Beyond Battlemind: Evaluation of a New Mental Health Training Program for Canadian Forces Personnel Participating in Third-Location Decompression

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ABSTRACT Introduction: Battlemind training, which improves postdeployment well-being, has been part of Canada's postdeployment Third-location Decompression (TLD) program since 2006. In 2010, a new educational program drawing on Battlemind was implemented to make it more consistent with Canada's current mental health training strategy. Methods: Subjects consisted of 22,113 Canadian personnel returning from Afghanistan via TLD in Cyprus; 3,024 (14%) received the new program. Pre-/post-training attitude and self-efficacy questionnaires assessed the impact of the training. In addition, a quasi-experimental approach used questionnaires administered at the end of TLD to compare the satisfaction, attitudes, and self-efficacy under the old vs. new program. Results: Pre-/post-training questionnaires showed medium to large positive effects of the training on targeted attitudes and self-efficacy (Cohen's $d = 0.44–1.02$). Participants completing the new program were more satisfied with the educational program (adjusted odds ratio = 3.2), perceived the TLD to be more valuable (odds ratio = 1.7), and had at least certain more favorable post-TLD attitudes and self-efficacy (d ranging from 0.00 to 0.29). Conclusion: All of these findings point to the superiority of the new program. However, quasi-experimental approaches are bias-prone, and it is unknown whether these advantages will translate into meaningful improvements in well-being.

INTRODUCTION

Military personnel returning from deployment must readapt to their home environment, psychologically, physically, and socially.[1] Most are glad to be home, but many find parts of this transition to be at least temporarily distressing.[1,2] In addition, an important minority go on to have serious long-term mental health problems.[3] Some have argued that difficult early homecoming experiences are an important etiological factor in these postdeployment disorders.[4,5]

In recognition of the challenges and potential toxicity of the transition home, military organizations have developed policies and programs to make the process of transition easier and to mitigate mental disorders. The two most commonly used approaches are third-location decompression (TLD) programs[6] and psychoeducational programs such as the U.S. Army's Battlemind training, which has been shown to improve postdeployment well-being.[7] The Battlemind program is a cognitive and skill-based program that reframes transition difficulties as a failure to adapt skills learned in combat to the home environment.

Since 2006, Canadian personnel returning from combat and peace support operations in Kandahar Province, Afghanistan, have completed a 5-day TLD program in Cyprus.[8] In addition to having opportunities for rest and recreation, all TLD participants have received a clinician-delivered version of the postdeployment Battlemind training program.[7] Participants also attended two 1-hour "elective" presentations on a variety of topics relevant to reintegration. Personnel are strongly supportive of the TLD concept, find the Canadian TLD program to be valuable, and perceive it to help make the transition easier for them.[8] About three quarters of participants were satisfied with the TLD educational program, and satisfaction with the program actually increased over the first 4 to 6 months after return from deployment.[8]About three quarters also felt that the TLD experience helped them realize that there was nothing wrong with getting help with a mental health problem[8]; this was a central message of the Battlemind program.[7]

Notwithstanding the apparent success of the TLD program, a variety of factors drove Canada to change its TLD education program:

- Some participants found the Battlemind video used during the training to be "too American" in its themes and settings;
- Participants going through TLD for a second time complained that the training was getting "stale;"
- Canada's career- and deployment-cycle mental health training program was using increasingly divergent training paradigms from Battlemind;
- Canada needed a more flexible postdeployment psychoeducational program that was suitable for non-combat operations;
- Recent research has increased awareness of barriers to care other than stigma that could be targeted in training[9];
- The use of electives prevented training from being delivered to cohesive groups, where it was expected to be most effective[7]; and
- The Canadian Forces (CF) moved to a joint delivery model for its mental health training, in which both a clinician and a nonclinician provide training together.

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In response, the CF developed a new 4-hour educational program for TLD. This article presents its results and compares these to those of TLD's using the old educational program. Specifically, it will explore:

— Pre-/postsession changes in self-efficacy and attitudes;
— Differences in satisfaction with the TLD program among those receiving the new vs. old program; and
— Differences in post-TLD self-efficacy and attitudes among those receiving the new vs. old program.

METHODS

Subjects

The subjects were 22,113 CF members returning from 6- to 9-month deployments in Kandahar Province, Afghanistan, who completed a 5-day TLD program in Cyprus from 2006 to 2010. The old and new programs were received by 19,089 and 3,024 personnel, respectively.

TLD Program

Canada's TLD program has been described elsewhere.[8] In brief, Day 1 consisted of arrival procedures, a short orientation briefing, and individual free time. Days 2 and 3 consisted of educational sessions (either the old or new program) followed by individual free time or group outings. Day 4 featured individual free time or outings, and participants flew home on Day 5. TLD was held in a four-star resort in varying locations in Cyprus.

Old Educational Program

On Day 2, a version of the Battlemind training program was delivered by a mental health clinician. A video with vignettes of four soldiers experiencing transition or mental health problems was shown, interspersed with didactic material and group discussion on how to recognize transition problems, how to use self and buddy care where appropriate, and how to know when professional care is needed. The video was developed by the U.S. Army's Walter Reed Army Institute for Research and was intended for use 3 to 6 months after return, but it was used during TLD because of its engaging nature. Battlemind sessions lasted approximately 60 minutes and occurred in groups of 30 or fewer personnel. To the extent possible, training occurred within platoons or among personnel who worked together.

On Day 3, participants attended one of between four and seven "electives." Attendance was mandatory, but participants could select the two sessions they preferred. The offerings varied over time, but the most popular offerings were:

— "Coping with Stress and Anger," a clinician-delivered, cognitive-behaviorally oriented anger and stress management program;
— "Healthy Relationships," a clinician-delivered, interpersonal therapy-oriented program intended to help participants prevent, recognize, and solve family conflicts;
— "Post-deployment Reintegration from the Veteran's Perspective," a presentation by veterans who were part of a peer support program for personnel with operation-related mental health problems; and
— "Leadership after the Action," a presentation by clinicians or personnel selection officers on recognizing and supporting those with postdeployment mental health problems.

The electives lasted 60 minutes each and consisted of didactics and group discussion, with a maximum of 30 participants per group. No attempt was made to deliver the electives in cohesive groups. Trainers were not necessarily selected on the basis of their instructional abilities, and they received varying durations of training (between a few hours and 1 week).

New Educational Program

Key differences between the old and new programs are summarized in Table I. The fundamental goals of the new program remained to ease the process of transition and to facilitate care-seeking for those who need it. These goals were met differently, though, via the following learning objectives:

— Identify the difficulties and accomplishments of the mission;
— Understand the physiological effects of stress;
— Appreciate the physiological decompression process;
— Recognize the common transitional phase challenges during reintegration;
— Identify key reintegration strategies in returning home from deployment;
— Identify positive coping strategies to assist during reintegration;
— Identify negative coping strategies;
— Recognize behavioral signs that may indicate external support is required;
— Challenge barriers to seeking mental health care; and
— Identify informal and formal mental health resources.

Training was delivered in two 2-hour blocks, on Day 2 and Day 3. The new TLD program was delivered in a group setting with an average group size of 27 learners (range = 2–50). Where possible, those who worked together while deployed received training together. The training included one individual exercise and three small-group exercises.

A mental health clinician (largely social workers and mental health nurses) and a nonclinician (either a veteran with a history of service-related mental health problems or line personnel with a special interest in mental health, similar to the Master Resilience Trainers[10] used in the United States) provided the training as a pair. Instructors underwent a minimum of 30 hours of training on psychoeducation in general and on the new TLD program in particular. Successful completion of a practical competency test was required.

TABLE I. Key Differences Between Old and New Educational Programs

Aspect	Old Program	New Program
Duration	3 hours	4 hours
Instructors	Largely clinicians; some electives delivered by nonclinicians	Clinician + nonclinician
Instructor training	Variable	Consistent
Choice of offerings	2/3 of content was electives	All learners received the same program
Group structure	Learners in varied and not necessarily cohesive groups	Learners largely in cohesive groups
Group interaction	Variable—limited where groups were not familiar with one another	Consistent—a number of group exercises were required
Barriers to care	Largely addressed stigma	Addressed broader range of barriers; focused on practical strategies to overcome these
Review of difficulties and accomplishments of the mission	Limited emphasis	Major emphasis of first module of the program
Recognition of transition and mental health problems	Central focus of Battlemind; limited focus of electives	Greater focus on assessment of severity of transition and mental health problems
Sources of care	Limited emphasis	Greater emphasis on describing different programs and services and how to access them; demystification of mental health care; identification of both formal and informal sources of care
Physiology of human stress response	Covered only in some electives	Covered consistently
Coping	Greater focus on avoidance of negative coping, especially use of alcohol	Balanced focus on a broader range of positive and negative coping strategies
Frame of reference	Combat-centric	More adaptable; addresses a broader range of deployment experiences

Evaluation Process

For the new program only, participants completed identical 15-item pre-/postsession evaluations covering attitudes and self-efficacy that were tied to the program's objectives. Five-point Likert scales were used, with 1 = "strongly disagree" and 5 = "strongly agree."

For both programs, participants completed an overall evaluation form at the very end of TLD that captured satisfaction with the TLD and with different aspects of it (notably the educational component) and key attitudes and self-efficacy using items obtained from the developers of the Battlemind program.[7] Most of the mental health care barrier items have been used in earlier research.[9,11–13] Program satisfaction was measured using a four-point "forced choice" Likert scale (with no middle category), and attitudes and self-efficacy were measured using a five-point Likert scale. To simplify analysis of satisfaction data, the response categories were dichotomized into satisfied vs. unsatisfied.

Analysis

Analysis was done using SPSS for Windows, version 15.0. Univariate association of categorical variables was explored using the χ^2 test. The association of satisfaction with the new vs. old program was explored with binary logistic regression.

In order to simplify analysis and presentation of results, exploratory principal components analysis with a varimax rotation was done on the 15 presession knowledge and attitude items to identify items for calculation of subscales. Cronbach's a was used to measure subscale reliability. Pre-/postsession differences and differences in attitudes and self-efficacy for the old vs. new program are expressed as Cohen's *d*, a standard measure of effect size for continuous data; confidence intervals (CI) for *d* and significance testing was done using the *Z* distribution. Differences in overall satisfaction with the TLD program under the old vs. new program were assessed using Somer's *d*, a nonparametric measure of ordinal association.

Ethical Aspects

Completion of all questionnaires was voluntary and anonymous. As routine evaluation of an educational program, approval by a Research Ethics Board was not required.[14]

RESULTS

For the new program, pre-/postsession knowledge and attitude questionnaires were received from 2,952 and 2,950 respondents, respectively (98% response rate). For the new and old programs, overall TLD evaluation forms were received from 2,935 and 14,253 respondents, respectively (97% and 75% response rates). A leading factor in the lower response rate for the old program was the loss of more than 2,000 evaluation forms in a single shipment from theater. Characteristics of the participants are shown in Table II; there were small differences in the sociodemographic and military characteristics of those who underwent the old and new programs, with those receiving the new program being

TABLE II. Sociodemographic and Military Characteristics of Participants, Old vs. New Programs

	Educational Program				
	Old		New		Total
	Count	%	Count	%	Count
Sex					
Male	12,604	91.8	2,650	91.8	15,254
Female	1,119	8.2	236	8.2	1,355
Total	13,723		2,886		16,609
Age*					
26 Years or Less	4,428	32.5	1,094	37.9	5,522
27–36 Years	5,342	39.2	1,078	37.3	6,420
37 Years or More	3,870	28.4	718	24.8	4,588
Total	13,640		2,890		16,530
Component*					
Regular	11,586	83.9	2,294	79.1	13,880
Reservist	2,230	16.1	607	20.9	2,837
Total	13,816		2,901		16,717
Rank					
Junior NCM	9,436	68.9	1,994	69.2	11,430
Senior NCM	2,504	18.3	496	17.2	3,000
Officer	1,757	12.8	392	13.6	2,149
Total	13,697		2,882		16,579
Deployment History*					
Never Deployed	6,379	47.1	1,619	56.3	7,998
Previous Deployment(s)	7,174	52.9	1,258	43.7	8,432
Total	13,553		2,877		16,430

NCM, Noncommissioned member. *$p < 0.001$ by χ^2 test.

slightly younger, more likely to be Reservists, and more likely first-time deployers ($p < 0.001$ by χ^2 test).

Principal components analysis of the 15 pre-/post-session items yielded three factors accounting for 58% of the variance. The first factor (44% of the variance, 6 strongly loading items, $\alpha = 0.87$) represented confidence in knowledge and abilities for transition, and included items such as "I can identify positive and negative ways of coping with transition challenges," "I understand the common experiences that occur during transition from deployment to home," and "I am confident in my ability to recognize when to get a transition problem checked out." The second factor (8% of the variance, 5 items, $\alpha = 0.83$) captured mental health literacy with items like: "I would know what to expect in terms of treatment if I were to seek help for a mental health problem," "I understand the impact of seeking mental health care on my CF career," and "I can identify a number of different ways to get help for mental health or transition problems in the CF." The final factor (7% of the variance, 3 items, $\alpha = 0.73$) represented the sense of personal responsibility toward others regarding their mental health with the following items "It's my responsibility to help a buddy with a mental health problem" and "It is the responsibility of leaders to encourage CF members to get help when they have mental health problems." A cross-loading item that was conceptually related was also included in this last subscale ("I am confident in my ability to help CF members get assistance for a mental health problem"). Subscales for each of these factors representing the mean score of loading items were calculated for each respondent. A single item ("If I had a mental health problem, I would definitely get professional help for it") cross-loaded on all three factors and was not used in any subscale.

Presession attitudes and self-efficacy were largely favorable, though mental health literacy showed the lowest average score (3.6 out of 5). All three knowledge and attitude factors saw statistically significant improvements in response to the new program (Table III), with the effect sizes (Cohen's d) for confidence in knowledge and abilities, mental health literacy, and sense of responsibility for others being 0.66, 1.03, and 0.44, respectively.

As shown in Figure 1, the new program was associated with significantly higher satisfaction with the educational program ($p < 0.001$). The "strongly agree" category showed a particularly strong shift in favor of the new program (39% vs. 16%). Figure 2 suggests that this increased satisfaction with the educational component enhanced the perceived value of TLD as a whole ($p < 0.001$). All measured sociodemographic and military characteristics had a statistically significant univariate relationship with satisfaction with the educational program and/or perceived value of TLD (Table IV). Logistic regression models confirmed that the new program was independently associated with increased satisfaction with the educational program (adjusted odds ratio [OR] = 3.8, 95% CI = 3.2–4.5) and greater perceived value of the TLD (OR = 1.7, 95% CI = 1.5–2.0).

Sociodemographic and military characteristics showed different patterns with respect to satisfaction with the educational program and with TLD as a whole. Women were more likely than men to be satisfied by the educational program and to find TLD valuable. Officer rank was associated

TABLE III. Mean Knowledge and Attitude Subscale Scores for New Program. Pre- vs. Postsession

	Pre (N = 2,952)		Post (N = 2,950)		Difference, Cohen's d (95% CI)
	Mean	SD	Mean	SD	
Confidence in knowledge and abilities for transition	3.92	0.58	4.27	0.48	0.66 (0.64–0.68)*
Mental health literacy	3.58	0.78	4.26	0.52	1.03 (1.00–1.05)*
Sense of responsibility toward others with respect to mental health	4.12	0.63	4.37	0.53	0.44 (0.44–0.46)*

*$p < 0.001$ by Z test.

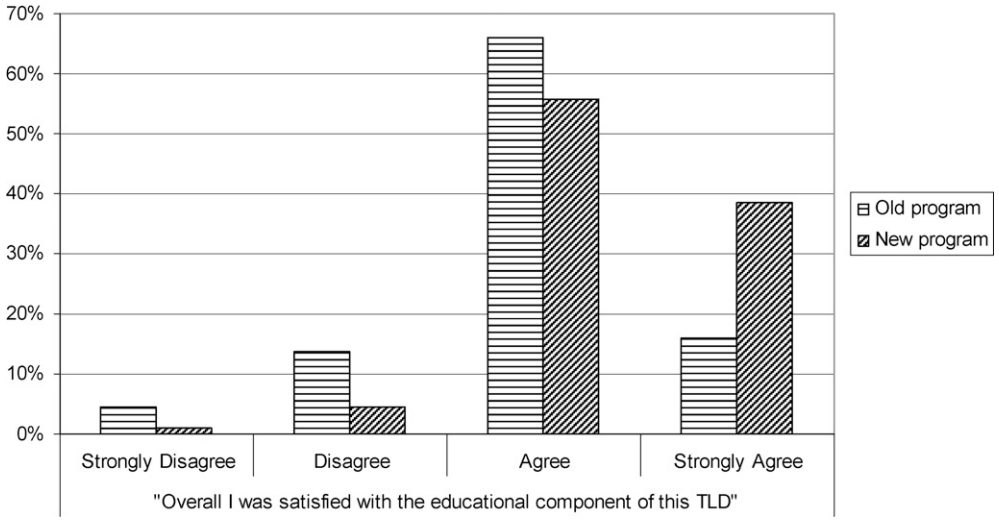

FIGURE 1. Satisfaction with TLD educational program, old vs. new program.

with lower satisfaction with the educational program but greater perceived value of TLD. Previous deployers were equally satisfied with the educational program but found TLD as a whole to be less valuable. No significant interactions were seen between the new educational program and any of the sociodemographic or military characteristics (results not shown).

Respondents who had underwent TLD in Cyprus previously (N = 1,491) were asked to compare the value of their current TLD experience with their previous one. As shown in Figure 3, the 984 respondents who completed the old educational program twice tended to find the current experience less valuable. In contrast, the 507 who completed the old program followed by the new program strongly favored the current experience.

The new program was also associated with more favorable attitudes toward mental health care (Table V). In particular, negative attitudes toward care (e.g., "I don't trust mental health professionals" and "Mental health care doesn't work") were less prominent in those who received the new program (Cohen's $d = -0.29$ and -0.27, respectively). Other attitudes (most involving stigma, such as "I would be concerned about what others might think") showed little or no difference between the two programs. The new program was also associated with greater self-efficacy surrounding mental health (Cohen's d = 0.20–0.34); these items covered self-efficacy both for identifying fellow CF members with mental disorders and for self-management of mental health problems. The univariate differences remained significant after adjustment for potential confounders (sex, age, component, rank, and

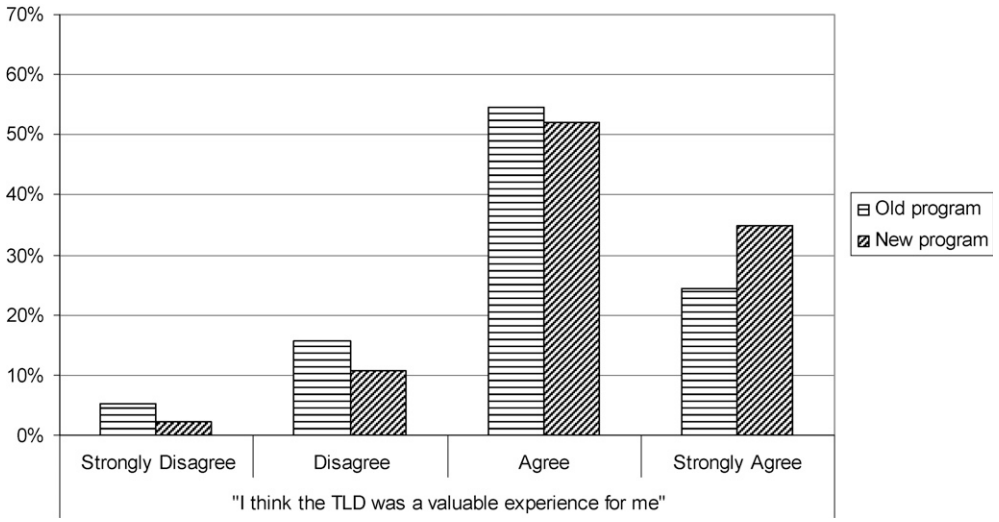

FIGURE 2. Perceived value of TLD program, old vs. new program.

TABLE IV. Logistic Regression Results for Satisfaction With Educational Program and Perceived Value of TLD

	Satisfaction With Educational Program		Perceived Value of TLD	
	Univariate OR (95% CI)	Adjusted OR (95% CI)	Univariate OR (95% CI)	Adjusted OR (95% CI)
Program				
Old	—	—	—	—
New	3.8 (3.2–4.4)**	3.8 (3.2–4.5)**	1.8 (1.6–2.0)**	1.7 (1.5–2.0)**
Sex				
Male	—	—	—	—
Female	1.2 (1.0–1.4)*	1.2 (1.0–1.5)*	1.6 (1.4–1.9)**	1.5 (1.3–1.9)**
Age				
26 Years or Less	—	—	—	—
27–36 Years	1.0 (0.9–1.1)	1.1 (1.0–1.3)*	0.9 (0.8–1.0)*	1.1 (1.0–1.2)*
37 Years or More	1.3 (1.2–1.5)**	1.7 (1.4–1.9)**	1.0 (0.9–1.1)	1.3 (1.1–1.5)**
Component				
Regular Force	—	—	—	—
Reserve Force	0.9 (0.8–1.1)	0.9 (0.8–1.0)	1.6 (1.4–1.8)**	1.5 (1.4–1.7)**
Rank				
Junior NCM	—	—	—	—
Senior NCM	1.1 (1.0–1.3)*	1.6 (1.4–1.8)**	0.9 (0.8–1.0)*	1.0 (0.8–1.1)
Officer	0.7 (0.6–0.8)**	1.5 (1.2–1.7)**	1.3 (1.1–1.5)**	1.2 (1.1–1.4)*
Deployment History				
No Previous Deployments	—	—	—	—
Previous Deployments	1.0 (0.9–1.1)	0.8 (0.8–1.0)*	0.7 (0.6–0.7)**	0.7 (0.6–0.8)**

NCM, Noncommissioned member; —, reference category. *$p < 0.05$; **$p < 0.001$.

deployment history) using univariate analysis of variance (results not shown).

DISCUSSION

Key Findings

This article demonstrates the superiority of a new TLD educational program over an earlier program including Battlemind, at least when it comes to very short-term outcomes. Three pieces of evidence are presented: first, pre- and post-session attitude and self-efficacy questionnaires established that the program resulted in medium to large changes in the domains of confidence in mental health knowledge and abilities (Cohen's $d = 0.66$), mental health literacy ($d = 1.02$), and sense of responsibility toward others ($d = 0.44$). Second, overall evaluation forms completed at the end of TLD showed that the new program was independently associated with a significantly increased odds of satisfaction with the educational program (adjusted OR = 3.2), and this satisfaction translated into increased odds of perceiving the TLD as a whole to be valuable (OR = 1.7). Those who had also undergone TLD under the old program clearly preferred the

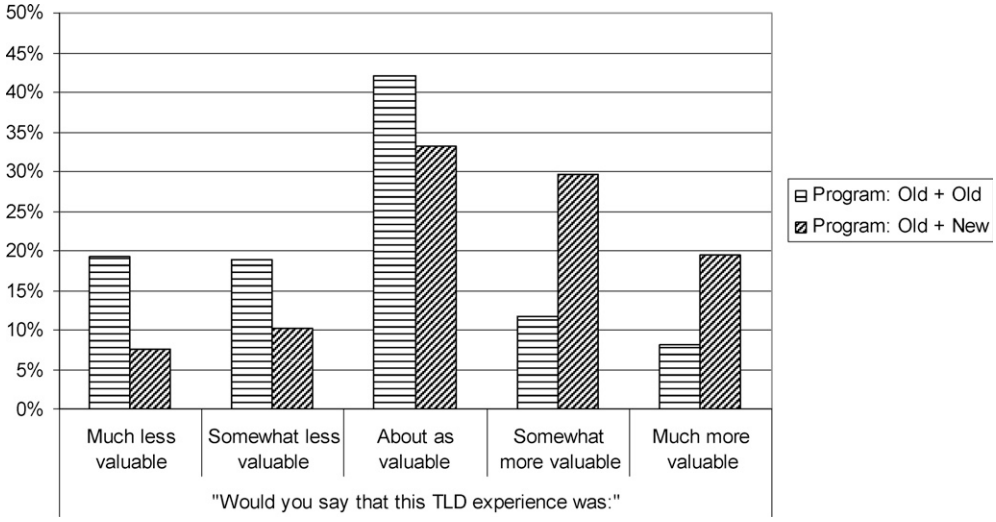

FIGURE 3. Overall satisfaction with current TLD compared to previous TLD, old + old vs. old + new programs (for those who had completed TLD in Cyprus previously, $N = 1,491$).

new one, on average. Finally, overall evaluation forms also showed that those who completed the new program had significantly more positive attitudes toward mental health care, though the magnitude of this effect was small (Cohen's $d = -0.29$ to -0.18). Stigma-related attitudes showed little or no difference between the two programs ($d = -0.15$ to 0.02). The new program was associated with a small but significant advantage with respect to self-efficacy for helping others with mental health problems and for self-management of mental health problems. Gains in self-efficacy for self-management occurred alongside gains in knowing when to seek care, suggesting that messages on resilience and care-seeking are not incompatible.

Although the new program did not appear to be superior with respect to its impact on mental health stigma, it was superior in its apparent impact on negative attitudes toward care (e.g., "Mental health care doesn't work"). This is an important finding because these attitudes are emerging as a much stronger predictor of care-seeking than stigma.[9] These negative attitudes received much greater emphasis in the new program.

The absence of significant interactions between key sociodemographic and military characteristics and the new program suggests that it has broad appeal and relevance: All subgroups benefited similarly from the new program. In short, all indicators point toward a significant advantage of the new program over the old one for all participant groups.

Comparison With Other Literature

The only real point of comparison for the present study is the rigorous group randomized trial of the postdeployment Battlemind training program done by its developers.[7] One hour of Battlemind delivered at the time of redeployment was superior to a conventional lecture on stress both in terms of training satisfaction and with respect to psychological well-being, 4 to 6 months later. For those with heavy combat exposure only, the investigators found well-being effect sizes (Cohen's d) ranging from 0.06 to 0.30. These effect sizes cannot be compared to any of the effect sizes in our sample, which deal with much shorter-term outcomes where higher effect sizes are achievable.

Although we earlier emphasized differences between our new program and the old program rooted in Battlemind, our "new" program did draw heavily from key elements of Battlemind. Key similarities included:

- Emphasis on identifying when help is needed;
- Reframing transition difficulties as consequences of appropriate adaptations to combat;
- Expectation of normal transition and reintegration for most;
- Use of military relevant examples;
- Skills-oriented;
- Strengths-based;
- Projective emphasis on unit cohesion and buddy support; and
- Use of sound principles of adult education.

TABLE V. Self-efficacy and Attitudes Toward Mental Health Care and at the End of TLD, Old vs. New Program

Domain	Item	Old Program		New Program		Difference, Cohen's d (95% CI)
		Mean	SD	Mean	SD	
Attitudes toward Care (desired score = low, desired change = decrease); item stem = "The following questions pertain to concerns that may affect your decisions to receive mental health counseling or services if you ever have a problem"	I don't trust mental health professionals	2.26	0.99	1.98	0.91	−0.29 (−0.31 to −0.27)*
	Mental health care doesn't work	2.04	0.88	1.81	0.81	−0.27 (−0.29 to −0.25)*
	If I had mental health problems, I would want to deal with them on my own	2.61	1.06	2.42	1.03	−0.18 (−0.21 to −0.16)*
	I would think less of a team member who was receiving mental health counseling	1.86	0.93	1.72	0.85	−0.15 (−0.17 to −0.13)*
	Members of my unit might have less confidence in me	2.63	1.11	2.55	1.10	−0.07 (−0.10 to −0.05)*
	I would be concerned about what others might think	2.46	1.15	2.42	1.15	−0.03 (0.06 to −0.01)
	I don't know where to get help	1.78	0.83	1.78	0.88	0.00 (−0.02 to 0.02)
	It would harm my career	2.22	1.03	2.24	1.03	0.02 (−0.01 to 0.04)
Self-efficacy (desired score = high, desired change = increase)	I am confident in my ability to identify CF members at risk for mental health or reintegration problems	3.60	0.78	3.86	0.71	0.34 (0.33–0.36) *
	I am confident in my ability to help CF members get assistance for a mental health problem	3.82	0.72	4.01	0.68	0.27 (0.25–0.28)*
	If I have a mental health problem, there are things I can do to make it better	4.01	0.69	4.15	0.66	0.20 (0.19–0.22)*
	If I take care of myself, I can avoid mental health problems	3.71	0.88	3.89	0.86	0.20 (0.18–0.22)*

*$p < 0.001$ by Z test.

In addition, our new program incorporated an element from another effective Battlemind program, Battlemind debriefing,[7,15] in that it started with a brief review of the difficulties encountered during the deployment. This exercise served as an ice breaker, acquainted the instructors with the unique experiences of each group, and permitted adaptation of the program to their specific needs (such as those related to noncombat operations).

Limitations

The foremost limitation of any pre-/postintervention evaluation strategy is that differences between the two groups other than the intervention could account for its apparent benefits. For example, the differences in response rate between the old and new programs could have introduced bias. We controlled for a limited number of confounders, but other factors may have been at play. The individuals best suited to judge the likelihood of bias are those closest to the project, namely the authors of this article. Although we can hypothesize any number of differences in, say, leadership, deployment experiences, and other factors, we cannot, in all honesty, identify any differences substantial enough to account for the sizable apparent advantage of the new program over the old one. We thus believe that a good fraction of the observed advantage reflects a real difference in the short-term educational impact of the program.

If one accepts these differences as real, a more important question arises: Will the short-term improvements in satisfaction, attitudes, and self-efficacy translate into improvements in long-term well-being and functioning? Military leaders want healthy, productive personnel, not just satisfied and confident learners. Battlemind has documented small but meaningful advantages in terms of well-being at 4 to 6 months after return, whereas the benefits of our new program are unknown. Whether the favorable changes we document here will translate into more meaningful changes in well-being hinges first upon the persistence of those effects over time. Unfortunately, the effects of health education (and education in general) are often transient. However, our TLD program has short-term outcomes in mind, namely successful reintegration over the weeks and months following return, so even a transient effect may be perfectly satisfactory. Our larger mental health training program also offers opportunities for reinforcement during other training offered across the career and deployment cycle. The translation of benefits in terms of attitudes into benefits in terms of well-being also hinges upon the extent to which those attitudes mediate well-being. Such mediation is likely but unproven.

One final major limitation: We cannot say which specific aspect of our new program (Table I) accounted for its apparent advantage. Was the team delivery model the active ingredient? Its less combat-centric content? Its delivery in more cohesive groups? Its slightly longer duration? Its greater interactivity? Better instructors, perhaps? Or simply the novelty of the new program? All of these are plausible, and none of them are testable with our data.

There are also some technical limitations in this analysis: Assumptions required for some of the statistical analyses may have been violated. We could not control for instructor or multilevel effects in training outcomes, and these may have been significant.[7] Use of logistic regression for other than rare outcomes (e.g., training dissatisfaction) has limitations.[16] Some of our respondents had participated in TLD earlier, hence their responses on the evaluation of the new program violated the assumption of statistical independence of the observations. We were not able to do paired comparisons for the pre- and post-tests; instead, we could only document differences at the cohort level. Finally, we did not adjust for multiple comparisons. We acknowledge these limitations but judge them to be much smaller threats to the conclusion as to the advantage of the new program over the old one. These would be of greater concern if the observed differences were less dramatic than they proved to be.

CONCLUSIONS

The development and validation of Battlemind was a landmark event in military mental health training, and we are deeply indebted to its creators. The meaningful gains in terms of well-being after a brief, group intervention for unselected learners made us look at military mental health training in a different light. When we selected Battlemind as the cornerstone of our TLD program, we endeavored to alter it as little as possible, with the intention of retaining as much of its efficacy as we could. At that time, we were not certain of what parts of the program were the active ingredients or if the whole was greater than the sum of its parts.

Over time, our understanding of deployment-related mental health problems and barriers to mental health care has progressed. Evidence is accumulating that psychoeducation and resilience training may actually be broadly effective.[17,18] In response to these changes, Battlemind itself has evolved in "Battlemind Resilience Training,"[19] and other resilience training has grown up around it in the form of the Comprehensive Soldier Fitness strategy.[20] Arguably, this article amounts to the testing of our new program (one with Battlemind firmly in its genome) against an increasingly obsolete version of the original program. However, many of the changes we made in our program mirror those in the mental health training in the U.S. Army. For example, Comprehensive Soldier Fitness relies on nonclinicians as trainers,[10] and the training as a whole is less combat-centric.[21] As such, the apparent success of our new program may have something to say about the effects of similar changes elsewhere.

Turning away from Battlemind, even as much as we have, has been a difficult decision. However, we are confident that we have retained enough of its essence to preserve its demonstrated benefits. Moreover, this evaluation suggests that our new program has, if anything, added to those benefits.

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