA hospital or Vet center	1.5	2.5	2.3	2.5	2.0	3.8	**2.4**
3: Self-efficacy in motivating veteran to seek help at a VA hospital or Vet center	2.0	3.0	2.3	2.5	1.5	3.8	**2.5**
4: Intention to approach veteran to discuss concerns	1.3	3.3	2.3	2.5	1.5	3.8	**2.4**
5: Intention to mention the VA as a helpful resource	1.5	2.3	2.3	2.5	2.0	3.8	**2.4**

Study Strengths

Good evidence was presented for some aspects of the validity of the outcome measures. Fidelity was enhanced through the standardized nature of the computer-based intervention. All participants were included in each study analysis. Appropriate analytical techniques were used.

Study Weaknesses

Insufficient evidence was provided about the reliability of the outcome measures. No formal measures were implemented to assess intervention fidelity. The study did not adequately control for a number of potential confounding factors, including possible self-selection bias given the fact that participants volunteered for the study in response to a recruitment advertisement.

Readiness for Dissemination

Review Date: July 2012

Materials Reviewed

The materials below were reviewed for Readiness for Dissemination. The implementation point of contact can provide information regarding implementation of the intervention and the availability of additional, updated, or new materials.

Administrator account login, http://admin.kognito.com

Kognito Interactive. (2012). Family of Heroes avatar-based resiliency and PTSD training for military families [PowerPoint slides]. New York, NY: Author.

Kognito Interactive. (2012). Resiliency training simulation for families of veterans: Implementation manual. New York, NY: Author.

Participant login, http://www.familyofheroes.com/

Program Web site, http://www.kognito.com/products/ptsd/

Readiness for Dissemination Ratings by Criteria (0.0-4.0 scale)

External reviewers independently evaluate the intervention's Readiness for Dissemination using three criteria:

1. Availability of implementation materials

2. Availability of training and support resources

3. Availability of quality assurance procedures

For more information about these criteria and the meaning of the ratings, see Readiness for Dissemination.

Implementation Materials	Training and Support Resources	Quality Assurance Procedures	Overall Rating
4.0	4.0	4.0	**4.0**

Dissemination Strengths

The online course and implementation materials are well organized and easily accessible to geographically dispersed learners and course administrators. The developer works closely with implementers and offers multiple options for technical assistance and support. Contact information for support is prominently displayed in various places in the course. Fidelity is supported by the standardized nature of implementation and training. Slides used for training describe how the optional, anonymous participant surveys can be customized by the implementing agency to track data of interest. The survey data can be used by the implementer as well as by the developer to identify possible program improvements or modifications.

Dissemination Weaknesses

No dissemination weaknesses were identified by reviewers.

Costs

The cost information below was provided by the developer. Although this cost information may have been updated by the developer since the time of review, it may not reflect the current costs or availability of items (including newly developed or discontinued items). The implementation point of contact can provide current information and discuss implementation requirements.

Item Description	Cost	Required by Developer
Program license (includes student access to course and administrator access to downloadable implementation manual, promotional materials, usage reports, and participant surveys)	Starting at $500, depending on the number and size of the learner population. Statewide/systemwide licenses are available.	Yes
Consultation and technical assistance by phone or email (includes two, 1-hour initial consultation sessions by phone and additional consultations, as needed)	Included with license	Yes

Additional Information

For implementers with evaluation needs that go beyond the included participant surveys, Kognito provides analysis and reporting services starting at $2,500.

Replications

No replications were identified by the developer.

Contact Information

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