

## Performance and Resilience Coaching for Military Leadership

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## ***ABSTRACT***

*Training programs on resilience and mental toughness building have received mixed results in their efforts to improve performance and well-being. Recognizing the potential of these programs, the Canadian Armed Forces (CAF), like other militaries, has developed the Road to Mental Readiness (R2MR) program, an evidence-based comprehensive mental health training and education program designed to increase mental health literacy and enhance resilience and mental toughness. Despite the program's successes, recent evidence has suggested that repeated application and practice of the psychological skills not only in the training environment, but also in daily activities within the unit, could further improve their retention and effectiveness. Performance coaching is a process where one person facilitates the development and action planning of another, aiding the individual to bring about peak performance under various levels of stress. Military leaders can better prepare their personnel to manage stress by ensuring that training includes deliberate and thoughtful exposure to criterion stressors combined with individual coaching of the psychological skills required to manage these stressors. In an effort to expand the psychological skills training beyond the classroom environment, the CAF has developed a R2MR Performance and Resilience Coaching Program. The R2MR coaching content is designed to enhance military occupational health by enabling CAF leadership to integrate stress training techniques into training and daily unit activities, and to coach the psychological skills that promote resilience and mental toughness. This paper will briefly review the literature supporting resilience training, stress exposure training and performance coaching, three components of a comprehensive program. The paper will then provide an overview of the R2MR coaching objectives and key teaching points, as well as review the findings from the pilot project at the Canadian Forces Infantry School. These findings which demonstrate increases in knowledge and skill acquisition in addition to changes in performance and well-being of CAF members, and point to opportunities to build on this research and find innovative ways to expand resilience training beyond the classroom environment.*

## **1.0 INTRODUCTION**

The Canadian Armed Forces (CAF), like other militaries, recognizes that mental fitness and well-being are key contributors to operational readiness. As such, over the past ten years the CAF has developed the Road to Mental Readiness (R2MR) program; an evidence-based comprehensive mental health training and education program designed to increase mental health literacy and enhance resilience and mental toughness in order to ultimately improve short term performance and mental health outcomes. Since its inception, the R2MR program has made some gains in the training of psychological skills that promote performance and positive mental health, with improvements seen in the areas of mental health literacy, skill development and confidence [1]. Despite these successes, recent evidence has suggested that repeated application and practice of the psychological skills not only in the training environment, but also in daily activities within the unit, could improve skill retention and effectiveness.

Furthermore, a unit's performance, as well as the health and well-being of subordinates, are leadership responsibilities. Thus, while the R2MR program can provide CAF members with tools, resources and information to guard against stress, promoting positive mental health is more than a health services responsibility. Commanders have a key role to play in supporting policies and programs that globally affect the health and wellness of personnel entrusted to them. As operators and leaders, it is their responsibility to ensure the appropriate knowledge and required skills are integrated into ongoing training and passed on to those who go out into harm's way so that they may be best prepared for the difficult tasks assigned to them.

In an effort to expand the psychological skills training beyond the classroom environment, the CAF has developed a R2MR Performance and Resilience Coaching Program. The R2MR coaching content is designed to enhance military occupational health by enabling CAF leadership to integrate stress training techniques into occupational/unit training and daily routines, as well as coach psychological skills that promote resilience and mental toughness. This paper will highlight the value of linking psychological skills training to resilience training, stress exposure training and high performance coaching for leadership in order to maximize the chances that these skills will be practiced and ultimately utilized in times of stress. Next, the paper will provide a brief overview of the R2MR coaching curriculum objectives and program components. Finally, the promising findings from the initial pilot project at the Canadian Army Infantry School will be reviewed, including the limitations of the current pilot and planned future directions for the leadership performance coaching program.

## **2.0 RESILIENCE TRAINING, STRESS TRAINING AND PERFORMANCE COACHING**

### **2.1 Resilience training**

Over the past decade, many civilian and military organizations have developed and implemented resilience-building training programs as a means of primary prevention, aiming to equip individuals with the information and skills required to prevent the potentially negative effects of stress on performance and well-being. Evaluations of these types of programs have produced mixed results for beneficial effects, with "some interventions showing effectiveness in some contexts on certain outcomes, however, the research is not clear on exactly what mechanisms are involved" [2, p. 8]. In a recent meta-analysis, Vanhove and colleagues [3] found that the majority of employment resilience-building programs were classroom-based interventions that had a statistically significant, albeit modest, effect across health and performance criteria.

In an effort to improve retention, application and generalization of resilience skills, some training programs have looked to contextualize psychological skills training to stressful training conditions and inculcate this training into real world military training. However, these attempts have also resulted in mixed results [4]. DeWiggins, Hite and Alston [5] saw promising first-hand accounts and anecdotal evidence of improved performance when they developed and implemented a mental skills program into infantry training, however no control group or objective measures were used to confirm their findings.

In the same vein, the R2MR program has also relied heavily on classroom-based resilience training contextualized, tailored and adapted to the relevant rank, task, occupation, environment or mission. R2MR has adopted the wider CAF definition of resilience which is the capacity of a military member to recover quickly, resist, and possibly even thrive in the face of direct/indirect traumatic events and adverse situations in garrison, training and operational environments; while also focusing on improving mental toughness, as defined by Gucciardi & Hanton [6], the ability to perform at the high end of one's abilities on demand and in response to varying degrees of adversity/stress. Thus, the overall training objectives for R2MR include both improved performance under stress and long-term well-being.

R2MR program development has been informed by a set of guiding principles consistent with guidance from leading experts in military mental health training [7]-[8], and the NATO Implementation Principles for Mental Health Training [9]. The guiding principles recognized that any military mental health training must be integrated into the organizational culture, based on clear requirements and needs, and built in a developmental fashion to progressively add concepts and skills over time. For the training to be well-received and useful it must also be experiential and action-focused, using tangible skills to build flexible and adaptive coping with real-world application. R2MR training content is strengths-based, building on existing skills and abilities, while creating the positive expectancy that most people can manage most demands placed on them.

While content is tailored and customized to a given environment/occupation, there are core content components that lay at the foundation of all R2MR programming. First, all content includes an explanatory approach to the stress response and its potential impact on performance and decision making. This highlights misunderstood reactions and provides a scientific explanation for why individuals should apply strategies to better manage their response to stress. Second, all content includes the three key components of optimized performance and well-being: preparation, performance and recovery. Preparation is designed to ensure individuals understand the potential stressors they might face and practice the techniques ahead of time that will mitigate this impact and improve their performance. Performance is about using the specific skills to manage the various stressors of military operations, training and daily life. The CAF has adopted four primary psychological skills (goal setting, self-talk, visualization, and activation control) that have been proven to be effective in managing physiological responses to stress and enhancing performance. Additional skills are included for specialized occupations, such as attention control, progressive muscle relaxation, mindfulness, and compartmentalization. Finally, recovery highlights the need to restore physical and mental energy. Training is geared towards employing specific recovery strategies, coping skills and recognizing signs of under-recovery.

Since its inception ten years ago, the R2MR suite of resilience-based training has demonstrated key improvements in CAF service members' mental health literacy, confidence to manage stress, self-efficacy [1] [10], ability to recognize the need for and to seek mental health support [11], and improved positive coping [12]. However, in a recent randomized control trial for CAF recruits [13], issues were found with the adoption and use of the skills outside the 160-minute classroom session.

Given the encouraging, yet limited, success of classroom-based resilience training, the R2MR program has looked to two additional conceptual models, stress training and high performance coaching, to guide the expansion of the program with the aim of improving effectiveness.

## **2.2 Stress Exposure Training**

In the military, and other first responder training contexts, stress training has traditionally occurred implicitly or indirectly; for example as a secondary effect of intense physical training, discipline and simulation training [14]. However, such an approach has been criticized for resulting in service members being left on their own to determine the psychological coping skills required to manage stress [15], many of whom may or may not have these stress management skills fully developed and available to them.

According to Driskell and Johnson [16, p. 193], stress training is defined as “an intervention to enhance familiarity with the criterion environment and teach the skills necessary to maintain effective task performance under stress conditions.” This differs from other forms of military training, where the focus is on gaining the required knowledge, skills and abilities to perform the given military task. Stress training allows for the systematic practice and application of psychological skills under conditions that approximate the real-world environment; and this is key for improved performance in adverse or stressful situations [17]. However, CAF leadership must be able to implement stress training in a structured, deliberate manner that includes careful consideration to the types and amount of stressors and key guidelines regarding implementation. Driskell and Johnson’s Stress Exposure Training (SET) model provides such structure and guidelines, and has been found effective in managing stress and improving performance [16], [18]-[21].

SET is a three-phase training program designed to provide information, skills training, and practice, with the goal of learning how to cope and perform while exposed to the given expected stressors in the environment. In the second and third phases, practice takes place under graduated exposure to stressors; the number and types of stressors are gradually increased in successive training scenarios [17]. It is in these latter components of the SET model that military leadership can benefit by gaining key knowledge regarding instructional content, delivery strategies, and the sequencing methods of stress training.

The R2MR program leverages the SET model in a number of ways. First, the model offers an explanatory approach to the relevance and need for deliberate training against stress, as well as to how this differs from a more indirect approach. Second, leaders learn the phased approach of stress training, the importance of teaching key psychological skills and then practicing skill application in a graduated stress environment. Finally, leaders learn how specific acute stressors can be applied in a purposeful and deliberate manner to increase challenge and adversity in the training environment, without unnecessarily contributing to training failures.

This approach could further benefits CAF personnel in training in a number of ways. First, individuals develop an awareness of the activation level at which they tend to perform best. Second, CAF members are able to appropriately manage physiological activation, and learn to stay within their optimal zone of performance for longer periods of time, as well as develop a sense of control over their preparation and performance. Finally, this approach leads to the development of service members’ self-confidence, which helps build a future-orientated perception where stress is appraised as a challenge vice a threat.

However, while there are many positive components to the SET model, namely the structure and guidelines for implementation, it also has key drawbacks. Firstly, the use of mental health professionals as the primary facilitators of this training may limit its relevance and credibility for military members [15]. Furthermore, it also limits its use to subject matter experts and therefore prevents leveraging of the knowledge and skills by leadership

on a daily basis within the unit. Secondly, SET separates stress training from other military training situations and it has been argued that a more complete approach would integrate the components of stress training into the context of all intense military training situations [15]. This approach is also supported by Fletcher and Sarkar's [22] mental fortitude training, which, drawing from resilience literature, postulates that resilience interventions should take place in an individual's existing training program and include a challenging environment where individuals are taught coping skills while facing real difficulties that they are supported through. However, this later component of support points to the third area of weakness with the current SET model. That is, while feedback and support are provided in the pre- and post-performance briefings, individuals may require additional support through the coaching of the psychological skills during the training itself. This has led the R2MR program to augment this stress training approach with high performance coaching for leadership.

### **2.3 High Performance Coaching for Leadership**

Over the past decade, the use of coaching techniques and methodologies have become increasingly prevalent in organizations seeking to enhance performance. The R2MR program has adopted the definition of high performance coaching as "the systematic application of collaborative, individualized and solution-focused psychological practices by leaders to enhance individual, group or organizational performance" [23, p. 342]. A meta-analysis on the effects of coaching on individual level outcomes by Theeboom and colleagues [24] found significant positive effects of coaching on five individual level outcomes: performance/skills, well-being, coping, work attitudes, and goal-directed self-regulation. Furthermore, Vanhove and colleagues [3], in the aforementioned meta-analysis, found that in regards to resilience-based training programs, more direct formats such as those that focus on one-on-one coaching were found to be most effective. They hypothesized that this may be due to the fact that such formats allow for adaption to trainees' unique needs and hold trainees accountable, while also allowing for application to specific experiences and situations.

High performance coaching provides a framework to assist leaders to integrate and encourage the use of the psychological principles of stress and coping into pre-existing training settings with its roots in both positive psychology [25] and coaching psychology [26]. Both of these theoretical models share a focus on performance enhancement, leveraging individual strengths and the positive aspects of human nature [24]. High performance coaching techniques such as the use of effective questioning, active listening, setting meaningful training goals, and providing effective feedback can all be applied to the learning and practice of psychological skills training.

The R2MR coaching program has incorporated these techniques as they apply to the skills of goal setting, visualization, positive self-talk, activation control and attention control. Specific instructions are provided to leaders describing how to support subordinate application of these skills in training and operational environments. These include: the observation and assessment of subordinates' stress management abilities, identification of any performance gap between their current ability and the desired ability, assisting subordinates to set appropriate psychological training goals, providing instruction on a given skill technique, providing key reminders and cues to apply the skills in-situ, utilizing language that supports the development of the skill sets, and at times creating and inserting activities that directly apply the techniques, such as visualization scripts and mental training plans. R2MR has also incorporated mental training plans, which provide leadership with a tool to encourage subordinates to plan ahead and create individualized strategies to build psychological skills into their performance [27]-[28]. These training plans include preparation, performance and recovery plans to ensure subordinates have a predetermined structured approach on how they will cope with given stressors, including overcoming obstacles and setbacks.

As previously mentioned, the R2MR performance coaching is a leadership-driven program, in recognition of the reality that leaders are ultimately responsible for the performance and well-being of their subordinates and are best

situated to provide the required operational relevance and credibility. As was advocated by Thompson and McCreary [15] in their mental readiness training model, mental health professionals are not eliminated from the training process, but rather are utilized to teach the essential theory and skills to the leadership and then play a consultative role in supporting the integration of these concepts into military training environments, respecting the fact that the primary responsibility for designing and implementing unit training falls to the chain of command. Furthermore, leaders, once trained on these skills, can also reference and utilize them in other aspects of military life given that psychological skills are not only helpful in performance situations, but are also key life skills. For example, tactical breathing should be encouraged and coached not only to improve performance during operational tasks, but also as a key skill whenever an individual is experiencing distress. The R2MR program operates on the belief that empowering leaders to fully integrate psychological skills will ultimately contribute to broader integration of these skills into military training and exercises.

### 3.0 R2MR PERFORMANCE COACHING PROGRAM OVERVIEW

The R2MR performance coaching course is a two-day (720 minutes) classroom-based training designed to assist CAF leaders to coach psychological skills throughout regular training activities, as well as implement effective stress training techniques in order to improve military performance and subordinate well-being. The CAF defines leadership as directly or indirectly influencing others, by means of formal authority or personal attributes, to act in accordance with one’s intent or a shared purpose [29], and as such this course content would arguably be helpful to all CAF members, the R2MR coaching program has targeted those in positions of formal authority (MCpl and above; Capt and above), with a particular emphasis on those leaders currently employed in a CAF training institution.

The core pedagogical approach to this curriculum is learning-centred with both teacher-centred activities such as didactic instruction for delivery of foundational theory along with learner-centred activities to promote reflective and collaborative learning amongst participants, including multimedia content, large and small group discussions, individual activities, and application simulations. The material is split into eight modules. For a summary of the timing and key objectives of each module refer to Table 1.

**Table 1: Overview of R2MR Performance and Resilience Coaching Program including module titles, timings and key learning objectives.**

Module	Timing	Key Learning Objectives
What is mental skills training	30 min	<ul style="list-style-type: none"> <li>Define resilience and mental toughness</li> <li>Describe three elements to achieving optimal performance: preparation, performance and recovery</li> <li>Identify three key outcomes of mental skills training: thriving in the face of adversity, failing forward, adopting a challenge mindset</li> </ul>
High performance coaching	30 min	<ul style="list-style-type: none"> <li>Differentiate between teaching, training, mentoring and coaching</li> <li>Apply key high performance coaching techniques: observation, effective questioning, active listening, goal setting, and effective feedback</li> <li>Describe how high performance coaching is linked to building self-confidence and improving performance</li> </ul>
Physiology of stress	45 min	<ul style="list-style-type: none"> <li>Define stress and pressure</li> <li>Differentiate between acute and chronic stress</li> <li>Differentiate between cognitive and somatic performance anxiety</li> </ul>

		<ul style="list-style-type: none"> <li>• Describe the impact of stress on performance</li> <li>• Identify the physiological and cognitive impact of stress</li> </ul>
Key mental skills (Big Four+)	120 min	<p>For each of the Big Four Plus skills (goal setting, visualization, self-talk, activation control, attention control):</p> <ul style="list-style-type: none"> <li>• Describe the benefits of the skills and how the skill works to mitigate the impact of stress and improve performance</li> <li>• Learn and apply the techniques of each of the key skills</li> </ul>
Stress training and coaching mental skills	120 min	<ul style="list-style-type: none"> <li>• Describe the role of adversity in improving resilience and performance</li> <li>• Describe role of leadership in assisting subordinates to overcome adversity</li> <li>• Identify key acute stressors that can be used to create stress in training and describe how each impacts on performance</li> <li>• Apply acute stressors to current training environment</li> <li>• Differentiate between training and stress training</li> <li>• Translate each of the three components of stress exposure training to the CAF training environment</li> <li>• Apply high performance coaching techniques to mental skills</li> </ul>
Syndicate application and Simulations	180 min	<ul style="list-style-type: none"> <li>• Apply the three components of stress exposure training to CAF training environment</li> <li>• Apply high performance coaching techniques to mental skills training in CAF training environment</li> </ul>
Assisting subordinates who struggle and recognizing distress	75 min	<ul style="list-style-type: none"> <li>• Differentiate between threat and challenge appraisals</li> <li>• Describe the role of leaders in promoting the development of challenge appraisals</li> <li>• Apply CORE questions to assist subordinates to manage setbacks</li> <li>• Differentiate between stress and distress in subordinates in a training environment</li> <li>• Apply key leadership support actions to subordinates in distress</li> </ul>
Managing leadership stress	120 min	<ul style="list-style-type: none"> <li>• Identify sources of leadership stress</li> <li>• Define recovery</li> <li>• Identify individual recovery activities</li> <li>• Identify individual coping strategies</li> </ul>

After an initial introductory session that situates the coaching material within other R2MR training and establishes the course objectives, the first three modules of the program are designed to establish the relevance and importance of psychological training in promoting optimized performance. Leaders are taught aspects of resilience, mental toughness, stress management and high performance coaching theory to help them appreciate the potential benefits of integrating the coaching concepts into their training. Leadership buy-in, which is crucial to implementation, cannot occur if leaders do not fully understand the foundational concepts. Following the theoretical component, the focus of the training turns to ensuring that leaders fully understand each of the key psychological skills employed by the R2MR program: goal setting, visualization/imagery, self-talk, activation control, and attention control. Each of the skills is taught in detail and includes individual practice application. While this module is repetitive for those who have been previously exposed to R2MR training, it is recognized that an advanced understanding of each skill is required in order to facilitate coaching and skill development in others.

Module five includes the process and techniques to implement stress training and coach the key psychological skills. Leaders discuss the importance of adversity and challenge in military training and the importance of selecting the correct types of acute stressors to facilitate growth and confidence building. By training leaders on the need to link the type of stressor (i.e. time pressure, task load, novelty, etc.) to the performance and environmental demands, leaders can make informed choices on appropriate stress training. For example, while sleep deprivation is often used to augment stress levels, it is counterproductive when trying to teach subordinates new information or skills. Furthermore, in training situations, creating adversity is not about cruelty and, in fact, the role of leaders is to help subordinates anticipate obstacles and recover from setbacks, rather than yelling at them indiscriminately and further fuelling the stress response. The training includes how to implement each of the three components of stress exposure training, with a particular focus on pre- and post-performance briefings, and high performance coaching techniques as they are applied to each of the core psychological skills.

The next module follows with a detailed practical application of the stress training and coaching content. Leaders are placed into small groups and asked to deconstruct a current training activity. With the acknowledgement that many of the more challenging military courses already involve a graduated exposure to increasingly realistic training scenarios, but may lack the link to performance deficits and required coping strategies, relevant current training activities are deconstructed in syndicate work. Participants in each syndicate are asked to identify the acute stressors being targeted; prepare a pre-performance brief; discuss coaching techniques to be used and provide details on what, where and when the psychological skills could be coached; and prepare a post-performance brief demonstrating how they would provide feedback on the use of the psychological skills. This methodology ensures that those with the technical and tactical experience and expertise are designing the training activities, with the support and subject matter expertise available to them on how to ensure that personnel are trained effectively in stress management by embedding stress training techniques and psychological skills within the overall training objectives. Syndicate presentations are shared with the larger group and discussion is focused on relevance of information and challenges to implementation. Thus, at the end of the coaching course, each group will have developed a systematic protocol for integrating psychological skills into unit training activities.

The final two modules of the course focus on distress and recovery in both subordinates and leaders. Understanding that resilience and mental toughness are not solely concerned with performance, but also with overall well-being, these modules are highly relevant. Topics covered include assisting subordinates to bounce back from setbacks and recognizing and supporting those who develop more significant mental health issues. Additionally, leaders will only be able to coach and develop these psychological skills in their subordinates if they themselves are psychologically healthy, therefore, the need for leaders and instructors to employ and model these skills is further highlighted.

At the completion of the training, participants are provided with a facilitator manual that summarizes all of the theoretical aspects of the program, provides direction on implementation of the three-phased SET approach, lists acute stressors that can be leveraged in training, and reviews key coaching strategies. Leaders are also provided with trainee materials including an R2MR skill refresher brief, a template for a post-performance questionnaire, a guide to building a tactical mind set, and a mental training plan template. Leaders are encouraged to use these tools as they see fit in their training environments.



## **4.0 PILOT IMPLEMENTATION AT CAF INFANTRY SCHOOL**

### **4.1 Background**

In an effort to begin testing the effectiveness of the performance coaching program in improving performance and well-being, the R2MR program partnered with the Infantry School at the Canadian Army Combat Training Centre (CTC) in Gagetown, New Brunswick. Military course instructors on the Basic Military Officer Qualification - Army (BMOQ-A), a primary leadership course for Army officers, were provided the R2MR coaching curriculum in order to integrate stress training techniques and coach the psychological skills with the course candidates during the BMOQ-A. The decision was made to test effectiveness by examining the course candidates' self-reported use of the psychological skills and levels of performance anxiety during stressful aspects of the training.

### **4.2 Methodology**

An initial search of the sport performance literature was undertaken to identify potential existing measures that could be used or slightly modified to suit this military setting. Three measures were identified: the Sport Competition Anxiety Test (SCAT), a measure of performance anxiety [30]; the Competitive State Anxiety Inventory-2 (CSAI-2), a sport-specific state anxiety scale [31]; and, the Athletic Coping Skills Inventory (ACSI), a measure of psychological skills [32]. The language in these measures was modified slightly to remove reference to sport and insert references to military training.

Data was collected from 78 BMOQ-A course candidates. These CAF members, having just completed basic training, had some initial exposure to the psychological skills through a 4 hour R2MR session during their basic training, therefore, no additional subject matter expert classroom-based training was provided, however leaders were given a R2MR refresher package to present to the students to ensure they were able to recall and apply the salient aspects of the skills. Course candidates were asked to complete the three performance-related scales prior to the start of their course (pre) and again at the end of their 55-day leadership course (post). The completed pre- and post- forms were matched for each individual using a unique identifier.

### **4.3 Results**

The results of the SCAT showed a significant decrease in the mean anxiety score from pre to post with a small effect size (Cohen's  $d=0.25$ ) (Table 1). When using the CSAI-2 (Table 2), a statistically significant improvement was observed for the self-confidence subscale with a medium effect size (Cohen's  $d=0.40$ ). For the ACSI (Table 3), highly significant increases in 'goal setting & mental preparation' and the total score were observed with medium effect sizes. 'Peaking under pressure' and 'concentration' subscales also showed significant increases in post-course scores but with small effect sizes. Overall, these findings demonstrate reduced anxiety levels in course candidates and positive changes in the areas of 'self-confidence', 'goal setting & mental preparation', 'concentration' and 'peaking under pressure', which are all directly aligned with the key objectives of the training.

**Table 1: Mean score and standard deviation as determined by the Sport Competition Anxiety test (SCAT) before and after the BMOQ-A course.**

	<b>Pre-course Mean (SD)</b>	<b>Post-course Mean (SD)</b>	<b>Cohen's d</b>	<b>p-value</b>
Total	19.36 (4.36)	18.29 (4.07)	0.25	0.015*

\*Significance at  $p < 0.05$ .

**Table 2: Mean scores and standard deviations for each of the three subscales of the Competitive State Anxiety Inventory-2 (CSAI-2) before and after the BMOQ-A course.**

	<b>Pre-course Mean (SD)</b>	<b>Post-course Mean (SD)</b>	<b>Cohen's d</b>	<b>p-value</b>
Cognitive Anxiety	19.03 (6.37)	17.87 (6.50)	0.18	0.15
Somatic Anxiety	15.10 (4.94)	13.97 (4.07)	0.25	0.090
Self-confidence	25.10 (6.17)	27.55 (6.11)	0.40	0.002*

\*Significance at  $p < 0.05$ .

**Table 3: Mean scores and standard deviations for each of the seven subscales of the Athletic Coping Skills Inventory (ACSI) before and after the BMOQ-A course.**

	<b>Pre-course Mean (SD)</b>	<b>Post-course Mean (SD)</b>	<b>Cohen's d</b>	<b>P-value</b>
Coping with adversity	7.05 (2.04)	7.29 (2.01)	0.12	0.21
Coach ability	9.68 (1.90)	9.53 (2.06)	0.08	0.49
Concentration	6.83 (2.18)	7.38 (2.19)	0.25	0.007*
Confidence & Achievement motivation	7.55 (2.08)	7.91 (2.11)	0.17	0.052
Goal setting & mental prep	6.45 (2.25)	7.68 (2.35)	0.54	0.000002*
Peaking under pressure	5.58 (2.95)	6.41 (2.80)	0.29	0.0002*
Freedom from worry	6.47 (2.51)	6.72 (2.61)	0.10	0.35
<b>Total</b>	49.62 (11.11)	52.92 (10.97)	0.30	0.00009*

\*Significance at  $p < 0.05$ .

### 4.3 Limitations and Future Directions

Several limitations exist in this initial attempt to study the effectiveness of the coaching course. First of all, the three scales used were adapted from sports psychology with slight modifications to remove the sport context, and

the reliability and validity of the modified scales were not determined in the CAF. Moreover, there was no control group in the study, which means that the improvements of scores on the performance scales could be attributed to the Infantry School training, or growth and maturation over time, instead of the performance coaching training. Next steps could include either validation of the modified SCAT, CSAI-2 and ACSI or establishing psychometric properties of a new scale using relevant questions from the SCAT, CSAI-2 and ACSI. Once a validated scale has been established, further research needs to be conducted administering the validated scale to control and intervention groups at various time points, which would help determine the efficacy of performance coaching. An additional limitation of the current study is the relatively small sample size. Once a validated scale has been developed, future applications of the material with additional CAF personnel would provide further opportunities to measure effectiveness. Finally, the current study focused on the improvement of the candidates' performance on the course and not on the coaching behaviours exhibited by the leaders employing the coaching course content. Future studies could explore and measure the coaching behaviours of the leaders to ensure the coaching content is being implemented as intended.

### 5.0 CONCLUSION

As discussed, since launching the Road to Mental Readiness program, the Canadian Armed Forces has seen notable improvements in CAF members' mental health literacy, confidence to manage stress, self-efficacy, ability to recognize the need for and seek mental health support, and improved positive coping. While these results are encouraging, other evidence from our program has suggested that the adoption and use of the psychological skills outside the classroom session has been limited. This finding mirrors results from other resilience-based training efforts, as discussed earlier in this paper.

However, if one examines the learning of other physical, technical, or tactical skills, these limited results should not be surprising. For example, one would not expect massive improvement in physical fitness skills if the sole intervention was one or two days in the gym reviewing physical fitness theories and key workout strategies with no follow up, encouragement or integration of physical fitness into any other military tasks. Similarly with technical skills, one would not be surprised with poor marksmanship skills, if the only intervention was a classroom session on weapons handling and instructions on how to operate the rifle. In the same vein, it is unrealistic to assume that one or two days of classroom based resiliency training would result in the generalization and integration of psychological skills into all aspects of an individual's professional and personal life.

As military organizations continue to implement resilience-based training programs, efforts must explore how to expand this training beyond the classroom environment. Furthermore, these efforts need to be undertaken in partnership with unit leadership, who retain the ultimate responsibility for the performance and well-being of their personnel.

The purpose of this paper was to review how the Road to Mental Readiness program, relying on the well-researched approaches of resilience training, stress exposure training and high performance coaching, has developed a training package to assist CAF leadership to integrate psychological skills into regular military training and other unit activities. This program has been piloted with encouraging results at the CAF Infantry School and, although this is only an initial step towards the ultimate goal of implementing an effective performance and resilience coaching into all aspects of military training, it is hoped that by sharing this information with other researchers and practitioners in the resilience field, further programs and studies can build upon this information and establish research-based approaches to taking resilience training beyond the classroom.

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