



Evaluation of WAROPS[®] (Warrior Optimization Systems) Training: Executive Summary

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INTRODUCTION

The WAROPS® (Warrior Optimization Systems) training program, developed by the Magis Group LLC, provides stress management information and self-regulating skills to Service Members to manage their operational and combat stress, enhance resilience, maximize performance, and facilitate re-integration throughout the deployment cycle. Samueli Institute, in collaboration with the RAND Corporation, conducted a systematic Program Evaluation of the WAROPS® training program that assessed the program's structure, process, and outcomes to generate information about its merit, worth, and significance. The specific aims of this project were to: (1) evaluate the feasibility and acceptability of the WAROPS® training program in both pre- and post-deployment military training environments; (2) assess the educational effectiveness of WAROPS® through quantitative measures and qualitative focus groups and interviews; and (3) investigate changes in stress-related and other military-related outcomes (i.e., somatic, behavioral, and psychosocial) in Service Members from Fort Carson, CO, after undergoing WAROPS® training prior to and after return from deployment.

The four-hour WAROPS® Core Training module is divided into four 50-minute blocks of instruction:

- Block 1: Performance, Brain and Body
 - o This block establishes the performance model and the neurophysiology of warrior adaptation and physical/mental regulation.
- Block 2: Skills A (Breathing, Awareness Exercises)
 - o This block teaches physical and mental skills for effective mission performance and baseline resilience.
- Block 3: Skills B (Visualization, Energy Management)
 - o This block teaches performance enhancing skills and introduces an optimal recovery process.
- Block 4: Restoration (CORE™ exercises, Recovery)
 - o This block teaches restorative skills and methods to maintain resilience and performance throughout the deployment.

METHODOLOGY

This study included 3,160 soldiers from a Brigade Combat Team (BCT) at Fort Carson, CO, who were Command-directed to receive the WAROPS® training at two time points: a few weeks prior to and then about two months after return from deployment. Additionally, a single time evaluation was conducted with 1,926 soldiers from a different BCT who were Command-directed to receive the WAROPS® training post-deployment. One hundred eighteen qualitative focus groups and interviews were conducted with 404 participants.

Before and after each training session, soldiers completed surveys addressing knowledge and beliefs and attitudes. After each training session, the surveys also included questions about

satisfaction and use of skills (expected use at pre-deployment and use during deployment at post-deployment). In addition to Army administered screening instruments (PDHA, PDHRA, Health and Readiness Medical Survey (HERMES), the main health-related outcomes were PTSD symptoms (PTSD CheckList – Military Version, PCL-M), resilience (Connor-Davidson Resilience Scale, CD-RISC), general health/quality of life (Short Form 36 Health Survey, SF-36), and post-deployment adjustment (Post-Deployment Reintegration Scale, PDRI). A mid-deployment survey was administered to a convenience sample of 203 soldiers in Afghanistan.

RESULTS

Feasibility

Results indicate that the plan to deliver this four-hour block of training to an entire BCT of soldiers over a four-week period was feasible. At three different time points, the Magis Group trainers conducted the WAROPS® training with all available soldiers from an entire BCT. They were able to train up to 120 soldiers at a time with two training groups per day for a total throughput of 5,963 soldiers. While the content of the training remained relatively stable over time, the trainers made changes to the delivery of the program on an ongoing basis based on informal feedback they received from soldiers after sessions. For example, soldiers were split into smaller groups and rotated through different rooms and the number of PowerPoint slides on neurophysiology was cut down considerably.

Satisfaction

Satisfaction with the training was extremely high as evidenced by survey and interview data, with many soldiers commenting that WAROPS® was better than other trainings they had received previously. The percent of soldiers reporting they were satisfied or very satisfied with the training overall ranged from 88 to 92 over the three training time points. At pre-deployment, there was significantly higher satisfaction and expected use among soldiers who had previously deployed, suggesting that experienced soldiers seemed to be able to grasp the relevance and applicability of skills much better than those who had never deployed. At all training time points, there was higher satisfaction and expected use in later training weeks as compared with initial training sessions. Possible reasons for this are that (1) trainers were better prepared to conduct the trainings as the weeks progressed and (2) the changes they implemented based on ongoing feedback from soldiers had a positive impact. At post-deployment, satisfaction, although quite high in general, was higher for soldiers with no previous WAROPS® training, possibly indicating that the post-deployment training was not different enough from the pre-deployment training to be additionally useful to some soldiers and/or that the novelty of this specific training had worn off.

Knowledge/Beliefs and Attitudes

There was a shift toward greater perceived self-efficacy immediately post-training (e.g. soldiers felt more confident that in stressful situations they could stay centered and focused, adapt easily to challenges, support their peak performance, reset and restore their balance, etc.). There was a statistically significant improvement in knowledge scores from pre- to post-training at all three training time points.

Use of Skills

Overall, there was high expected use and application of skills with a large majority of participants indicating that they would recommend this training to others. Soldiers often commented that they were planning to go home and teach their spouse or buddy the skills they just learned.

After pre-deployment training, soldiers most often mentioned the Recovery skills (i.e. Combat Operational Recovery Exercises or CORE™, a physical method of releasing tension in the core muscles) when asked which they liked and planned to use. After deployment, they reported that breathing and visualization skills were used most often. When asked why they did not use skills during deployment, some soldiers felt they did not have enough time to practice and master the skills before deploying, or in the case of the CORE™ skills, they did not have enough physical space or privacy to do the exercises in theatre.

Overall, the reported use of the skills was high especially given that this training was a single four-hour session prior to deployment. Each WAROPS® skill was used by at least 65% of participants during deployment with 56% of participants reporting use of at least one skill at least weekly. As measured by a mid-deployment survey administered eight months into the tour in Afghanistan, 32% of soldiers reported using one or more of the skills daily in theatre. The most common situations for skill use during deployment included: preparing for a mission, during downtime, during mission, or to help get to sleep. Since redeployment, each WAROPS® skill was used by at least 55% of participants, mostly commonly to help with job stress, sleep, and family stress. More than half of the soldiers surveyed agreed that WAROPS® had an impact on mission readiness and other performance-related factors.

Health-Related Outcomes

Although not a randomized controlled trial, the design of the study allowed us to make some comparisons between soldiers from the same BCT who received WAROPS® training pre-deployment and those who did not. All soldiers in this BCT were command-directed to receive this training and the Magis Group was prepared to train the entire group. However, because the training occurred just a few weeks prior to deployment, nearly 1,000 soldiers did not attend the pre-deployment training due to conflicts with other trainings, leave time, or other

responsibilities. Of this group, more than 700 attended the post-deployment training and many provided consent for us to retroactively access their pre-deployment HERMES data. In this way, we were able to examine pre-post changes in health outcomes for soldiers who received the training and compare them with soldiers who did not. We compared pre-deployment HERMES health-related outcomes for soldiers who attended WAROPS® and those who did not and found no significant between group baseline differences. We recommend that these results be regarded cautiously since soldiers were not randomized to these groups and it is not possible to determine exactly why certain soldiers attended the training and others did not.

Given the above caveat, we found that soldiers who were trained at pre-deployment had small but significantly better health outcomes in multiple areas, including resilience, PTSD symptoms, post-deployment reintegration, and general health and well-being than the comparison group of soldiers who were not trained at the pre-deployment time point. Additionally, soldiers who used the skills regularly during deployment (i.e., used at least one skill daily) had better health outcomes than soldiers who attended the training but did not use the skills. These skill-users were also less likely to screen positive for depression and anger, reported better perceived unit support/cohesiveness, and were less likely to seek health-related and a variety of other services at post-deployment.

LIMITATIONS OF STUDY

The results reported are based on data collected during this observational (i.e., non-randomized) study. We compared health outcomes across the deployment cycle between soldiers who received WAROPS® training at pre-deployment and those who did not and found health-related and other benefits for soldiers who attended the training and used the skills regularly. We again recommend that these results be regarded cautiously since soldiers were not randomized to the training and no-training groups and it is not possible to determine conclusively if differences in health-related outcomes are attributable to the WAROPS® training.

CONCLUSIONS

The WAROPS® program appears to be feasible to implement in military settings with large numbers of Service Members able to be trained in a short period of time. Satisfaction with the training was high (on average, 90% of soldiers were satisfied or very satisfied) and soldiers' knowledge and self-efficacy increased from immediately pre- to post-training. Considering the single four-hour block of training, skill use was relatively high during deployment with 56% of soldiers reporting using at least one skill at least weekly. There is some preliminary evidence of health-related benefit in the group of soldiers who participated in the training and regularly used of skills as evidenced by greater self-reported resilience, fewer PTSD symptoms, better post-deployment reintegration, and better general health and well-being.

RECOMMENDATIONS

As a result of our analysis of the quantitative and qualitative data, we offer the following recommendations:

Training delivery: Magis Group trainers made a number of format and content changes over the course of the three training time points including splitting the soldiers into smaller groups and thereby increasing the trainer to trainee ratio; decreasing the number of PowerPoint slides; increasing the proportion of experiential/interactive activities; and refinement of the content to increase soldier interest. As some participants seemed to need more skills practice, we suggest either planning for refresher sessions or instituting practice sessions by unit. Participants seemed to respond well to the trainers, many of whom had a Special Forces background. This aspect should be maintained in subsequent training sessions. Soldiers with previous deployments seemed to grasp the importance and relevance of the training better than those soldiers who have not previously deployed. We recommend finding ways to attract the attention of the less experienced soldiers from the beginning.

Leader buy-in: A number of participants reported in interviews that their platoon sergeants or unit commanders were not supportive of the training and so they were less likely to take it seriously. Attempts were made by the Magis Group to have separate trainings for both leaders and sustainers and also to include them in the core training. Leaders were underrepresented, which seemed to be related to the Command's lack of enforcement of attendance. It is recommended that buy-in at all levels of leadership occur before such training is planned.

Sustainer Module: The Magis training model included a sustainer piece intended to train a cadre of combat medics and platoon sergeants to assist soldiers in sustaining the use of WAROPS® skills once deployed. Due to a number of logistical and communication problems, about half of the sustainer participants had not attended the core WAROPS® training. As a result, the Sustainer training included a re-hashing of the core material and consequently was not as well-received by participants. Future implementations should address these problems so that the crucial sustainer component can succeed.

Communication and flow coordination: Although many soldiers were trained in a short period of time, at times there was a lack of effective scheduling and coordination between the brigade leadership and the trainers and research team. It was not uncommon for many more or many fewer trainees to show up for a given session than expected. Another issue that may have hindered the training process was that soldiers were not given accurate information about the nature of the training and did not know how long it would last. It is recommended that communication with the brigade leadership and communication to the soldiers about the training be improved.

Post-deployment training: Although a number of soldiers appreciated being exposed to the WAROPS® training again after redeployment and satisfaction remained quite high, some complained that the skills were the same and they were not getting new information. A possible solution would be to make it more clear that the intention of the post-deployment training is to offer a refresher of previous skills learned, with an emphasis on reintegration with family and adjustment back to life in garrison.

Timing in training cycle: Many soldiers, leaders, and Magis trainers felt the training should have occurred earlier in the deployment cycle. Soldiers wanted the chance to use the skills during other training and field exercises so they could practice in more realistic scenarios. In fact, the unit leaders and Magis Group had planned to execute the training earlier in the deployment cycle so that the skills could be reviewed and integrated at their field training location; this plan could not be executed based on the timeline and logistics. Ideally, training and practice could be spread out over time and interspersed with regular field training.

Skills implementation/Mandatory practice: Since among the soldiers who attended the training, those who used skills daily tended to have better health-related outcomes, it is recommended that skills be implemented and practiced on a unit level and regular use encouraged. A few unit leaders reported that they instituted a group practice of some of the skills even while deployed. Suggestions were made to incorporate some skills into PT and have them led and supported by a unit leader. This would potentially eliminate barriers to implementation that some soldiers mentioned when practicing the CORE™ exercises during deployment and would encourage regular use.

Recommendations for future research: Include further study of the WAROPS® model in a randomized design with a control group receiving an equivalent training and replicate in other Service Member populations.