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YaHaLOM Training in the Military: Assessing Knowledge, Confidence, and Stigma

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Under conditions of profound stress, individuals in high-risk occupations may experience an acute stress reaction (ASR). Given that ASRs may interfere with functioning, placing the team in danger, the Israel Defense Forces developed YaHaLOM training to teach service members how to manage ASRs in team members. YaHaLOM is a novel, rapid, peer-based intervention specifically designed for use in the midst of a high-stress event. In all, 904 Israeli combat soldiers participated in the study; 76% reported having received YaHaLOM, and 24% reported that they had not. In addition to measures of knowledge about managing ASRs, confidence in managing ASRs, and stigma-related attitudes toward ASRs, questions also addressed training approach, including the use of a video and instructor type. Participants who reported receiving YaHaLOM also reported more knowledge about managing an ASR, more confidence in managing an ASR, less external stigma, and more normative views of ASRs. Being trained with a video was associated with more confidence and less self-stigma than being trained without a video. Instructor type was not associated with differences in knowledge, confidence, or stigma-related attitudes. The study is limited by cross-sectional self-report data. Nevertheless, results suggest YaHaLOM may prepare soldiers to manage ASRs in team members; future studies are needed to assess intervention efficacy and to expand this research to other high-risk occupational contexts.

Keywords: acute stress reaction, combat stress reaction, military, peer-based intervention, training

Soldiers and others in high-risk occupations may experience an immediate and extreme psychophysiological reaction to profound stress. Although various terms have been used to describe this

condition, such as *combat stress reaction* or *combat and operational stress reaction* (U.S. Department of Defense, 2013), the International Classification of Diseases (World Health Organization, 1992) classifies this condition as an ASR. In each case, the reaction is characterized by intense symptoms of anxiety and cognitive disruption that appear immediately following a potentially traumatic event that result in significant functional impairment.¹

Besides feeling immediate distress, an individual with an ASR may also be at greater risk for developing longer term psychopathology such as posttraumatic stress disorder (PTSD; Solomon & Mikulincer, 1987; Solomon, Weisenberg, Schwarzwald, & Mikulincer, 1987; Solomon, Shklar, & Mikulincer, 2005). PTSD is associated with symptoms such as intrusion, avoidance, negative alterations in cognitions and mood, and hyper-arousal, as well as significant social and occupational impairment (American Psychiatric Association, 2013). Although the empirical link between ASR and PTSD has not yet been established, Shapiro (2012) and Zohar, Sonnino, Juven-Wetzler, and Cohen (2009) have highlighted the need to address the ASR period as a “window of

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¹ We use the term ASR in the present study to underscore the broad relevance of these concepts to high-risk occupations.

opportunity” (p. 44) to facilitate the trajectory of recovery following exposure to traumatic stress.

Not only is it important to address ASR in order to promote adjustment over time, but it is also important to address ASR immediately in the midst of a high-stress event in order to facilitate the individual’s and team’s capacity to meet operational demands. Temporary physical or mental incapacity and impaired judgment of traumatized personnel may lead to reckless behavior inconsistent with operational requirements (e.g., Nash & Watson, 2012), and this behavior may put the individual and team in jeopardy. Moreover, there are numerous examples of combat resulting in high rates of psychiatric casualties (Dobson, 2010). These rates suggest that ASRs may have a cumulative toll on organizations and impede the ability of organizations to conduct their mission.

Despite the negative consequences, military guidelines that address ASRs focus on the treatment by medical personnel immediately following a high-risk mission such as the Combat and Operational Stress Control program in the U.S. Army (Brusher, 2007). Although these guidelines provide important recommendations for rest, replenishment, and recovery, they are not designed for rapid intervention with ASRs that occur in the midst of a high-risk event (U.S. Department of Defense, 2013). In contrast, the U.S. Marine Corps program on Combat Operational Stress First Aid (U.S. Department of the Navy, 2010) describes what peers might do to provide immediate support for Marines experiencing combat or operational stress. While largely focused on postevent management, there are some general steps that can be applied during the event itself (e.g., checking to see whether intervention is required, getting out of the line of fire, and calming down the individual).

In terms of civilian guidelines, techniques that do exist are also geared toward the immediate aftermath. For example, Psychological First Aid (National Child Traumatic Stress Network and National Center for PTSD, 2006) is intended for the immediate period following a traumatic event and is designed to provide victims with a feeling of safety, calm, self and community efficacy, connectedness and hope (Hobfoll et al., 2007) through natural recovery processes. These processes rely on unobtrusive care, compassionate support, encouragement, and other key concepts. However, Psychological First Aid relies on building a sense of safety in a location physically removed from the high-risk event. Thus, even though Psychological First Aid provides a useful starting point for planning interventions, these techniques are still not logistically compatible with a dangerous context, such as in the midst of a combat-related event.

It is unclear why there is a gap in intervention techniques designed for this context. It may be that such work has not been conducted because it is extremely difficult and mental health professionals are not typically present during such events. It may also be a reflection of a concern that early interventions are contraindicated because they can derail natural recovery processes (McNally, Bryant, & Ehlers, 2003). Despite this concern, it is unclear whether all intervention options are necessarily contraindicated given the critical need for sufficient functioning by team members during a high-stress and dangerous event.

Thus, the Mental Health Department of the Israel Defense Forces developed a first-line intervention for peers to use with team members experiencing an ASR (Svetlitzky, Farchi, Ben Yehuda, & Adler, in press). This intervention was intended to

extend the reach of available psychological support to high-risk contexts. Not only were mental health professionals specially trained in this new intervention, but they were also responsible for providing training on this intervention to unit members and for following up with clinical care in the event that the intervention was not successful. Thus, this intervention was integrated within the psychological services provided by the Israel Defense Forces.

The newly developed intervention was based on a novel approach to psychological first aid created by Farchi et al. (2018). This approach focuses on shifting a traumatized person’s sense of helplessness and passivity to a sense of active and effective functioning. The objective is to encourage a cognitive response which can help reduce amygdala hyper-activity (Goldin, McRae, Ramel, & Gross, 2008), the neurobiological basis of an ASR. The Mental Health Department used this approach to craft a series of five discrete steps designed to be implemented rapidly in the midst of a combat-related event.

These steps comprise the YaHaLOM intervention.² YaHaLOM is an acronym that represents each of the five steps: (1) *Yetzirat keshet* (Ya [connect]): Connect with the individual; (2) *Hadgashat* (Ha [emphasize]): Emphasize commitment to the individual; (3) *Levarer* (L [inquire]): Ask simple fact-based questions; (4) *Vidu* (O [confirm]): Confirm the sequence of events; and (5) *Matan* (M [give]): Give an order to prompt deliberate action.³

The first step ensures that the individual pays attention. The person conducting the intervention moves to eye level, calls the individual’s name, grasps the individual firmly on the arm and asks the individual to grasp back. The second step offers a way to break through the individual’s sense of isolation by assuring the individual that the other person is present and there with him or her. The third step is designed to initiate prefrontal cognitive processing by asking the individual to provide basic facts that do not require much cognitive reasoning. The fourth step is to orient the individual in time by describing in simple language what has happened, what is happening, and what will happen. Finally, in order to overcome the individual’s sense of helplessness and promote a sense of mastery, the individual is directed to carry out a specific action.

The aim of the current study was to evaluate the degree to which YaHaLOM training resulted in shifts in knowledge about managing ASRs, confidence in managing ASRs, and stigma-related attitudes toward ASRs. Despite the simplicity of this 30- to 60-s procedure, acquiring the knowledge required to perform YaHaLOM may be challenging for military personnel who do not have expertise in mental health. Consequently, it is important to determine empirically that YaHaLOM training results in knowledge acquisition regarding the intervention steps.

Although not the focus of the current study, we also explored the relationship between knowledge scores and the amount of time that had elapsed since the training occurred. Previous studies have found that knowledge decays over time following training (Arthur,

² Given the Hebrew spelling system, the five-step intervention is written as YaHaLOM, so that the term can be pronounced in English in the same way as it is pronounced in Hebrew; capitalization is used to highlight each step.

³ The pronunciation of the Hebrew letter *V* changes from /ou/ to “vee” and vice versa, depending on its location relative to other letters. In this case, although *vidu* is spelled with a *V*, it is pronounced /ou/.

Bennett, Stanush, & McNelly, 1998; Ford, Baldwin, & Prasad, 2018). Thus, we used data from the current study to explore the degree to which time elapsed since training was associated with different knowledge scores.

Besides knowledge, the present study examined the impact of training on confidence in managing ASRs. This variable was selected because previous studies have demonstrated that training in mental health interventions can lead to greater levels of confidence in helping an individual with a mental health problem (Morgan, Ross, & Reavley, 2018), and greater confidence has been associated with better performance in a variety of areas (Bray, Balaguer, & Duda, 2004; Davis, Campbell, Poste, & Ma, 2005; Dayal et al., 2009; Woodman & Hardy, 2003). Thus, we examined whether soldiers in the Israel Defense Forces who received YaHaLOM training had greater confidence in managing ASRs than their untrained counterparts.

Likewise, we examined the degree to which YaHaLOM training influenced stigma-related attitudes regarding ASRs. Previous research in the military has highlighted concerns about stigma associated with mental health problems (e.g., Gould et al., 2010). Although the research is inconsistent (Britt, Black, Cheung, Pury, & Zinzow, 2018), stigma may impede willingness to access to care (e.g., Hom, Stanley, Schneider, & Joiner, 2017) and can result in ostracism of team members (Hipes & Gemoets, 2018), potentially disrupting team cohesion (Jones, Campion, Keeling, & Greenberg, 2018; Wright et al., 2009).

To our knowledge, no research has been conducted on stigma-related attitudes regarding ASRs, yet it may be that YaHaLOM training can influence these attitudes. Previous research has found that information about mental health problems is correlated with positive attitudes (Busby Grant, Bruce, & Batterham, 2016), and education about mental health problems can reduce stigma (Griffiths, Carron-Arthur, Parsons, & Reid, 2014; Thornicroft et al., 2016). Furthermore, psychoeducation that focuses on recovery from a mental health problem has been found to positively impact stigma-related attitudes (Li, Sorrentino, Norman, Hampson, & Ye, 2017). Given that the YaHaLOM training provides knowledge about ASRs, emphasizes how ASRs can be managed by team members, and describes how recovery from ASRs can be facilitated, we expected that soldiers trained in YaHaLOM would view an ASR less as a sign of weakness and more as an integral part of combat.

In addition, we also compared training methods in terms of supplemental video and instructor type. These comparisons were based on real-world changes in training practices. First, we examined the relative benefit of a training video. Video may contribute to training by maintaining the attention of trainees, engaging them through a realistic portrayal, and enabling them to witness the implementation of the YaHaLOM skills. Previous research has documented the potential benefits of video-based teaching and training (Andrist, Chepp, Dean, & Miller, 2014; Huang et al., 2016), especially when it consists of a lecture combined with a video. Thus, we examined whether training YaHaLOM with a video would improve soldier knowledge and confidence about managing ASRs in team members. Other research has found that training with videos that include individuals with mental health problems have contributed to improvements in stigma-related attitudes (Corrigan, Morris, Michaels, Rafacz, & Rüsche, 2012; Li et al., 2017). As a result, we examined whether training YaHaLOM

with a video would positively impact stigma-related attitudes regarding ASRs.

The current study takes advantage of the fact that YaHaLOM training has been conducted with and without videos. When YaHaLOM was originally implemented, the training was conducted without a video. This training, provided between 2014 and 2016, included a 60-min didactic module that introduced ASRs, presented the YaHaLOM procedure, and provided a 30-min practical exercise to reinforce YaHaLOM skills. In 2016, a training video portraying soldiers in a fire-fight was created in order to enhance training consistency and to provide an optimal demonstration of the YaHaLOM procedure. The training program was adapted to include this 7-min video, with no changes in the learning content or in practical exercise time. Given the potential benefit of training with a video, we examined whether YaHaLOM with a video would be associated with more knowledge and confidence about managing ASRs and fewer stigma-related attitudes about ASRs.

Second, in order to ensure that the training program could reach a large number of soldiers, instructors with diverse professions were included. In addition to mental health professionals, platoon leaders, and combat lifesaver instructors were prepared to deliver the training as well. It was unclear whether these different types of instructors would influence training outcomes. On the one hand, it was expected that mental health professionals would be particularly suited to deliver a mental health curriculum. On the other hand, it was expected that platoon leaders would be particularly credible and that their authority would draw soldier attention to the material. Similarly, it was expected that combat lifesaver instructors would be perceived as having expertise and skills in instructing and delivering material related to medical interventions. Thus, the current study explored training knowledge, confidence, and stigma-related attitudes according to instructor type.

Specifically, the study hypotheses were as follows:

Hypothesis 1: The YaHaLOM training group will report more knowledge, more confidence, and fewer stigma-related attitudes relative to the nontraining group.

Hypothesis 2: YaHaLOM training augmented with a training video will result in more knowledge, more confidence, and fewer stigma-related attitudes to training without a video.

Research question: Are there differences in knowledge, confidence, and stigma-related attitudes regarding ASRs as a function of instructor type (combat lifesaver instructors vs. platoon leaders vs. mental health professionals)?

Method

YaHaLOM training has been piloted in many combat units between in 2014 to 2016, mostly during basic combat training and, in some cases, in garrison. Due to a lack of options in training techniques for ASR management, there has been a growing demand by units for the training. At the end of 2016, the YaHaLOM training became mandatory. Taking into account the personnel turnover resulting from three years of compulsory service, it was estimated that in 2017, approximately two thirds of personnel in each battalion would have received training YaHaLOM. The present study used a posttest only, quasi-experimental design to com-

pare those who had already received YaHaLOM training to those who had not.

The Israel Defense Forces Medical Corps Helsinki Committee provided ethical approval for the study. Study data were collected using a cross-sectional survey administered in September 2017 to December 2017.

Participants

In all, 1,254 Israeli combat soldiers across 12 combat battalions were briefed on the study; 72% ($N = 904$) provided informed consent. Most were Israeli-born (87.5%; $n = 791$) and between the ages of 19 and 22 (88.3%; $n = 611$), which is the typical age for Israeli mandatory service. Service duration ranged from 4 to 120 months ($M = 19.05$, $SD = 9.86$), reflecting the fact that the sample included both enlisted conscripts and officers. In terms of rank, 2.5% ($n = 21$) were officers, and 97.5% ($n = 883$) were enlisted. In total, 75.0% reported having at least one previous combat experiences. On the survey, 692 participants (76%) reported receiving YaHaLOM training, and 212 (24%) did not. In terms of training timeline, 48.6% ($n = 250$) reported receiving training within the previous 6 months, 36.4% ($n = 187$) reported receiving training between the previous 7 to 12 months, and 15.0% ($n = 77$) reported receiving training more than 12 months previously.

Measures

Background. Background questions addressed age, country of origin, service duration, and military rank. Previous combat experiences were measured with seven items adapted from Hoge et al. (2004) and Dekel, Solomon, Ginzburg, and Neria (2003) in order to more closely match the Israeli soldier experience. Items such as “Being attacked by shooting, stabbing or throwing rocks” and “Participating in dangerous operations” were rated in terms of frequency of exposure on a five-point scale (1 = *never*, 2 = *1–3 times*, 3 = *4–10 times*, 4 = *11–20 times*, 5 = *21+ times*). Cronbach’s alpha was not calculated because the scale is formative and not reflective.

Training history. Three questions about training history were developed for the present study. First, soldiers were asked whether they had been trained in YaHaLOM; response options were no or yes. Second, if they had been trained, they were asked who provided that training; response options were combat lifesaver instructors, platoon leaders, or mental health professionals. Third, they were asked whether the YaHaLOM training video was used during the training; response options were no or yes.

Knowledge about managing ASRs. Knowledge about managing ASRs was assessed with 10 multiple choice questions developed for the training (e.g., Question: What is the key symptom of an ASR? Answer: Not being able to function; Question: What is the purpose of the intervention with ASR? Answer: To restore individual functioning; Question: Which of the following is not the part of the intervention with ASR? Answer: To listen supportively to your buddy). Each question had four possible response options, only one of which was correct. Total knowledge score was calculated based on the sum of correct responses and ranged from 0 to 10. Besides total score, a cut-off score of 80% was also calculated, consistent with the passing score required for all combat casualty care training, including YaHaLOM, within the Israel Defense Forces.

Confidence in managing ASRs. Confidence in managing ASRs in the midst of a high-stress event was assessed with six items. Previous studies have used single items to assess confidence in performing medical procedures at the point of injury (e.g., Sergeev et al., 2012); thus, we developed a series of items in which individuals rated their confidence in managing combat stress reaction, the military’s terminology for ASR; for example, soldiers were asked, “To what extent are you likely to succeed in assisting a soldier with a combat stress reaction on the battlefield?” and “To what extent will you be effective and quick in helping a soldier with a combat stress reaction on the battlefield?” Participants rated their response to each item on a five-point Likert scale (1 = *not at all*, 5 = *extremely*). Mean scores were calculated, with higher scores indicating greater confidence in managing ASRs. Cronbach’s alpha in current study was .87.

Stigma-related attitudes toward ASRs. Three domains of stigma-related attitudes toward ASR were assessed while the participants were asked to rate their agreement with each item on a five-point scale (1 = *strongly disagree*, 5 = *strongly agree*). *Self-stigma*, or belief about how individuals would be perceived or treated if they experienced a combat stress reaction, was assessed with four items adapted from Greenberg et al. (2010), who adapted phrasing from Hoge et al. (2004), who adapted items from Britt (2000). For example, “If I develop a combat stress reaction in battle, I will seem weak” and “If I develop a combat stress reaction, it will harm my military career.” Mean scores were calculated, with higher scores indicating stronger self-stigma beliefs. Cronbach’s alpha was .89 in the Britt study, and .82 in the current study. *External stigma*, or beliefs about others having an ASR, was assessed with one item adapted from Greenberg et al. (2010) and others: “Soldiers who develop a combat stress reaction are weak.” *Normative view of ASR*, or beliefs that anyone could potentially experience an ASR, was also assessed by an item adapted from Greenberg et al.: “Anyone could develop a combat stress reaction during combat”. For all stigma items, references to “stress-related problems” or “mental health problems” were replaced with “combat stress reaction”. Participants rated their agreement with each item on a five-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

Procedure

Surveys were administered to groups in classroom settings on military installations across Israel. All soldiers available for duty during survey administration were invited to participate. On arrival, service members were briefed on the study, received an information sheet, and were asked to provide their informed consent. Participants then completed the 30-min survey.

Data Analysis

The training and control groups were compared on background variables using *t* tests and chi-square with the goal of identifying potential covariates for subsequent analyses. Two sets of between-subjects independent samples *t* tests were conducted, one comparing trained and untrained soldiers and one comparing soldiers who were trained with a video to those who were trained without a video. In both sets of analyses, differences in knowledge about managing ASRs, confidence in managing ASRs, self-stigma, ex-

ternal stigma, and normative view were evaluated. A series of one-way ANOVAs were then conducted to evaluate differences in knowledge about managing ASRs, confidence in managing ASRs, self-stigma, external stigma, and normative view by trainer type (combat lifesaver instructors, platoon leaders, or mental health professionals). We also conducted a one-way analysis of variance (ANOVA) to evaluate differences in knowledge about managing ASRs by length of time since the training (within the previous 6 months, 7 to 12 months, more than 12 months). Post hoc differences were analyzed using the Tukey method to minimize Type I error. To further examine knowledge, chi-square analyses for each independent variable were also conducted using a cut-off score. Effect sizes were calculated for each group comparison. Using guidance based on Cohen (1988), effect sizes of 0.2 were regarded as small, effect sizes of 0.5 were regarded as medium, and effect sizes of 0.8 were regarded as large. Finally, given the number of comparisons, a false discovery rate was estimated using the graphically sharpened method (Benjamini & Hochberg, 2000; Pike, 2010) with a cut-off of $q \leq .05$. Analyses were conducted using SPSS Version 24.0 (IBM Corp, 2016).

Results

The trained and untrained groups were similar in age, $t(863) = 0.12, p = .91$; country of origin, $\chi^2(1, 904) = 1.70, p = .19$; rank, $\chi^2(2, 904) = 4.96, p = .08$; years of military service, $t(861) = -0.63, p = .53$; and previous combat experiences, $t(901) = 0.40, p = .69$. Given that there were no significant differences between groups, no covariates were used in subsequent analyses.

Trained soldiers had significantly more knowledge about managing ASRs compared with untrained soldiers whether knowledge was scored as a continuous measure, $t(902) = 17.39, p < .001, q = .003; d = 1.25$; or in terms of a cut-off score, with 69.4% of trained soldiers scoring a passing grade versus 25.0% of untrained soldiers, $\chi^2(1, 904) = 132.00, p < .001, q = .003$. Trained soldiers also had more confidence in managing ASRs, $t(875) = 4.40, p < .001, q = .003, d = 0.34$; less external stigma, $t(855) = 2.36, p = .018, q = .038, d = 0.38$; and more normative views, $t(852) = -2.68, p = .01, q = .021, d = 0.22$, compared with untrained soldiers. No significant differences were observed for self-stigma, $t(901) = -1.82, p = .08$ (see Table 1). Thus, Hypothesis 1 was largely supported.

The subsequent analyses were all conducted with the subgroup of soldiers who reported receiving YaHaLOM. In an initial exploratory analysis, we examined whether there were differences in knowledge scores depending on length of time since training, $F(2, 510) = 4.95, p = .007, q = .017$. There were no differences in knowledge scores between those trained within the previous 6 months ($M = 8.38, SD = 1.84$) and those trained within 7 to 12 months ($M = 8.27, SD = 2.06, p = .863$); however, those trained more than 1 year previously scored lower on the knowledge measure ($M = 7.58, SD = 2.18$) than those who had been trained within the previous 6 months ($p = .006, q = .017$) and those who had been trained within the last 7 to 12 months ($p = .025, q = .043$). When knowledge was assessed using cut-off scores, the results followed the same pattern (results are not reported here).

We also compared those who received training with a video and those who did not. In this analysis, those who were trained with the video were significantly more confident, $t(673) = 4.72, p < .001, q < .003, d = 0.36$, and had significantly less self-stigma, $t(659) = -2.49, p < .001, q < .003, d = 0.21$, than those who were trained without the video. No significant differences were found between the two groups on knowledge whether knowledge was measured as a continuous variable, $t(690) = 1.52, p = .13$, or using a cut-off score, $\chi^2(1, 692) = 0.86, p = .36$. There were also no differences in external stigma, $t(662) = -.75, p = .45$; or normative views, $t(659) = 0.18, p = .86$ (see Table 2). Thus, Hypothesis 2 was partially supported.

Finally, we addressed the research question regarding instructor type. No significant differences were found for instructor type in terms of knowledge about managing ASRs whether knowledge was measured as a continuous variable, $F(2, 621) = 1.37, p = .26$; or cut-off score, $\chi^2(2, 624) = 1.34, p = .52$; and there were no differences in terms of confidence in managing ASRs, $F(2, 607) = 1.9, p = .15$; self-stigma, $F(2, 594) = 0.05, p = .95$; external stigma, $F(2, 598) = 0.12, p = .89$; or normative view, $F(2, 597) = 0.45, p = .64$.

Discussion

The current study examined training-related outcomes resulting from YaHaLOM, the first systematic intervention for team members in high-risk occupations that addresses ASRs in the midst of a stressful event. In a cross-sectional survey of more than 900 Israeli soldiers, training was associated with better knowledge,

Table 1
Means of YaHaLOM Training Outcomes Across Trained and Untrained Soldiers

| Training outcomes | Trained (n = 692) | | | Untrained (n = 212) | | | t | df |
|--|-------------------|------|-----|---------------------|------|-----|----------|-----|
| | M | SD | n | M | SD | n | | |
| Knowledge about managing ASRs ^a | 7.77 | 2.42 | 692 | 4.04 | 3.57 | 212 | 17.39*** | 902 |
| Confidence in managing ASRs ^b | 3.52 | .81 | 675 | 3.22 | .94 | 202 | 4.40*** | 875 |
| Self-stigma ^b | 2.31 | 1.10 | 661 | 2.15 | 1.19 | 194 | -1.82 | 901 |
| External stigma ^b | 1.67 | 1.03 | 664 | 1.88 | 1.24 | 193 | 2.36* | 855 |
| Normative view of ASR ^b | 3.69 | 1.32 | 661 | 3.39 | 1.39 | 193 | -2.68** | 852 |

Note. ASR = acute stress reaction; YaHaLOM = is an acronym that represents each of the five steps: (1) *Yetzirat keshet* (Ya [connect]): Connect with the individual; (2) *Hadgashat* (Ha [emphasize]): Emphasize commitment to the individual; (3) *Levarer* (L [inquire]): Ask simple fact-based questions; (4) *Vidu* (O [confirm]): Confirm the sequence of events; and (5) *Matan* (M [give]): Give an order to prompt deliberate action.

^a Correct scores on the knowledge items ranged from 0 to 10. ^b Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2
Means of YaHaLOM Training Outcomes Across Soldiers Who Were Trained With and Without Video

| Training outcomes | Video (n = 348) | | | No video (n = 344) | | | t | df |
|--|-----------------|------|-----|--------------------|------|-----|---------|-----|
| | M | SD | n | M | SD | n | | |
| Knowledge about managing ASRs ^a | 7.91 | 2.32 | 348 | 7.63 | 2.51 | 344 | 1.52 | 690 |
| Confidence in managing ASRs ^b | 3.66 | .80 | 338 | 3.37 | .80 | 337 | 4.72*** | 637 |
| Self-stigma ^b | 2.19 | 1.12 | 348 | 2.42 | 1.07 | 343 | -2.83** | 689 |
| External stigma ^b | 1.64 | 1.04 | 332 | 1.70 | 1.03 | 332 | -.75 | 662 |
| Normative view of ASR ^b | 3.70 | 1.37 | 329 | 3.68 | 1.28 | 332 | .18 | 662 |

Note. ASR = acute stress reaction; YaHaLOM = is an acronym that represents each of the five steps: (1) *Yetzirat keshet* (Ya [connect]): Connect with the individual; (2) *Hadgashat* (Ha [emphasize]): Emphasize commitment to the individual; (3) *Levarer* (L [inquire]): Ask simple fact-based questions; (4) *Vidu* (O [confirm]): Confirm the sequence of events; and (5) *Matan* (M [give]): Give an order to prompt deliberate action.

^a Correct scores on the knowledge items ranged from 0 to 10. ^b Responses ranged from 1 (*strongly disagree*) to 5 (*strongly agree*).

** $p < .01$. *** $p < .001$.

more confidence, less external stigma-related attitudes, and a more normative view of ASRs. In addition, training by video was associated with more confidence and less self-stigma whereas instructor type appeared unrelated to knowledge, confidence or stigma-related attitudes.

As hypothesized, reports of receiving YaHaLOM were associated with greater knowledge. These results demonstrate that soldiers trained in skills designed to manage ASRs in team members are able to acquire this knowledge, with Cohen's *d* exceeding criterion for a large effect size. Moreover, there was no difference in recall between those who reported receiving YaHaLOM training 0 to 6 months and 7 to 12 months previously, suggesting that knowledge about the training was retained over time. Other studies of training in emergency medical procedures have found a significant drop in knowledge after 6 months (Su, Schmidt, Mann, & Zechin, 2000). Such retention reported in the present study indicates several possibilities, including that the material was presented in an engaging manner, that the material was easy to recall, and that soldiers considered the material relevant and thus worthy of their cognitive resources. Nevertheless, knowledge scores were lower for those who had been trained more than a year prior, consistent with findings from Arthur et al. (1998), suggesting that there is information decay and refresher training may be useful.

Importantly, the training also appears to have secondary benefits associated with soldier confidence in managing an ASR in team members. As hypothesized, soldiers who reported receiving the training were significantly more likely to feel they could be effective in managing an ASR than their untrained counterparts. This finding suggests that even months later, a 1-hr training class may impact soldier confidence in responding to a peer experiencing an ASR on the battlefield.

The training was also partly consistent with the hypothesis regarding stigma-related attitudes. Specifically, training was associated with less stigma in terms of judging other soldiers with an ASR and with more endorsement of the universal nature of ASRs. Although the training did not address stigma directly, YaHaLOM implicitly addressed stigma by reinforcing the fact that an ASR is a relatively normal response to extreme stress and can happen to anyone. Thus, the underlying message from the training may have shifted stigma-related perceptions in terms of evaluating others who experience an ASR. These results may reflect the fact that the training addressed ASR from the perspective of the soldier who

was providing the intervention, focusing the soldier on the experience of those with an ASR and thus supporting a shift in attitudes related to external stigma and normative views.

In contrast, the training overall did not appear to be associated with differences in self-stigma. Regardless of whether they reported receiving YaHaLOM training, soldiers had similar perceptions of how they would be judged if they had an ASR themselves. The reason there was no significant difference in self-stigma between those who reported being trained and those who did not is difficult to determine. One possibility is that the lack of support for the self-stigma hypothesis may be a function of training focus. The training presented the perspective of the soldier providing the intervention, and from this vantage point, participants may not have identified with the soldier experiencing an ASR. Without this first-person perspective of the person experiencing an ASR receiving the YaHaLOM intervention, the participants may have remained similarly concerned about the way they would be perceived. The exact mechanism of how YaHaLOM may influence stigma-related attitudes is unclear and warrants further investigation, and the training itself may need to be refined to target this particular outcome.

In terms of the use of video, results partially confirmed the hypothesis that a training video was associated with more positive training-related outcomes. Specifically, soldiers who reported being trained with the video also reported more confidence and less self-stigma compared to those who were trained without a video. Although it is not clear if this relationship is causal, it may be that the video provided a vivid and engaging illustration that gave soldiers greater confidence in the feasibility of the procedure and their ability to execute each step than training without a video. In addition, in terms of lower levels of self-stigma, perhaps watching the video allowed participants to identify more with the individual recovering from an ASR in response to the YaHaLOM intervention than not watching a video. Seeing a vivid depiction of recovery may have bolstered the individual's belief that they would be perceived positively by others if they experienced an ASR.

However, watching the video was not associated with differences in knowledge, external stigma or normative views, suggesting that the core training material without the video is sufficient at impacting these outcomes. Still, the lack of support for the hypothesis regarding knowledge scores and the use of a training video may be the result of a ceiling effect on the knowledge measure. That is, knowledge scores may have been so high that a

significant difference between those reporting training with and without a video could not be detected. In contrast, the lack of support for the hypotheses regarding external stigma and normative views may reflect the fact that training content itself eclipsed any benefit associated with supplementing the training with a video.

In terms of the research question about instructor type, it appears that the training was not dependent on a particular instructor profession. All three trainer types appear to be able to communicate the material equally effectively. This lack of difference regarding instructor type may have been a function of the simplicity and intuitive nature of the training material, and the comparable foundational skills of the instructors. In addition, all instructors were active duty service members and this commonality may have superseded any differences associated with their type of profession. Such findings are critically important for being able to scale training across a large population and suggest that good training material is key to implementing this kind of specific and sequential procedure.

The present study has many strengths, including its real-world context and large sample size; however, there are limitations. First, the study did not randomize soldiers to different training conditions. Thus, pretraining variables may have accounted for group differences, although measures of demographics and military background did not significantly differ between the two groups. Second, the study relied on soldiers self-reporting whether they had received training, if they received training with a video, and who their instructor was, if applicable. This self-report may have been biased in favor of those who received the training and remembered it (as opposed to those who received the training but did not remember it). Still, the percentage of those trained was consistent with the expected rates of personnel turnover, and the numbers reporting video training and trainer type were also consistent with expected rates. Self-reported training recall has also been used in previous research with military units (McKibben, Britt, Hoge, & Castro, 2009). Third, the study assessed knowledge on a multiple-choice test and did not assess skill mastery through demonstration. In addition, the knowledge test did not include an option for those who did not know the answer, potentially biasing correct responses in favor of guessing. Fourth, we did not assess the degree to which the different instructor types possessed varying levels of expertise within their profession or experience managing ASRs. Fifth, the stigma-related items were slightly adapted from established scales. Although this adaptation calls the original scale validation into question, adaptation is common because developing new scales is so resource intensive (Öztürk, Şahin, & Kelecioğlu, 2015). In the present study, items were only slightly adjusted to ensure organizational relevance, as is common practice (e.g., Britt, Adler, Sawhney, & Bliese, 2017; Sipos, Kim, Thomas, & Adler, 2018). Sixth, single items were used to assess external stigma and normative views, potentially limiting the reliability of these measures, although single items can be valid measures of global constructs (e.g., Hoepfner, Kelly, Urbanoski, & Slaymaker, 2011; Wanous, Reichers, & Hudy, 1997). Finally, the present study did not address whether trained and untrained soldiers discussed the material with one another.

In contrast to the results on knowledge, the confidence, external stigma and normative views differences between groups reflected a small to medium effect size. Such results are typical of field

research (Bliese, Adler, & Castro, 2011) and universal behavioral health interventions (Brunwasser, Gillham, & Kim, 2009). Nevertheless, even modest effect sizes can have practical significance when targeting public health priorities in high-risk occupations (Bliese et al., 2011).

Given the potential for the YaHaLOM procedure to improve functioning of personnel in high-risk occupations like the military, future research regarding the efficacy of the procedure should be encouraged. For example, research should examine factors that influence utilization of the YaHaLOM steps during a variety of practical training scenarios. Moreover, future studies should assess implementation of YaHaLOM during high-stress events by analyzing case studies and by conducting a survey before and after a high-stress event in order to examine the utility of YaHaLOM and potential moderating factors. If possible, it would also be ideal to conduct a randomized controlled trial in order to determine training efficacy. In addition, studies should examine the degree to which ASR is linked to developing traumatic stress symptoms over time and the degree to which YaHaLOM may impact the trajectory of PTSD symptoms following exposure to potentially traumatic events. Finally, it is unclear whether these results will generalize to other high-risk occupations. Thus, it is important to adapt and test YaHaLOM for those in other high-risk occupations such as police, firefighters, and correctional officers, in order to determine the degree to which the procedure is relevant beyond the military context.

Since initiating the development and testing of YaHaLOM within the Israel Defense Forces, other nations have expressed interest in translating and adopting this technique. For example, the U.S. Army has created iCOVER an acronym for a six-step intervention: (1) Identify; (2) Connect; (3) Offer commitment; (4) Verify facts; (5) Establish order of events, and (6) Request action. In a randomized trial, iCOVER demonstrated that soldiers were able to use these skills in live-action scenarios involving a combat patrol (Adler et al., in press). Such international interest underscores the degree to which YaHaLOM addresses an important gap in unit-based training and the relevance for high-risk occupations. By conducting a systematic series of studies, YaHaLOM and its international adaptations can be refined to ensure a feasible and effective method of supporting personnel engaging in high-risk occupations.

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