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Building on Strengths

**Improving Mental Fitness
For
Canadian Forces Personnel**

By / par

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The idea and concept of “Building on Strengths” is attributed to Brigadier-General W. Semianiw, Commandant Canadian Forces College. This concept is part of the Commandant’s philosophy for education at the Canadian Forces College. This concept has been incorporated as one of the underlying themes of this thesis. This idea is being used in this essay with his permission.

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ABSTRACT

The Canadian Forces (CF) has experienced a very high-paced operational tempo over the past 16 years. During the Cold War years the CF had prepared to face an enemy whose actions and the theatre of operations could be predicted with a fair degree of accuracy. This predictability allowed for stability in force structures, training and deployments, and indeed, seemingly permanent CF bases were established on foreign soil to increase states of readiness for the deployed forces. This stable state of affairs ended in 1989 when the fall of the Berlin Wall heralded the collapse of the Soviet Union.

Initially, following this sea change in world politics, the Western World expected to reap a huge financial 'Peace Dividend' where states, no longer threatened by nuclear MAD, could select new spending priorities, in place of defence. These new priorities would be in the pursuit of peace, development, the general betterment of the human condition and even possibly tax cuts for its citizens. Unfortunately, this was not to be the case, and the world has entered a new era, with a new 'hot war'. This is a war against an asymmetric threat, a world war where non-state actors may be the greatest threat. This new paradigm of warfare is referred to as "4th Generation Warfare".

To operate successfully in this new battlespace, CF personnel must be able to transition rapidly between high-intensity Combat Operations, to mid-intensity Peace Support Operations, to fast-paced and demanding Humanitarian Relief Operations. The CF refers to this new operating environment as the "Three Block War". CF personnel must possess a high level of mental fitness and agility to be able to cope with this new structure of operations, which are occurring at a seemingly ever increasing tempo. Unfortunately, CF personnel are now experiencing a high level of stress related injuries which may be as a result of both the increased frequency of operations (tempo) and the combat stressors inherent in this new battlespace.

This paper will conduct a review of the literature concerning stress, coping strategies, and the factors, characteristics and techniques that may enable a person to improve their level of mental fitness and by doing so increase their resistance to stress injuries. Additionally, an analysis of the effectiveness of current CF Health and Mental Well-Being programmes, and of certain general CF programs and institutions will be done to determine their impact on mental well-being. The paper concludes by suggesting methods and an approach which puts emphasis on the prevention of stress-caused injuries.

CHAPTER 1 - INTRODUCTION

It is not the stress that kills us; it is our reaction to it.

Hans Selye

Introduction

The Canadian Forces (CF) has participated in many operational missions over the past 16 years. This has been a significant increase in the level of mission activity, compared to the period prior to 1990. This level of activity is commonly referred to as “operational tempo” referring not to the tempo or pace of a specific operation, but rather, to the overall number and frequency of distinct operations being conducted by the CF. Since the end of the Cold War, as marked by the fall of the Berlin Wall in 1989, CF personnel have served on significant missions in Africa, the Persian Gulf Region, Cambodia, Bosnia, Kosovo, Afghanistan, Syria, and Haiti.

In addition to the complex human geo-political situations encountered on these missions, the natural world has also seemingly become more of a force to be reckoned with. To help ameliorate the human suffering caused by serious, large-scale, natural disasters there have been major CF humanitarian relief missions deployed internationally to Turkey, Sri Lanka, Honduras and Pakistan.¹ To ensure the capability to react quickly to humanitarian crises, the CF has established a special unit named the Disaster

¹ The history of the DART including all of its deployments is available from DND, http://www.forces.gc.ca/site/operations/DART/index_e.asp; Internet; accessed 15 March 2006.

Assistance Relief Team or DART which is ready, on short notice, to deploy either domestically or internationally as required. Domestically, the CF had also been busy helping Canadians; the most notable examples being the Winnipeg floods (Operation ASSISTANCE) in the spring of 1997 and during the Ice Storm of the winter of 1998 which devastated parts of Eastern Ontario and Quebec (Operation RECUPERATION). Additionally, the CF was on alert and ready with contingency plans (Operation ABACUS) to assist the nation should there have been Y2K problems associated with computer programming at the conclusion of the year 1999. When the terror attacks hit the United States, in September 2001, Canada was prepared to assist using the CF to either deliver humanitarian aid or combat forces (Operation Support).² Operations in support of Canadians in Canada are the number one priority for the CF, and as part of CF Transformation, a new operational level headquarters has been established as Canada Command. This new headquarters has been created to ensure that all aspects of operations within Canada are planned, and conducted, in a coordinated and effective manner.

As evidenced by this elevated number of operations, or the increased operational tempo, both domestic and international, the end of the Cold War marked the conclusion of what had been a very stable period for the CF. A very brief history of the CF, post World War II, will demonstrate that a new paradigm of operations was entered into in 1990 – one that is more demanding and challenging both physically and mentally for those executing it – the men and women of the CF.

² Accounts of all past CF Operations, both domestic and international, are available from DND. http://www.forces.gc.ca/site/Operations/past_ops_e.asp; Interned; accessed 15 March 2006.

Following the cessation of World War II, Canada continued to pursue its goal of national security through alliances and focused its defence efforts and resources on its partnership in the North Atlantic Treaty Organization (NATO). An important sequel to this primary effort was the support given to United Nations peacekeeping missions.

Canada was one of the 12 countries who signed the original NATO treaty in Washington in 1949.³ During this period, from 1949 onwards, Canada's focus was on conventional forces prepared to fight a 3rd Generation War or conventional war. The land, maritime and air elements of the CF were ready to face, with our NATO Allies, the Soviet Block's massed forces. In preparation, the Army and Air Force occupied various bases throughout Europe and the Navy sailed the high-seas with NATO striking fleets practicing its specialty of Anti-Submarine Warfare. The CF functioned within a very structured environment: annual training and exercise cycles were planned, with relative accuracy, well into future years.

The period of the Cold War was very predictable, but all 'good things' must come to an end. And the end was marked by two significant events: the fall of the Berlin Wall in November 1989 and the Al-Qaida terror attacks against the United States in September 2001. The Cold War had truly ended and a new 'Hot War' era began. The world had lost the opportunity to reap the benefits of an anticipated "Peace Dividend". This new era of warfare has been defined by William S. Lind as 4th Generation Warfare (GW).

³ NATO, *NATO Handbook*, (Brussels: Office of Information and Press, 2001), 29.

Lind, an American military analyst and writer has developed a theory which aims to explain and define this new era of warfare.⁴ A brief explanation of Lind's four generations of warfare theory is provided here:

Generation	Tactics	Era	Comments/Characteristics
First	Line and column. Line maximized firepower, rigid drill was necessary to generate a high rate of fire.	Era of the smoothbore musket.	Napoleonic warfare in Europe.
Second	Based on fire and movement, while remaining basically linear in execution.	First World War. Effects of Industrial Revolution being introduced.	Massed firepower (artillery) replaced massed manpower. Catalyst: Technology.
Third	Nonlinear tactics. Manoeuvre rather than attrition. Infiltration to bypass and collapse enemy combat forces.	Last year of First World War to end of Cold War.	"Manoeuvre Warfare" theory. "Operational Art" concept begins to take shape. High-speed operations. Col John Boyd and the "OODA Loop" theory. "Air-Land Battle" theory. Catalyst: Ideas.
Fourth	Mission Orders. Decreasing dependence on centralized logistics. More emphasis on manoeuvre. Goal is collapsing the enemy internally rather than physically destroying him.	Post Cold War.	Asymmetric threat. "War on Terror". Non-State Actors. Rogue states with WMD. Catalyst: Ideas, new threat paradigm, i.e., the non-state actor terrorist who may be WMD capable. Non-linear. Entire society is involved.

Figure 1: An adaptation of Lind's theory of the Four Generations of Warfare.

Lind and others have written extensively on the characteristics of 4th GW and how to understand and operate successfully in this new battlespace.

⁴ William, S. Lind, "The Changing Face of War: Into the Fourth Generation," *Marine Corps Gazette*, (October 1989): 23.

The CF, after having experienced some considerable difficulties during complex international deployments during the 1990s, is now responding to the challenges presented in Lind's 4th GW battlespace.⁵ As a specific response to this new operating environment the CF has embraced a new doctrine for operations entitled the "Three Block War". Interestingly, the "Three Block War" concept also comes from an American, United States Marine Corps General Charles C. Krulak.⁶ The Three Block War describes the complex spectrum of threats and challenges likely to be faced by soldiers on the modern battlefield. As described, perhaps simplistically, on CF posters, the modern soldier may encounter and must be able to respond effectively in three contiguous city blocks to three very different types of operations: high-intensity combat operations, Peace Support operations, and Humanitarian Support operations. The capacity to respond effectively, which means quickly and successfully, to these three types of operations, requires a high degree of mental agility.

⁵ The CF deployment to Somalia in 1992 (Op DELIVERANCE) encountered certain serious leadership and discipline problems which resulted in the Somalia Inquiry being conducted. One of the results of this mission was the disbandment of the Canadian Airborne Regiment. The Somalia Inquiry Report was the catalyst for many of the changes that have been and are being instituted in the CF today. The full Inquiry report can be found at http://www.forces.gc.ca/site/Reports/somalia/index_e.asp; Internet; accessed 13 March 2006. The deployment to the Former Republic of Yugoslavia 1993 (Op HARMONY) also encountered certain serious problems also involving leadership and discipline. There have been several investigations into events which occurred during Op HARMONY. The "Detailed Report of the Special Review Group Op HARMONY (ROTO TWO) can be found at http://www.forces.gc.ca/site/reports/harmony_2/annexa1-e.asp; Internet; accessed 13 March 2006. It is the opinion of this author that one of the major contributing factors to these problems was the lack of preparedness of CF personnel to operate effectively in the 4th GW construct. Both of these missions met many of the criteria established by Lind for 4th GW however, the CF personnel sent on these missions were trained for and perhaps expecting a more benign "Blue Beret" or "Cyprus" type of peacekeeping mission, when instead, they encountered a formidable asymmetric threat, comprised of regular and irregular forces, and a situation which was very ambiguous leading to frustration and several major incidents. One of the manners by which the CF is addressing this issue has been to introduce and train to meet the challenge of what is being referred to as "The Three Block War".

⁶ Charles C. Krulak, General USMC, "The Strategic Corporal: Leadership in the Three Block War." *Marines Magazine* (January 1999). 30.

This table displays the “Three Block War” construct and some of its characteristics:

Block	Type of Operation	Characteristics
First	High-Intensity Combat Operations	Very robust ROE. Conventional combat activities involving full kinetic effects. Information Operations are partner to combat operations. Combatants should be identifiable. Will likely transition to a Peace Support Operation.
Second	Peace Support Operations	Less robust ROE, emphasis on de-escalation of the situation. Information Operations may be the lead effort. Tasks to involve monitoring and enforcing some type of peace agreement. Former combatants should be separated. There may be an insurgency to deal with.
Third	Humanitarian Relief Operations	Restrictive ROE, perhaps self-defence only. In some countries bringing weapons will be an issue. Information Operations important but usually simpler, i.e., “we are here to help.” Emphasis is on lessening human suffering. Shorter duration (4 to 10 weeks) until national authorities can assume tasks or crisis is over. There may still be a threat to CF personnel.

Figure 2: An adaptation of the CF construct to the Three Block War. It is based upon the similar US Marine Corps concept.

The Chief of the Defence Staff is currently leading the CF through a major period of transformation with the ultimate goal of achieving a CF that is more operationally focused and able to respond jointly, as a team, to the asymmetric threats and challenges of the post 9/11 world. A new Defence Policy Statement, new force and command structures, imaginative concepts such as “Fighting the Snakes and Bears” and the “Three Block War”, Jointness, Mission Command, new equipment, and planned increases in manning levels all promise marked improvements for the operational effectiveness and

sustainment of the CF.⁷ All of these items, taken together would seem to paint a very exciting and positive future ahead for the men and women of the CF, that is until one reads the November 2005 issue of *Salute!*, the newsletter of Veterans Affairs Canada .

Stress Injuries in the Canadian Forces

As long as there have been wars, and other types of conflicts involving militaries, there have been psychological injuries. The serious study of armed conflict caused psychological injuries began during the First World War. These injuries were then known as “battle fatigue” and “shell shock”. Today, in the CF, these disorders are grouped under the term “Operational Stress Injury” (OSI) which is a non-medical and CF specific term used for the classification of any persistent psychological condition that result from operational duties. OSI includes conditions such as anxiety disorders, depression and Post Traumatic Stress Disorder (PTSD). The mental health of the CF population does appear to be under pressure, as reported here:

A 2002 CF supplement to Statistics Canada’s *Canadian Community Health Survey* (CCHS)...found that the most common mental illness in the CF is depression, followed by alcohol dependency, social phobia and PTSD. The CF Mental Health Survey, as it is known, found that 16.2 % of Regular Force members and 9.7 % of Reservists will develop depression at some point in their life.⁸

The November 2005 special issue of *Salute!*, the newsletter of Veterans Affairs Canada (VAC), contains a special information section regarding OSI in the CF.

According to this issue of *Salute!* “VAC is providing more than 8,500 people with

⁷ The full details of the CF Transformation project are available from DND. http://barker.cfcacad.net/Admin/CFT/cftransformation_e.html; Internet; accessed 13 March 2006.

⁸ Veterans Affairs Canada Mental Health Strategy, <http://www.vac-acc.gc.ca/clients/sub.cfm?source=mhealth/strategy>; Internet; accessed 15 March 2006.

pensions for OSI disabilities”.⁹ What is of interest to this thesis are the systemic, or sea changes, which have affected the institution as a whole and may have had the greatest effect on the CF membership in general and have demanded the greatest change in thinking. I will hypothesize that the factors discussed at the beginning of this chapter have been major contributors to the high instances of OSI presently being experienced by members of the CF.

Three recent major changes or events which have had significant impact on the CF.

Major Change	Effect	Stressor
End of the Cold War	End of predictability for training and deployments within the European centric NATO framework. Lind’s 4 th GW construct. Asymmetric threat environment. Role Confusion or Role Ambiguity i.e., Warrior or Peacekeeper.	Personnel must now be trained for and have the mental flexibility to operate within the “Three Block War” construct. Ambiguous situations where more cognitive processes are required to determine what the correct response is.
Increased Op Tempo	More missions being conducted by CF, both domestic and international. Policies created to enforce time between missions become a necessary ‘health’ reality.	More time away from home and family. Increased exposure to violent and deadly situations. Frustrations of repeated deployments.
Reductions in CF Personnel Strength Personnel Strengths: 1990 – approx 80,000. 2006* – between 53,000 and 58,000 effective strength. * Government has promised an increase somewhere in the range of 5 to 10 ten thousand.	CF force size is reduced, resulting in fewer personnel to deploy on more missions, i.e., the ‘doing more with less syndrome.’ Effectiveness sacrificed for the sake of efficiency.	Compounds problems associated with the increased Op Tempo. Fewer personnel doing more work and more deployments with the result that time at work back in Canada is also stressful as many personnel are “double and triple hatted” doing the work of people who are no longer in the CF. This can lead to depression, burnout, and/or other psychological disorders.

Figure 3: Major systemic changes, or factors, that during the past 16 years, may have had an overall negative stress effect on CF personnel.

⁹ Veterans Affairs Canada, *Salute!* (Ottawa: VAC Canada, November 2005).

The negative effects of stress on CF servicemen are well understood today. Finally, it appears that the CF, as an institution, is accepting the situation that many of its people will suffer “invisible” wounds on operations; these are the psychological injuries and other OSI. Nearly every week there are stories in the media about stress and its effects on people in civilian life and in military life. This recent story in the Halifax Chronicle Herald clearly demonstrates the attention that this issue continues to receive:

Horrors of war leave lasting scars

Imagine the horrors haunting some Canadian troops who tromped through Rwanda and Bosnia.

Now try to picture what soldiers mentally scarred by those deployments are going through as they learn about the recent slew of suicide bombings and other violent attacks against their comrades in Afghanistan.

“Their injuries resurface, in many cases, through this kind of witnessing,” said LtCol Stephane Grenier, head of the military’s operational stress injury support program.¹⁰

The costs of stress upon our serviceman are reaching alarming levels as noted in the Veterans Affairs special report. Many recent studies have documented the high cost of psychological casualties in modern operations. In *Military Life, The Psychology of Serving in Peace and Combat: Operational Stress* Megan Thompson and Donald

¹⁰ These are the opening lines of this particular story. The increased operational tempo being experienced by the CF has also increased the number of servicemen experiencing OSI. Deployments to murderous situations, such as those found during CF operations in: Somalia, Bosnia, Rwanda, Kosovo, Sierra Leone, Congo, and Afghanistan have exposed servicemen to extreme levels of carnage, torture, murder and genocide. A high percentage of these servicemen have returned with some form of OSI that is requiring treatment, <http://www.thechronicleherald.ca/NovaScotia/494862.html>; Internet; accessed 2 April 2006.

McCreary, cite the following research findings which support this new reality:

However, while technical proficiency is necessary, it is not sufficient to guarantee operational effectiveness. Indeed, psychological injuries typically account for between 10 and 50 percent of operational casualties, regardless of the mission.¹¹

Further to the psychological costs to the serviceman, Thompson and McCreary also report the negative effects that poor reactions to stress can have on operational effectiveness. These negative effects are summarized as:

- Attention lapses.
- The narrowing of perceptual focus.
- Short-term memory impairment.
- Biased information processing.¹²

Consequently, each of these factors, alone or with a cumulative or combined effect, can contribute to errors in judgement and performance.

Scope of the Paper

This thesis will commence with a literature review in order to provide the necessary framework for understanding and examining the current state of research regarding the field of mental fitness, which will include a review and discussion of the Richard S. Lazarus Transactional Model of Stress and Coping. A review of Stress Inoculation methods will be conducted and their applicability to the CF explored. The current CF Stress Management Programs and Preventative Mental Health programs will

¹¹ Megan M. Thompson and Donald R. McCreary, "Enhancing Mental Readiness in Military Personnel," in *Military Life, The Psychology of Serving in Peace and Combat, Volume 2: Operational Stress*, ed. Amy B. Adler, Carl Andrew Castro and Thomas W. Brit, 54-79 (Westport, Connecticut: Praeger Security International, 2006) 54.

¹² Thompson and McCreary, "Enhancing Mental Readiness...", 56.

also be reviewed to determine their efficacy in relation to the theoretical models and current research. CF institution and culture will be examined to determine the effect of its aspects on mental resiliency. The paper will conclude by making recommendations for those areas where the CF may wish to invest further research or implement programs into the different training systems to achieve a higher level of mental resiliency within CF personnel.

Aim

The CF is experiencing a very fast paced and therefore demanding operational tempo. There are no signs that the operational tempo will slow down in the next ten years. Concurrently, CF Transformation is occurring with the aim of improving the operational focus and effectiveness of the CF. This is all happening when CF personnel must conduct operations in a new and more mentally challenging, ambiguous, world era which, for the purposes of this paper, will be referred to as 4th GW (using Lind's theory). These factors combined will undoubtedly increase the amount of stress that CF personnel will encounter whether during training, when all elements of the "Three Block War" must be prepared for, and during operations, both domestically and internationally, where the threat may be asymmetric and situations ambiguous in the extreme. Furthermore, the stress encountered during garrison routine work must not be discounted.

The aim of this thesis is to examine methods by which mental fitness may be enhanced. Improved mental fitness could be one factor to better prepare our soldiers, sailors, and airmen for the challenges that await them when conducting operations in the 4th GW battlespace.

These results from a recent study conducted by Martin Deahl, and colleagues, into the effectiveness of an Operational Stress Training Package, on the mental well-being of British soldiers following a United Nations peacekeeping mission in the former Republic of Yugoslavia (mission occurred in the early 1990s at the height of that conflict), demonstrates that this idea has potential to have a positive effect on the occurrence of operational stress injuries. Here is a summary of their findings, in which only 3% of returned soldiers developed clinically significant PTSD:

In this case an Operational Stress Training Package developed by the British Army and administered to all soldiers prior to operational deployment and this, recruit selection or some other aspect of training may have contributed to the very low rate of psychopathology. Previous studies of British soldiers returning from conflict prior to the introduction of Operational Stress Training have reported a 50% incidence of PTSD at 1 year and a 22% incidence at 5 years; the difference between the present sample and these predecessors is striking.¹³

From the results provided by this study, it is possible to deduce that the introduction of an effective Operational Stress Training Package was likely a key contributor to this much reduced rate of PTSD.

Considering the high incidences of Operational Stress Injuries in the CF, it is only logical that equal attention should be given to the prevention as well as to the treatment of Operational Stress Injuries. The field of mental resiliency research may contain the promise of helping to achieve the goal of having CF personnel better prepared mentally to deal with the challenges they will face in the modern “Three Block War” battlespace. Success in this area has the potential to benefit CF members during, and after, their

¹³ Martin Deahl, *et al*, “Preventing psychological trauma in soldiers: The role of operational stress training and psychological debriefing,” *British Journal of Medical Psychology* (2000), 73: 83.

period of service, and will equally be of benefit to the CF as an institution that must conduct operations and care for the health and welfare of its personnel.

Chapter 2 will now provide the theories defining stress, how it has potentially negative effects, and what can be done to mitigate those negative effects. In Chapter 2, research will be presented which supports a model for improving the mental fitness of CF personnel.

CHAPTER 2 – LITERATURE REVIEW

Exploring the Field of Research

Stress is ubiquitous, an inevitable feature of normal life.

Richard S. Lazarus

Introduction

The aim of this chapter is to provide a comprehensive review of the research and concepts relevant to this field. The significant theories will be examined as well as modern advances in the area of coping with stress. Additionally, a new model concerning mental fitness will be presented and discussed. The goal of the model is to present a construct that leads to “improved mental fitness” which in itself can contribute to lower levels of depression, suicide, and OSI in Canadian Forces personnel. Finally, at the end of the chapter training programmes and techniques designed to mitigate the negative effects of stress will be discussed.

Understanding “Mental Fitness”

It seems to be common sense to begin any serious discussion of the field of mental fitness with an attempt at a defining the concept or idea. Clear definitions enable common understanding and are essential to ensuring unity of thought. The field of research in this area is broad, in-depth, exciting, and there has been substantial recent research into the psychological areas that surround this matter. This has provided a substantial amount of material available for reference, though as always, different views exist in the scientific community. To help simplify the issue of multiple definitions, for ease of reference, and to assist with understanding of this complex field, definitions for

all of the psychological terms used in this thesis have been included in a glossary. In some instances, more than one definition has been provided in order to provide a greater depth of understanding and this should not confuse matters as most definitions listed are complimentary. When a term with a specific psychological meaning is used, it is important that the definition in the glossary is referred to and understood as multiple definitions exist, from different sources, for many of these terms. Equally important, many commonly held beliefs and opinions regarding these terms and conditions relating to this field are inaccurate.

The aim of the previous chapter was to demonstrate that CF personnel are operating in a complex environment that is more mentally demanding and where responding to multiple factors will require enhanced mental resiliency and agility. This new operating environment is referred to in the CF as the ‘Three Block War’. In order to prepare for this newly defined battlespace one may have heard the following statements “We have to fight smarter” or “Our soldiers must fight smarter” referring perhaps to enhanced intelligence that may be required to operate successfully in the new construct. This thesis will not deal with the issue of how we might make ourselves and our soldiers “smarter” but rather it will explore the idea of how we might improve the mental fitness of our soldiers in order to provide them with improved cognitive processes or the “mental tools” necessary to deal successfully with the complex and ambiguous situations that they will encounter on operations. This path of inquiry leads, once again, to the matter of a definition of mental fitness.

Mental Fitness – What does this mean?

At this point in time, there is no definition in the psychology textbooks or articles in scientific journals describing “mental fitness” specifically. However, the ideas and concepts surrounding the notion of mental fitness have received considerable recent attention from certain organizations and authors. The concept is being written about by some as mental “hardiness and “resiliency”. Much of this recent research built upon the scientific data that was collected and analyzed during and following the Second World War when considerable research was done and progress made in areas relating to the understanding and treatment of combat related stress injuries.

The period since the end of that war has provided many useful “battlefield laboratories” for further research into the field of combat stress reactions. A series of 3rd GW wars, examples of which are, the Arab/Israeli Wars, Gulf War One and Two, and Afghanistan in 2002, provided significant material and subjects to study combat stress injuries in high-intensity conflict. Additionally, 4th GW wars such as, Iraq since 2003, Afghanistan since 2003, the continuing Global War on Terrorism, and interventions in failed and failing states in Africa, have and are providing material and subjects for studying the effects of combat stress reactions in this new battlespace. Until recently, the majority of research and writing was focussed on the recognition and treatment of combat stress reactions and related psychological injuries, however, scientists and organizations are now directing their efforts towards understanding what can be done to prevent or at least minimize the occurrence of these injuries. The Canadian Mental Health Association

is one such organization which is promoting mental fitness as an important aspect of preventive mental health care.

The Canadian Mental Health Association (CMHA) used the concept of Mental Fitness as its theme for its 2005 Mental Health Week. The concepts presented in that campaign provide an excellent starting reference point for a model of mental fitness for CF personnel. This CMHA information campaign is summarized here:

What is Mental Fitness?

Mental fitness helps us achieve and sustain a mentally healthy state, just as physical fitness helps us to achieve and sustain a state of good physical health.

Having good mental health enables us to more fully enjoy and appreciate our environment and the people in it. We can often better resist stress and tackle our challenges in a positive frame of mind. It allows us to be more creative, to use our mental abilities to the fullest extent and make the most of opportunities.

People's responses to stress, and difficult events, are as individual as the people experiencing them. So everyone will assess and measure their mental fitness in different ways. But there are common factors which facilitate good mental health. By considering some of these factors, it is possible to identify how we can improve our mental fitness:

Realistic attitude. When we are able to feel and draw on optimism, a sense of perspective and flexibility, we gain the resilience needed to endure the shock, hardship or change, and to carry on with our lives.

Self-esteem and confidence. Instead of focusing on what we are lacking, we need to focus on the qualities that we do have that make us a good friend, a valued colleague, a loving parent or family member [this equates well to the concept of 'building on strengths'].

Emotional support. Close ties with family and friends build support networks through which we receive help and, in turn, help others.

Mental agility. Giving our minds and bodies a workout by engaging in a variety of mental activities – such as reading a book, solving crosswords

or playing a musical instrument – enhances mental agility and promotes overall wellness.¹⁴

The term mental fitness fits very well with the theme of this thesis for the following reasons: (1) it corresponds well to the term and idea of “physical fitness” already used and understood within the CF; (2) perhaps some of the stigma that is associated, within the CF in any case, with the terms and conditions of mental illness and mental health problems can be overcome; and (3) it is a simpler term, for the average CF service member to use and understand, than are other more scientific or medical terms. For these reasons the term “mental fitness” will be used in this paper. However, the meaning will be expanded upon to take into account the special requirements of the military occupation.

Knowing where this journey ends will assist in explaining what this concept of mental fitness will mean for the CF service member. The goal of this journey is to make a contribution towards lowered incidences of psychological injuries in the CF. This would be demonstrated by lower levels of depression, suicide and with OSIs such as Combat Stress Reaction (CSR) and PTSD.¹⁵ The concept of improved mental fitness recognizes and emphasizes the cognitive and other skills necessary to help mitigate the negative effects of stress on their health and well-being; this is the goal of improved mental fitness.

¹⁴ This section is a complete quote from the CMHA website for their 2005 mental health awareness campaign. As such, it provides an excellent starting point for the concept of “mental fitness” in the military context. Canadian Mental Health Association http://www.cmha.ca/bins/content_page.asp?cid=2-267-351&lang=1; Internet; accessed 6 April 2006.

¹⁵ The term CSR has come to encompass a number of older terms, including battle fatigue, battle shock, shell shock and combat exhaustion. CSR refers to a number of reversible effects caused by the stressors associated with combat operations. See Glossary for more detail.

This concept of mental fitness encompasses the following characteristics, or components, which would ideally be resident within and available for use by the mentally fit serviceman:

Effective Stress/Appraisal Transaction (Lazarus). This concept will be seen in the Transactional Model of Stress and Coping. It deals with a cognitive approach for the appraisal, classification and response to potentially stressful events.

Adaptive Coping Strategies. Effective processes and techniques for coping with stressors. The opposite types are classified as mal-adaptive coping strategies. Mal-adaptive strategies include: anger and violence, alcohol abuse leading to avoidance and denial, gambling, smoking and other addictions, and risky behaviour.

Hardiness. A combination of three psychological qualities shared by people who can undergo high levels of stress yet remain healthy: (1) a sense of control over one's life, (2) commitment to one's personal goals, and (3) a tendency to view change as a challenge, rather than as a threat.

Resiliency. Resiliency is the ability of people to cope with stress and catastrophe. It indicates a characteristic of resistance to future negative events. Resilience corresponds to cumulative 'protective factors', and is considered in opposition to cumulative 'risk factors'.

Agility. An ability to make the necessary cognitive changes which allow a person to quickly recognize, analyze, understand and respond effectively to new different types of situations.

Values and Ethos. Values and the military ethos must be taught, understood and internalized by the service member. The closer the match between the individual's internalized values and belief system and that of the institution, in this case the CF, the greater the degree of commitment there will be of that person to the institution and its goals. A high level of commitment leads to more mental hardiness which in turn enables a person to undergo high levels of stress and remain healthy. Additionally, a strong and living set of values and ethos within the institution suggests to the service member that he or she is part of a larger whole and belongs to the organization which he or she values. These factors in turn can contribute to mental fitness through job satisfaction and the perception of social support.

Confidence and Self-esteem. Focussing on the positive, mentally healthy qualities in the person. Involves recognizing and building on the strengths that are already resident in the person. Confidence comes in part from the military skills that he or she has.

Physical Fitness. Mental and Physical fitness are closely linked. High levels of physical fitness are a major eliminator of the negative effects of stress and consequently a contributor to mental fitness.

In the literature review that follows these factors will be examined in the light of the scientific research. This thesis will essentially deal with exploring these concepts, and specifically what they mean, and what can realistically be done within existing CF training structures and systems to institute programs whose objectives would have the goal of improving mental fitness in CF personnel.

It will always remain the vital responsibility of the military leadership to ensure that CF personnel have the appropriate tactical and technical skills to operate in the “Three Block War” environment. The serviceman must understand and be able to apply tools such as the “Estimate Process”, to evaluate and develop effective solutions to tactical problems, and have a sound ability to execute the Tactics, Techniques and Procedures (TTPs) that will allow him to react correctly in time constrained combat situations. However, improved mental fitness will assist the serviceman with maintaining control over his physiological and emotional responses to stress, to be mentally agile, and consider his options for action especially when under circumstances of extreme stress. In the Three Block War battlespace the decision to exercise restraint may be the best one, however this may not be obvious, as at the same time your body is telling you “to take flight” and your training is telling you to execute the TTP for a crowd control scenario. A high level of mental fitness has the potential to allow the serviceman to cope with a stressful situation and remain calm, thereby allowing other cognitive processes to function and evaluate the situation, finally arriving at the most effective solution.

The aim of this chapter is then two-fold: first to build an understanding for this concept of mental fitness which has its application in the military life experience, and secondly, to provide a theoretical framework through a review of current scientific research literature to deepen the understanding of the concept of mental fitness, and some of the operational mental health disorders, and theories, techniques and programmes that are aimed at mitigating the negative effects of stress on health and mental well-being. At this point it would appear to be a fairly straight forward effort to analyze the issue and present recommendations for a solution, this would be so if it were not for some significant societal barriers.

Barriers to Mental Fitness

There is still a long way to go in the area of education and acceptance of mental health. Generally, many people still remain inhibited concerning mental illness. For example, it is more probable that if a relative commits suicide by means of a vehicle accident that the death will be talked about with the wider circle of relations and community as a tragic vehicle accident which resulted from poor driving conditions, rather than that your cousin was severely depressed, over-dosed on prescription pills, and then drove her car off a bridge. We may be more comfortable telling friends that an aunt is in the hospital receiving cancer treatment, than we are to tell them that an uncle has been hospitalized because of depression.

Why is this? Why is there a stigma connected to a death from mental illness and to mental illness itself? Perhaps, because there is perception among some that mental illness is the result of some sort of character flaw, weakness, or mental defect. This

perception of character weakness or a lack of toughness leading to mental illness or injury is definitely a problem within the CF. While these pathologies may indeed be the case for mentally-ill psychopaths, this paper is not concerned with that category of persons. Later in this chapter, it will be shown that screening for any particular character traits supposedly linked to a predisposition to suffer an OSI in combat has not been successful.

Other barriers exist around a lack of knowledge and understanding concerning what the mental injuries, illnesses, and preventive measures actually are. Information campaigns such as the CMHA “Mental Health” week may help to increase awareness regarding preventive measures applicable to normal life in Canadian society. However, more direct methods will be required to win the cultural battle against the stigma shrouding mental health issues within the CF. The US Army “Battlemind” program has the potential to be just such a tool. “Battlemind” will be discussed later in this paper.

What is Stress?

A clear understanding of what stress is, and isn't, is essential to this thesis. However, it also important to remember that this thesis is not focussing on stress, and its negative effects, rather the theme focuses on determining effective methods for dealing with “stressors” and methods for mitigating the negative effects of stress when stressful encounters do unfold.

What is stress? It is important to know precisely what we are dealing with and why this entire exercise is important – stress and the negative effects it can have upon CF

servicemen and servicewomen. This definition from *A Dictionary of Psychology* provides a broad definition that matches the requirements of this thesis:

Psychological or physical strain or tension generated by physical, emotional, social, economic, or occupational circumstances, events, or experiences that are difficult to manage or endure.¹⁶

The first portion of the literature review will demonstrate the progression in the understanding of what stress is and how it can have negative effects. Key to this theory review is that during the 20th Century the scientific knowledge of stress and its effects began with an understanding of the physical and physiological effects of stress, and then, further research led to an understanding of the psychological impacts and effects of stress on the person. These latest findings are critical, as this new research established the connection between some forms of mental illnesses and the negative effects of stress, and the cognitive processes that can control one's reaction to a "stressor".

This section has provided the definition of stress, barriers to dealing with stress related mental injuries, and as we have seen previously in Chapter One, the potentially negative effects this can have upon the CF serviceman and his or her performance. The theories explaining stress will now be examined in order to deepen the knowledge and understanding regarding stress, and lead us finally to the cognitive aspects of responding to stress filled situations.

The Flight-or-Fight Response - Cannon

Walter Cannon (1871 – 1945), a Harvard physiologist, made an important contribution to the understanding of the effects of stress upon the body with his

¹⁶ See Glossary.

description of the fight-or-flight response. This classic contribution to the understanding of the effects of stress was primarily focussed on the physiological effects of stress. Cannon's research discovered that when any threat is perceived by an animal, including humans, the sympathetic nervous system and the endocrine glands prepare the body to fight the threat or flee from it. He considered the fight-or-flight response to be very adaptive, because it helps the animal respond rapidly to threats.

He also considered it to be potentially harmful, in the long, run, if the animal is not able to fight or flee and experiences prolonged stress and continuing physical arousal. This fight-or-flight response is a phenomena that most people have either experienced or seen occur to another human or to an animal. It is primarily a physiological response to stress, and if allowed to run its course will provide a physical result, i.e., either running away or facing the threat.¹⁷ Further study will demonstrate how cognitive processes, in humans, may assist in overcoming this physiological response to stress if it is not the most effective response.

The General Adaptation Syndrome - Selye

Another prominent scientist in this field was Canadian researcher Hans Selye (1907-1982). Through his research he discovered that the body responds in much the same manner to all harmful agents (physical attacks, toxic substances) and a host of other stressors. He found that the physical response was so predictable that he named it the

¹⁷ Samuel E. Wood, *The World of Psychology* (Scarborough, Ontario: Allyn and Bacon, Inc., 1999), 365.

“general adaptation syndrome.”¹⁸ Eventually, through research and experimentation, Selye proved that the general stress reaction was the body’s way of responding to stress.

Selye discovered that all living things are constantly confronted with stressors – stimuli or events that place a demand on the organism for adaptation or readjustment. Each stressor can cause both specific and non-specific responses. Extreme cold, for example, causes the specific response of shivering. The principle idea of Selye’s concept of stress is the General Adaptation Syndrome (GAS), his term for the non-specific response to stress. The GAS consists of three stages: alarm, resistance and exhaustion.

Stage 1 - Alarm. When there is emotional arousal and the defensive forces of the body are prepared for fight or flight.

Stage 2 – Resistance. There are intense physiological efforts to resist or adapt to the stressor.

Stage 3 – Exhaustion. Occurs if the organism fails in its efforts to resist the stressor. Physical (tissue) disintegration and death may follow if exposure to an extreme stressor continues.

Selye believed that any event requiring a readjustment, whether positive or negative, will produce stress. This connection provides proof, in part, of Selye’s GAS theory. However, it is lacking from the psychological viewpoint because this theory does not take into account how a human being – the thinking animal – perceives and evaluates the stressor through his cognitive abilities. Selye’s work still concentrated primarily on the physiological effects of stress. This deficiency in these theories led to research in a new direction and the development of the cognitive theory of stress. Richard S. Lazarus was the 20th Century leader of this new direction of theory and research.

¹⁸ Wood, *The World of Psychology*..., 366.

The Transactional Model of Stress and Coping - Lazarus

Richard S. Lazarus (1922 – 2002), an American psychologist, and his associates, developed this cognitive theory of stress and coping. Lazarus contends that it is not the stressor itself that causes stress, but a person's perception and reaction to the stressor.¹⁹ This theory and work was new and ground-breaking as it took the emphasis of scientific stress research from the physiological to the psychological. Because Lazarus emphasizes the importance of perceptions and the appraisal of stressors, his is a cognitive theory of stress and coping. His theory encompasses the following ideas: that human encounters with stress are process oriented and transactional, encompassing appraisals, coping and emotions.²⁰

Lazarus' major body of work was completed at the University of California, the Berkeley Stress and Coping Project, which he led from 1957 until 1988. As a testament to the enduring quality of his work this praise is provided, "Fifteen years on from the end of the Berkeley Project, their work is still being discussed, debated, and examined."²¹ For those interested in further readings regarding the outcomes on emotions and cognitive processes on stressors, the large volume of research produced by Lazarus will be very informative. Lazarus also researched and wrote extensively on the area and importance of emotions to the area of stress, coping and mental well-being.

¹⁹ Wood, *The World of Psychology...*, 367.

²⁰ Cary L. Cooper and Philip Dewe, *Stress: A Brief History* (Oxford, Blackwell Publishing), 71.

²¹ Cooper, *Stress...*, 71.

Lazarus developed the “Transactional Model of Stress and Coping” in the mid 1960s. As previously noted, Lazarus contends that it is not the stressor itself that causes stress, but the person’s perception, appraisal and reaction to that particular stressor. He places his main emphasis on the importance of the appraisal in determining the outcomes, “At the bottom line of psychological stress analysis, then, primary appraisal determines the intensity and quality of the emotional response to any transaction.”²²

Lazarus contends that stress is all around us, and it that would be impossible to avoid it in a normal life. This notion is very intuitively appealing, to this author, because in the new CF operating environment a high number of stressors will normally be present at all times. Indeed, even in garrison and headquarter settings in Canada, the types of staff positions, the workload, competing demands, shortage of resources, and other factors virtually guarantee the presence of stressors. This theory offers the potential of being able to think through potentially stressful situations using ones cognitive processes to enable the thinking serviceman to choose the response or desired outcome. This scientific model for appraising and choosing a response to stress, rather than allowing physiological or emotional responses decide our reaction to stressors, is a vital part of the concept of mental fitness. An important contributor to maintaining mental well-being will be found in the adaptation to the stressor. This process will be described in the following sections.

Why study only this one particular model? Indeed, there are other models of stress and coping, however, Lazarus’ model was chosen because it has cognitive

²² Lazarus, *Fifty Years of the Research...*, 198.

processes as its key element, and this corresponds to the central ideas of this thesis, which also has cognitive processes, which are inherent in the concepts of “Hardiness”, “Agility”, and “Self-Confidence”, central to its main ideas. Lazarus acknowledges the existence of alternate theories here:

There is no single stress and coping paradigm, and certainly not one on which there is substantial agreement. I would like to believe that I have described here a meaningful conceptual analysis and a workable set of methodological principles that could and should be tried out and ultimately judged heuristically.²³

Lazarus’ work and theories are generally accepted in the scientific community as being valid and form an important part of the theoretical foundation of the behavioural sciences.

How the Transactional Theory Works

Lazarus’ theory is cognitive by design. What does this mean? To quickly refer to a definition contained in the glossary, *Cognitive Processes: mental processes such as thinking, knowing, problem solving, and remembering*. The model emphasizes the importance of perception and appraisal of the stressor. His theory encompasses the following ideas: that human encounters with stress are process oriented, transactional, encompassing appraisals, coping, and emotions.²⁴ The diagram at Figure 4 illustrates this process.

According to Lazarus, when people are confronted with a potentially stressful event, they engage in a cognitive process that involves a primary and secondary

²³ Lazarus, *Fifty Years of the Research...*, 216.

²⁴ Cooper, *Stress...*, 71.

appraisal. A *primary appraisal* is an evaluation of the meaning and significance of a situation-whether its effect on our well-being is positive, irrelevant, or negative. An event that has been identified as negative or stressful could involve: 1. **Harm or loss** (damage that has already occurred); 2. **Threat** (the potential for harm or loss; or 3. **Challenge** (the opportunity to grow or gain). A primary appraisal of threat, harm, or loss can be made in relation to anything important to us: a friendship, our group, part of our body, our property, our family, or our self-esteem.

The primary appraisal concerns the significance of a transaction for well-being, where the person answers the question “is there anything at stake here?” If the answer is in the positive, “yes, I am in jeopardy,” that is, facing *harm/loss*, *threat*, or *challenge*, the key adaptational process is called into being. This next step is contained within the secondary appraisal. Whether consciously and deliberately, or unconsciously and automatically, a decision is taken about what to do. This decision is based primarily upon whether or not the person appraises the situation to be within the person’s control.

This model, described at Figure 4, requires a set of complex cognitive appraisal processes devoted to coping decisions. He called these cognitive appraisal processes *secondary appraisal* to distinguish their function of evaluating coping options and resources from the *primary appraisal* function that had specific and limited objectives. However, the distinguishing feature between the primary and secondary appraisal is not one of timing but one of content. In his dynamic, time-oriented cognitive system, secondary and primary appraisal processes are interdependent, and may even fuse.

This diagram provides a visual framework for his model, which will be useful as each area of the process, is examined.²⁵

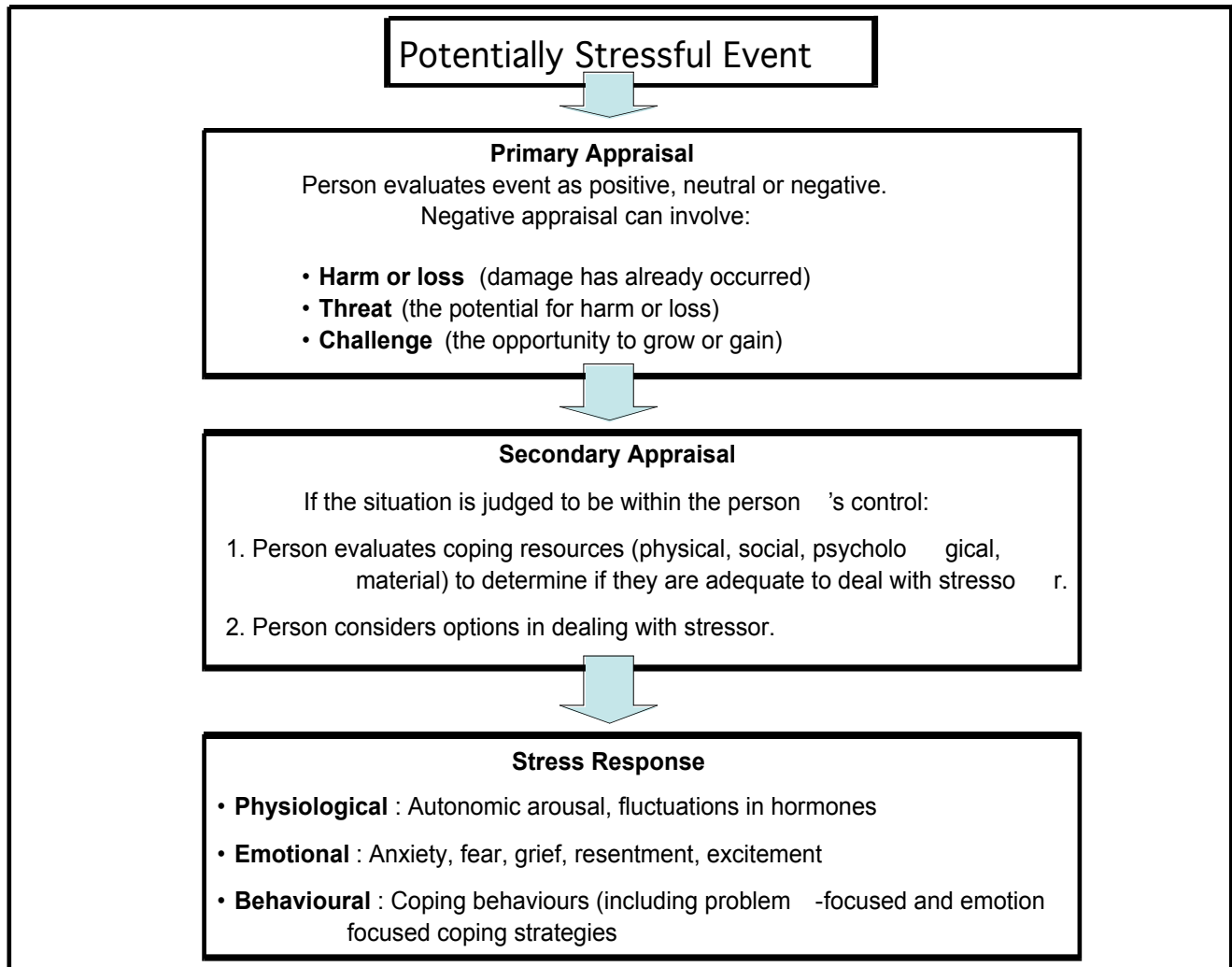


Figure 4: This diagram represents the appraisal process in the Transactional Model of Stress and Coping.

Lazarus believed that psychological stress, and positive experiences, resides neither in the person nor in the situation, though it depends on both.²⁶ He posited that the stress can arise from the adaptational relationship as the person appraises it. He thought

²⁵ Wood, *The World of Psychology...*, 368.

²⁶ Lazarus, *Fifty Years of the Research...*, 187.

that this relationship is best termed and understood as a transaction rather than an interaction.

His definition also has a second important meaning. Lazarus also believed that the term “transaction” had another crucial difference from the term “interaction”. In an interaction, the variables retain their separate identities, but in a transactional concept, describing a relationship offers a situation where the separate variables will be changed or lost, and the outcome will be similar to the saying that “the whole is different from the sum of the parts”.

The Transactional Model does not focus exclusively on what is stable in the person-environment relationship, rather the emphasis is on the process or dynamics of what is actually happening in any given stressful encounter and how what is happening changes. Process refers to what happens over time or across encounters. It has two elements: first, an interchange between the person and the environment (or among forces within the person): and second, the flow and transformation of the interchange over time, either as the encounter gets underway, proceeds and ends. Lazarus provided additional information to assist with the understanding of his model and the process which is key to it.

Lazarus offers a working hypothesis concerning the appraisal of a stressor: when a person assumes that the specific environment is hostile and dangerous and that he lacks the resources for mastering it then it will be appraised as a threat. Conversely, challenge

arises when the environmental demands are seen as difficult but not impossible to manage, and that drawing upon existing or acquirable skills offers a genuine prospect for mastery. This hypothesis is worthy of further investigation as the CF puts a tremendous amount of effort into training personnel to know what to do in operational settings, which are by nature often very stressful. Knowing that there is an actual causal link between a person's training level, competencies, and tendency to appraise a stressful situation in the most effective manner would be quite beneficial to coping with stress.

Psychological stress, overall, refers to the demands (or conflicts among them) that tax or exceed available resources (internal and external) as appraised by the person involved. Cognitive appraisal by an individual is what makes this model of stress a psychological one. The key element is that a person senses in some way, consciously or unconsciously, that he or his group is in jeopardy. Therefore, stress is a relational concept, a balance between demands and the power to deal with them without unreasonable or destructive costs.

To briefly review this concept of psychological stress analysis, primary appraisal determines the intensity and quality of the emotional response to any transaction. The irrelevant appraisal will cause no emotion in the person, a benign-positive appraisal results in a positively toned emotional reaction such as joy, exhilaration, love, contentment and relief. A stressful appraisal produces negatively toned emotional emotions such as anxiety, fear, anger, guilt, envy, jealousy, etc. Each emotional quality and intensity has its own particular appraisal pattern. Anxiety, for example, involves

anticipated harm (threat) that is ambiguous, either as to what is to happen or what can be done about it, and is compared with fear, largely symbolic.²⁷ Primary appraisal also involves the possibility of feedback from changes in the person-environment relationship and from reflection as the transaction proceeds, thus potentially allowing for changes in the quality and intensity of the emotion.

To summarize this section of the Transactional Model, Lazarus stressed that it is the interaction of both sets of determinants, person and environment, that determines whether a transaction will be appraised as irrelevant, benign-positive, or stressful. If appraised as stressful, then whether harm/loss, threat or challenge will be the outcome of the primary appraisal. During the secondary appraisal a coping strategy will be chosen.

It is within the secondary appraisal step that the important cognitive processes occur. If the person makes the cognitive appraisal that the stressful situation is within his or her control then adaptive coping strategies can be employed to deal with the situation. If the situation presents a harm or loss that has already occurred then there are certain coping strategies that can be effective. However, if the appraisal choice is between threat and challenge, the appraisal of challenge based on the presence of effective coping resources should provide better physical and psychological results. The mentally fit person will know what his or her coping resources and coping strategies are prior to encountering stressful situations. Being prepared with the knowledge of this scientific model, which takes into account both the physiological and psychological reactions to

²⁷ Lazarus, *Fifty Years of Research...*, 198.

stressors is already a step towards improved mental fitness as it provides knowledge, the first step necessary to master any process. The Transactional Model now leads to adaptive coping strategies which are very important to achieving the desired outcomes.

Coping Strategies

It is during the secondary appraisal step that a coping strategy will be decided upon. According to Lazarus, the two functions of coping are problem solving and regulation of emotional distress. Although they may be at times in opposition often they support each other. Effective copers typically engage both forms of coping in combination to deal with stressful situations. For example, actions that resolve a person-environment problem, by preventing the harmful confrontation can also reduce or eliminate emotional distress. Lazarus considered adaptive coping strategies as key to maintaining mental well-being when encountering stress as he noted here:

In my view, stress itself as a concept pales in significance for adaptation compared with coping. As noted elsewhere, stress is ubiquitous and inevitable feature of normal living, though some persons do indeed experience more frequent, severe, or sustained stressful encounters than others. What makes the major difference in adaptational outcome is coping, and so we should give special attention to it in our research on human functioning.²⁸

The four coping strategies identified by Lazarus are: information seeking, direct action, inhibition action, and intrapsychic processes. Each strategy is capable of serving both problem-solving and emotion regulatory functions. These four strategies can all be categorized as being adaptive, i.e., they are positive or effective coping strategies. Each is capable of being oriented to the self or the environment, and each concerned with

²⁸ Lazarus, *Fifty Years of the Research...*, 202.

either past or present (harm/loss) or future (threat or challenge). Each coping strategy will be explained.

Information Seeking.

Information-seeking involves scanning the characteristics of a stressful encounter for knowledge needed to make a sound coping decision or to reappraise the damage or threat. In addition to providing the basis of action (problem solving function), information-seeking can also have the function of making the person feel better by rationalizing or bolstering a past decision. Lack of total or clear information will not always lead to a negative stress response. Lazarus contends that we know too little about the probably wide variation in successful patterns of coping to make the unequivocal assumption that accurate reality testing is always best for all persons under all conditions. He contends that, at times, some ambiguity or uncertainty is even a balm to the regulation of emotional distress, rather than a source of anxiety.

Direct Action

Anything a person does (except cognitively) to handle stressful transactions falls within the realm of direct action. Such actions may be as diverse as the environmental demands and personal goals people have to manage, including expressing anger, seeking revenge, fleeing, suicide, building storm shelters, taking medication, or jogging to enhance your health. Direct coping actions can also be aimed at the self or the environment, since both are potentially capable of being changed, thereby altering the stress person-environment relationship for the better. The action can be aimed at overcoming a past injury, as when a grieving person becomes buried in work or finds a new love relationship.

Inhibition of Action

Effective coping often calls more for hold back action impulses that will do harm, than taking action that poorly fits the requirements of a transaction in a particular situation. In our complicated social and intrapsychic world, every type of action is capable of coming into conflict with moral, social or physical constraints and dangers, and choice is possible only if strong natural impulses to act, as in anger or fear, can be held back for the sake and importance of other values. In the military context this equates well to the concept of restraint. Especially during Peace Support Operations, restraint can be an important contributor to mission success. Restraint can save lives on all sides of a conflict by limiting escalation.

Intrapsychic Modes

All of the cognitive processes designed to regulate emotion, in effect; the things a person says to himself are in the realm of intrapsychic modes of coping strategies. Not only does this mode encompass self-deceptive mechanisms or defences such as denial, reaction formation, and projection, but it can also include avoidance and efforts to obtain detachment or insulation from a threat in order to achieve a feeling of control over it. These modes are mostly palliative in that they make the person feel better by reducing or minimizing emotional distress. As in the cases of the other coping modes, they can be oriented to the past, as in the reinterpretation of a past traumatic event, or to the future, as in the denial that one is going to be in extreme danger. They can also be focused on self “I am able to climb this mountain”, or on the environment ‘Help will get here soon’. Intrapsychic modes of coping can be considered as adaptive as long as the outcomes are positive, i.e., denial or detachment should be a pathway to a positive outcome.

Understanding Coping – A Complex System

Coping is never a single act but a constellation of many acts and thoughts engendered by a complex set of demands that may stretch out over time.²⁹ There are of course styles or patterns of coping that are more or less characteristic of an individual, and such styles will involve a combination of many acts and thoughts rather than any single item. As we are all quite different, and little research has been done with actual coping strategies used by groups in specific situations, it is difficult, and may indeed be harmful; to prescribe inadequately documented modes or strategies upon people.

However, people can be educated regarding what are known to be generally effective coping strategies and which strategies have proven to be ineffective and harmful. People should choose the tools that work best for them, provided they are properly informed. It should be an institutional goal to teach adaptive coping strategies and identify and discourage mal-adaptive strategies.

Summary of the Transactional Model

In the summary to his work on Stress and Coping, Lazarus provides seven implications and recommendations regarding stress and further research into the paradigm of stress and coping.³⁰ Most of these implications relate to areas for further research in this field and his recommendations about the directions and methods that should be taken. However, his first implication provides a thorough review of this thoughts and theory on stress and coping:

²⁹ Lazarus, *Fifty Years of the Research...*, 207.

³⁰ *Ibid.*, 213.

Stress, per se, cannot be regarded simplistically as causal in human maladaptation because it generates such variety of coping processes and, in turn, is as much a product of inept coping as it is of environmental demands, or stressors. Therefore, it is not fruitful to blame pathology strictly on stress, except perhaps in extreme situations of environmental deprivation and human cruelty in which little or no opportunity is allowed for the development or utilization of effective coping....From the perspective of this paper [Lazarus] to relate stress to maladaptation requires emphasis not so much on stressors as on the cognitive and coping processes mediating the reaction.³¹

Therefore, the Transactional Model places the emphasis for successful outcomes on the secondary appraisal. In that step, the person chooses an effective or adaptive coping strategy. This adaptive coping strategy then provides the person with a behavioural response to the situation. Whether the primary appraisal is of harm or loss, threat, or challenge, the knowledgeable and well-prepared person will have the coping strategies and resources available, and can choose an adaptive course of action that should lead to both an effective outcome to the situation and a mentally healthy outcome for the individual. Ideally, when presented with the threat or challenge appraisal decision, the mentally fit CF service member will be equipped to appraise the situation as one of challenge and then develop an adaptive coping strategy as his or her reaction.

The following sections will explore the negative effects of stress on health, stressors specific to the military occupation, and thoughts on how to mitigate the effects of stress. This is further evidence that stress needs to be dealt with through effective appraisal and coping strategies in order to avoid these negative effects.

³¹ Lazarus, *Fifty Years of the Research...*, 213.

Health and Stress

The scientific community now acknowledges the connection between extreme, prolonged stress and certain diseases. Scientist Hans Selye was one of the first to differentiate between the positive and negative effects of stress with the terms “Eustress” as positive stress, including exhilaration, excitement, and the thrill of accomplishment and “Distress” as damaging or unpleasant stress, such things as frustration, inadequacy, loss, disappointment, insecurity, helplessness, or depression.

Most scientists today would agree that health and stress are closely related. People who experience stress may be more susceptible to coronary heart disease, stroke, and poorer pregnancy outcomes.³² Many studies available today have established the link between stress and illness, as reported by this finding:

The physical toll of stress includes headache, skin rashes, heart disease, lowered immunity, backache, stomach and intestinal disorders, hypertension and sexual dysfunction.³³

Also of concern is the growing evidence that stress can impair the functioning of the immune system itself. The immune system, one of the most complex systems of the body, protects one from infection and disease. However, if we return for a moment to the theories of Selye and Lazarus, it isn't the stress that kills us, rather it is our reaction to the stressor that causes the damage. The effective reaction to and coping strategies for dealing with the stressor is an important theme to be explored further in this paper. The very unique stressors that are encountered on operations will now be discussed. These

³² Wood, *The World of Psychology*..., 379.

³³ Herbert Benson, *Managing Stress from Morning to Night* (Alexandria, Virginia: Time Life Books, 1987), 15.

special ‘combat stressors’ depict what separates the military life from all other occupations.

Combat Stressors

A “stressor” is any event capable of producing physical or emotional distress.³⁴ The military is an especially stress prone environment because of the presence of violence, the controlled use of violence and the real possibility of death, either enemy, friendly, or your own occurring at any time when on operations. It is a work environment like no other, carrying with it the very real risk of physical and psychological injuries. This passage from LCol Farley accurately describes the battlefield workplace and the risks therein:

The very nature of warfare is based on violence, and combat zones remain the most dangerous and violent places on earth. Unlike working in traditional workplaces, soldiers are trained to inflict violence on the enemy and minimize the danger to themselves and their peers. Soldiers in war are therefore doubly at risk; an addition to being victims of violence, there is a psychological cost for killing other human beings.³⁵

These special circumstances of the military environment ensure the presence of more stressors than are found in civilian society. Particularly during deployed operations the service member must deal with not only the unique stressors of combat but also the stress from home and family situations caused by separation and the inability to assist with matters affecting family members. Births, deaths, accidents and the host of other events that occur at home also have an effect upon the service member. As a response to

³⁴ See Glossary.

³⁵ LCol K.M.J. Farley and V.M. Catano, “The battlefield as workplace: Violence in Warfighting”. In E.K. Kelloway, J. Barling, J.J. Hurrell, Jr. (Eds.), 281-307. *Handbook of Workplace Violence*. (London: Sage Publications, 2006), 281.

the stress of separation, the CF has limited most operational tour lengths to a maximum of six months duration.

This table provides a useful summary of the combat stressors a serviceman may encounter on operations. It shows the unique types of occupational stress that the serviceman must face.

Combat Stressors

Physical Stressor	Mental Stressor
<p>Environmental</p> <p>Heat, Cold, Wetness Vibration, Noise, Blast Hypoxia (insufficient oxygen) Fumes, Poison, Chemicals Directed-Energy Weapons/Devices Ionizing Radiation Infectious Agents Physical Work Bright Lights, Darkness, Haze, and Obscurations Difficult or Arduous Terrain</p>	<p>Cognitive</p> <p>Information: Too much, Too little Sensory Overload versus Deprivation Ambiguity, Uncertainty, Isolation Time Pressure versus Waiting Unpredictability Rules of Engagement Difficult Judgments Organizational Dynamics Hard Choice versus No Choice Recognition of Impaired Functioning</p>
<p>Physiological</p> <p>Sleep Debt Dehydration Malnutrition, Poor hygiene Muscular and Aerobic Fatigue Impaired Immune System Overuse or Under use of Muscles, Organ Systems Illnesses or Injury</p>	<p>Emotional</p> <p>Fear- and Anxiety-Producing Threats (of Death, Injury, Failure, Loss) Grief-Producing Losses (Bereavement) Resentment, Anger- and Rage-Producing Frustration, Threat, Loss, and Guilt Boredom-Producing Inactivity Conflicting Motives (Worries about Home, Divided Loyalties) Spiritual Confrontation or Temptation Causing Loss of Faith Interpersonal Feelings</p>

Figure 4. This table, an adaptation from US Army FM 8-51 cited by Farley and Catano, represents common combat stressors grouped into four areas: environmental,

physiological, cognitive and emotional. One of the strongest stressors is the soldier's fear of dying.³⁶

However extreme these combat stressors are, this thesis is examining the effects of stress on the serviceman both while in garrison and office settings in Canada, as well as on operations. The mentally fit serviceman will function more effectively in all environments and people who are examining this issue should be sure to consider both environments.

How to Mitigate Stress

Before we consider efforts and methods that may be used to mitigate stress perhaps a different approach could be considered. Would it not be more simple and efficient if persons prone or vulnerable to OSI were just not recruited into the CF? Indeed, different armed forces have, in the past, attempted to prevent or lessen the occurrence of Combat Stress Reaction (CSR), Post Traumatic Stress Disorder (PTSD), and other battle related mental health casualties through the process of psychological screening. However, these attempts have been largely unsuccessful, as reported here by Thompson and McCreary:

Despite considerable efforts to date military screening programs have largely been ineffective in determining the personality factors that are associated with resiliency or vulnerability in the face of combat stress. Thus, the onus has long been on the military training programs to develop the potential of each soldier.³⁷

³⁶ LCol K.M.J. Farley and V.M. Catano, "The battlefield as workplace: Violence in Warfighting," In E.K. Kelloway, J. Barling, J.J. Hurrell, Jr. (Eds.), 281-307. *Handbook of Workplace Violence* (London: Sage Publications, 2006), 285.

³⁷ Thompson and McCreary, "Enhancing Mental Readiness...", 54.

A cautionary tale of screening failure, from World War II, which had huge negative consequences, will be presented here. The US Armed Forces psychological screening process was supposed to detect those persons who were more likely to become stress casualties, and then, if found to have this tendency or “character weakness” that person would be rejected for service at that point in the recruiting process. Many thousands of potentially effective servicemen were unnecessarily screened out using this type of testing or screening as attested to by the following historical case.

The experience of the US Armed Forces preparing for World War II demonstrates the unreliability of psychological screening for this purpose, “Potential recruits were rejected from service for educational deficiencies, assertions of anxiety disorders, or neurotic personalities.”³⁸ Obtaining sufficient manpower in situations such as those experienced during World War II, when massive armed forces were required, and today when declining birth rates and other factors also makes recruiting each serviceman very crucial, armed forces cannot afford to reject potential recruits for invalid reasons as was done by the U.S. in that period, “Overall, 1,600,000 recruits were denied military service on the grounds of psychological or educational deficiencies.”³⁹ The unreliability of psychological screening to detect sensitivity to OSI was demonstrated when persons who had previously been rejected for service were inducted into the military:

To illustrate this point, in World War II, 2,054 men who were rejected by the Selective Service were subsequently inducted into Army. Although 18 percent of this sample was ultimately discharged due to psychiatric causes, the remaining

³⁸ D.H. Marlowe, “Psychological and Psychosocial Consequences,” in *Steeling the Mind*, Todd C. Helmus and Russell W. Glen (Santa Monica California: RAND Corporation, 2004), 13.

³⁹ A.J. Glass, “Lessons Learned,” in *Steeling the Mind...*, 13.

82 percent were given a satisfactory duty rating. This is in contrast to a 94 percent satisfactory rating for all enlisted personnel. The authors concluded that 1,992,950 soldiers were unnecessarily prevented from serving their country.⁴⁰

This historical example demonstrates the fact that, except in cases of severe psychiatric disorders, psychological screening will not be effective in “weeding out” those that might be susceptible to sustaining an OSI.

These screening processes have proven to be ineffective as it is not possible to determine or detect a single psychological or character factor that will accurately predict the likelihood of a person to become victim of an Operational Stress Injury (OSI), this finding is supported by Dr. J.W. Appel, in *Steeling the Mind*, “If screening [were] to weed out anyone who might develop a psychiatric disorder, it would be necessary to weed out everyone.”⁴¹

Psychological screening does have legitimate uses for the CF, but not for this particular reason. Screening during the recruiting process to help ensure persons with current psychological pathologies are not admitted, and pre- and post-operational deployment screening of serviceman to help detect existing or suffered psychological issues and injuries are also very useful and important and should continue.

Therefore, it will be necessary to determine how the CF can build upon the strengths, abilities and the potential already resident within the servicemen and new

⁴⁰ J.R. Egan, L. Jackson, and R.H. Eanes, “A Study of Neuropsychiatric Rejectees,” in *Steeling the Mind...*, 95.

⁴¹ J.W. Appel, “Preventive Psychiatry,” in *Steeling the Mind...*, 94.

recruits to improve their mental fitness making them less susceptible to OSI and the general negative effects of stress. Further examination will lead to an understanding of how this might be accomplished.

Prevention Efforts by Military Leaders

In addition to the theme of this thesis, which is to determine what specific methods could be employed to improve the mental fitness of the individual CF serviceman, it is also worthwhile to remember that military leaders have the ability and responsibility to influence factors in order to create an environment that supports and promotes mental well-being for the serviceman. Commanders and Commanding Officers have the ability to create a work environment that contributes to the mitigation of stress. In *Steeling the Mind*, a RAND Corporation publication authored by Todd C. Helmus and Russell W. Glenn, there is an excellent leaders guide for both understanding concepts related to mental fitness and the steps a leader should take to enhance mental fitness and strengthen unit cohesion in his command.

In a model that will be presented later in this chapter, the environment of the military unit will be shown to have a critical impact on the serviceman's mental and physical well-being. This is important because the unit is the basic organizational building block within the CF. The unit is the first organizational level in the CF where the complete functions of administration, discipline, and training are contained. Every soldier, sailor and airman in the CF belongs to a unit and has a Commanding Officer. Therefore the importance of getting this key area correct is of fundamental importance achieving and maintaining mental fitness in the CF serviceman.

The Canadian Army, The Army Lesson Learned Centre, DISPATCHES Volume 10 Number 1, “*Stress Injury and Operational Deployments*” is also an excellent leaders guide aimed at providing understanding, the ability to recognize, mediate the effects of, and for the prevention OSI. For those interested in further study of what measures can be taken to create an environment that promotes and protects mental health in service members during operations, *Steeling the Mind and Stress* and *DISPATCHES Stress Injury and Operational Deployments* are very useful starting points for understanding this critically important area.

Effective Transactions and Adaptive Coping

The Transactional Model will now be referred to again and an analysis will be done to determine how the appraisal process can be employed in the most effective manner to either completely transform the “stressor” and to mitigate the effects of the stress. When dealing with combat stressors in military situations the appraisal steps are of primary importance to achieving effective outcomes. The Primary Appraisal of the stressor will determine if the event is positive, neutral, or negative. The Secondary Appraisal allows the person to judge whether or not the situation is within his or her control.

Within this realm of potentially negative events, three classifications can be made, either of harm/loss, threat or challenge. If the assessment is of harm or loss then the damage has already occurred and the secondary appraisal step will assist the person in selecting an adaptive coping strategy. An adaptive coping strategy coupled with the

person's characteristics of mental fitness will assist him or her with coping with the negative effects of that situation. This is the type of harm or loss stress that may come from learning that a soldier from your unit or a friend has been killed in a sudden and unexpected manner. It is with the second two categories, threat or challenge that improved mental fitness has greater potential to influence a positive immediate and long-term affect.

The transactional outcome deciding whether the stressor is appraised as a threat or as a challenge will depend on the individual's evaluation of his available coping resources. These resources will be in the form of physical, social, psychological and material elements or the factors which are resident in the construct of mental fitness proposed by this thesis. If the serviceman judges that he has the coping resources available then the stressor will be appraised as a challenge, and that is the preferable outcome. The level of confidence that the service member has in himself or herself, the unit leadership, equipment and training, and the mission will be a major factor in deciding whether the appraisal will be one of threat or challenge. It is logical that the higher the levels of confidence in self and unit the more likely that the stressor will be appraised as a challenge. When the appraisal is of challenge then adaptive coping strategies such as Information Seeking, Direct Action, or Inhibition of Action (restraint) can be considered and the challenge met with the best choice of reaction.

A scenario demonstrating the effective outcome resulting from a secondary appraisal of challenge could be as follows: On a Peace Support Operation, a speeding

vehicle is approaching a roadblock which is being manned by a section of infantry. The infantry section commander, a Sergeant, sees the vehicle approaching at high-speed and judges that it not likely to stop in time. The Sergeant feels the rush of adrenalin as his primary appraisal is of a potentially negative event. The section infantrymen have taken up firing positions and their weapons are ready in accordance with their training and TTPs. They are only awaiting the order from their Sergeant to commence firing. The Sergeant overcomes his physiological prompts to do something immediate “fight or flight” and instead through his secondary appraisal judges the speeding car situation to be more a challenge than a threat. He chooses the adaptive coping strategy of Information Seeking and as the car reaches the roadblock the Sergeant sees the Red Cross emblem on its doors. The order to fire is not given. The vehicle in this hypothetical case belonged to the International Red Cross and was fleeing an attack by a criminal gang. Additionally, it had two wounded Red Cross workers in the back seat. It has approached the roadblock in such haste to escape danger and find medical help. This short vignette demonstrates how the tools inherent in the Transactional Model of Stress and Coping have practical application during operations. Two important things happened in this vignette: a potentially negative stress situation was transformed into a challenge, and a positive outcome for the military mission was achieved. This was the result of a cognitive process being employed to determine the appropriate course of action.

It is a deduction of this thesis that the serviceman who has a high level of mental fitness is more likely to have the personal resources necessary to appraise more situations as challenges than as threats, than would a serviceman with a lower level of mental

fitness. For a person with an extremely high level of mental fitness it is conceivable that almost all stressor events could be viewed as a challenge rather than a threat. For the serviceman with a strong internal locus of control, internalized values and beliefs, and the other characteristics of mental fitness most stressor situations will be seen as a challenge to himself, his beliefs, his abilities, and of his unit. This is the result that should lead to lower levels of psychological injuries being suffered during operations.

Contributors to Mental Fitness

Five factors that either have the potential to mitigate the effects of stress or contribute directly to mental fitness will now be examined. Research has shown that each of these factors does have a contribution to make. However, due to the paucity of research into this area there is no overarching theory tying all of these factors together. Therefore, further research is necessary to determine if these different factors or their effects could be linked together and then packaged in a formal model to be employed in military settings.

Psychological Hardiness - Kobasa

Scientist Suzanne Kobasa, in 1975, examined the phenomenon of why some people under great stress succumb to illness while others do not. She studied 670 male executives, who had identified stressful life events and symptoms of illness that they had experienced in the preceding three years.⁴² She found that high-stress / low-illness males were more immersed in their work and social lives. They enjoyed a challenge and had a greater sense of control over events than their high-stress / high-illness colleagues.

⁴² Wood, *The World of Psychology*..., 382.

Kobasa identified three characteristics, in the healthier group, which she named 'psychological hardiness': commitment, challenge and control.

A summary of Kobasa's central theme is presented here:

Executives who displayed this hardiness, as shown in signs of commitment, control, and challenge, were likely to be handling stressful life events well, without falling sick; executives who did not appear to be committed, in control, or challenged were likely to describe becoming ill in the wake of stress.⁴³

The area of organizational commitment, as noted in Kobasa's work is of interest to this paper as this concept is linked to hardiness - a component of mental fitness. Considerable research has been done into this area since Kobasa first published her theory and supporting research. Commitment to an organization has been classified as either affective and continuance. From this article by John P. Meyer, these two types of commitment are defined:

"Although both affective and continuance commitment presumably increase the likelihood that an individual will remain with an organization, the reasons for doing so are different. Employees with strong affective commitment remain because they want to, whereas those who have a strong continuance commitment remain because they have to (i.e., to do otherwise would be costly). As such, affective and continuance commitment are related to March and Simon's (1985) "desirability" and "ease" of movement concepts, respectively. Although both forms of commitment may have similar effects with respect to turnover, it has been shown recently that they have quite different implications for on-the-job behavior. Allen and Smith (1987) and Meyer and Allen (1986) found that affective commitment correlated positively, whereas continuance commitment correlated negatively, with self-report measures of motivation and performance. Meyer et al. (1989) and Shore and Barksdale (1991) found a similar pattern of correlations with supervisor ratings of performance and promotability."⁴⁴

⁴³ Suzanne C. Kobasa, *The Hardy Executive: Health Under Stress* (Homewood, Illinois: Dow Jones-Irwin, 1984), 1.

⁴⁴ John, P. Meyer, D. Ramona Bobocel, and Natalie J. Allen, "Development of organizational commitment during the first year of employment: a longitudinal study of pre- and post-entry influences," *Journal of Management* (December 1991), http://www.findarticles.com/p/articles/mi_m4256/is_n4v17/ai_11817379; Internet; accessed 8 April 2006.

In general, the military will prefer and seek the affective form of commitment, as it is more likely to result in the benefits of better performance and higher levels of motivation. Further research within the Canadian Army has demonstrated a link between the organizational culture of the army, which is strong, and building the affective commitment in its soldiers. Recently, the Canadian Army produced a survey examining army culture and values:

The CROP survey found that Canada's Army has a very strong organizational culture. Predominant Army values include the need for personal achievement, importance of the individual, adherence to institutional leadership, attraction to intensity, sense of duty and accomplishment, social conscience and conservatism. Soldiers' values are closely aligned with those of Canadian society.

Soldiers are similar to Canadian society in their adaptability to complexity in life, penchant for risk taking, pursuit of novelty, adaptive navigation, sexual permissiveness, introspection and empathy, need for personal autonomy, spontaneity in daily life and need for achievement through work. Soldiers differ from Canadian society in their diminished valuation of working simply for money, aversion to complexity in life, effort for health, rejection of order, rejection of authority, risk aversion and a more intuitive, affective approach to life.⁴⁵

It is this authors' deduction that a strong and effective culture and ethos living within the organization will develop and foster affective commitment in its personnel. The research noted above supports this notion. This idea can then be linked back to the Kobasa theory and findings concerning the contribution of commitment to hardiness. Strong affective commitment is a factor leading to hardiness. This is important because hardiness is a key contributor to mental fitness. The concept and contribution of military

⁴⁵ Canadian Army, Army Culture and Climate Survey, published in 2003, http://www.army.forces.gc.ca/lf/English/5_10_1_2.asp; Internet; accessed 7 April 2006.

values and ethos, first noted in the citation above will be explored in greater depth later in this chapter.

Resilience

Resilience is considered to be the ability to “bounce back”, recovering one’s self-confidence, good spirits, and hopeful attitude, after extreme or prolonged stress.⁴⁶

Studies have determined that the following factors contribute to resilience: strong social support, (both from family members and friends), having a positive attitude towards life in general and your own place in it, and self-esteem (which may be gained from excellence at a hobby or sport).

Maintaining a strong social network of friends and family who provide effective social support is a key contributor to maintaining mental health.⁴⁷ It is important to note that to be effective the social support network must be providing useful and effective support. A social group that promotes denial or encourages other damaging coping measures such as the use of alcohol or drugs will probably have a negative effect on a person’s mental health.

Social Support may be considered as one of the cumulative ‘protective factors’ as part of Resiliency (a characteristic of Mental Fitness) that work in opposition to ‘risk factors’. Effective social support when dealing with stressful events, such as death or serious wounding, can also function as a coping strategy. The concept of social support

⁴⁶ Charles G. Morris, *Psychology: An Introduction* (Upper Saddle River, New Jersey: Prentice Hall, 2002), 487.

⁴⁷ *Ibid.*, 501.

may be embodied in the military interpretation of cohesion. The presence and importance of social support will be investigated in more depth when CF institutions are examined with the objective of determining their contribution to the mental fitness of CF personnel.

Leadership and Unit Cohesiveness

Leadership has been analysed and written about by many authors, and indeed the field of leadership in the military environment is especially well documented. Of interest to this essay, is the contribution or impact of effective leadership upon unit cohesion. This is due to the ameliorating affect of unit cohesion on combat stressors as stated here by researcher James Driskell, “Unit cohesiveness has been identified by many as the single most important variable in reducing the impact of stress in combat.”⁴⁸

Leadership in the CF has received very close attention over the past 15 years, and the conceptual foundations for leadership with the CF have been provided in the new manual *Leadership in the Canadian Forces: Conceptual Foundations*, published in 2005. The importance of understanding what leadership is, and providing sound, effective leadership within the Canadian Forces is clearly at the fore of importance to the senior leadership of the Canadian Forces.

Establishment of the Canadian Defence Academy and the CF Leadership Institute and the creation of the family of relevant and timely manuals is a clear indication of this importance. Effective leadership creates and fosters both unit cohesion and a healthy unit

⁴⁸ James E. Driskell and Brian Mullen, “Simulation and Training for Stress Environments: A Meta-Analytic and Experimental Evaluation,” ARI Research Note 95-38, Research Institute for the Behavioural and Social Sciences, United States Army, (June 1995), 3.

environment for the serviceman to live and fight within. This leadership element, at the unit level, is a key factor which contributes to the mental fitness of the individual serviceman and is a factor that the unit leader can influence through his execution of effective leadership behaviours as provided in Chapter 4 of *Leadership in the Canadian Forces: Conceptual Foundations*. Effective leadership, by the Commanding Officer of a unit, is one of the most effective methods for mitigating stress and thereby making a significant contribution to the improved mental fitness of the serviceman.

Physical Exercise and Mental Fitness

In the CF, considerable emphasis in the form of financial resources, time, equipment, human resources, and standards is placed on maintaining physical fitness. This is done primarily to achieve and maintain the serviceman's personal physical fitness level so he will be better prepared for the physical rigours of operations. The importance placed on physical fitness is apparent in this introduction by the Commander Land Force Command in the introduction to the *Army Fitness Manual*:

Members of the Army,
Physical fitness is fundamental to being an effective soldier in Land Force Command. It ensures vigour, alertness and stamina in operations and in the performance of your duties.
Fit individuals make strong team members, ensuring operational readiness of Army at all times. Regardless of your occupation, you can be called upon to perform difficult and dangerous tasks, whether they are combat, peace enforcement, peacekeeping, or aid to civil power. You must be ready to go on short notice and for sustained operations.⁴⁹

This forceful, and enthusiastic, endorsement of the importance of maintaining personal physical fitness and the range of activities that the serviceman can encounter has

⁴⁹ Department of National Defence, *The Army Fitness Manual* (Kingston: Army Publishing Office, 2005), i.

another benefit. The benefit is that exercise can also have a positive effect on the mental well-being of a person and is importantly an effective method for coping with stress.

Exercise promotes both physical fitness and mental fitness. The results of this study by Parinda Khatri attest to these positive mental fitness outcomes:

Although there do not appear to be any specific “personality types” associated with specific kinds of exercise (e.g., joggers vs weight lifters), active individuals tend to have higher self-esteem and greater confidence than sedentary individuals. Athletes (with the exception of marathon runners) are more likely to be extroverted and less neurotic than non-athletes. Athletes also tend to have less anxiety, depression, anger, and fatigue and more vigour than their non-athletic counterparts. Interventional studies have shown exercise to improve self-concept, self-esteem, and self-efficacy.⁵⁰

The research results provided by Khatri’s paper demonstrate many of the benefits that exercise provides for improved mental health. These findings will be important later in this paper when the analysis of the impact of current CF programs and culture is conducted. Also important to this study is the effectiveness of fitness on the ability of a person to cope with stress. The findings of the same study also provide encouraging information for this field:

A number of cross-sectional studies have demonstrated that physically fit or physically active individuals exhibit lower cardiovascular responses to physical and mental stressors compared to unfit or sedentary individuals. Because regular exercise results in physiological adaptations that may affect responses to psychological challenges, interventional studies have also examined the effects of exercise training on cardiovascular and neuroendocrine responses to laboratory stressors such as mental arithmetic and or public speaking. Results of these studies have shown that heart rate and blood pressure responses to these mental stressors are attenuated after 12-16 weeks of exercise and that aerobic exercise (e.g., jogging or biking) are generally more effective than anaerobic exercises (e.g., strength training) in reducing psycho physiologic stress responses.⁵¹

⁵⁰ Parinda Khatri and James A. Blumenthal, “Exercise,” in *Encyclopaedia of Stress Volume 2*, ed. George Fink, 98-102 (San Diego, California: Academic Press Inc., 2000), 100.

⁵¹ *Ibid.*, 100.

This paper, by Khatri, summarizes several studies conducted into the area of the physiological and psychological effects and benefits of exercise. It is important to note here that these studies demonstrate that physically fit persons will also have an enhanced ability to cope with stress, a key component and contributor to mental fitness. Khatri's research would tend to suggest that the ability to mitigate the negative effects of stress rests with physical aspects, whereas the Transactional Model places the emphasis on cognitive appraisal and adaptive coping strategies as the determining factor regarding mitigating the effects of stress. This thesis accepts the contributions and benefits of both the physical aspects inherent in enhanced physical fitness and the psychological cognitive aspects of appraisal and coping. Therefore, physical fitness is accepted by this author as a key contributor to mental fitness. Perhaps the linkage between physical fitness and the psychological aspects of hardiness and resiliency can be found within the contribution that physical fitness makes to confidence and self-esteem. This link is an area that could be researched further by behavioural scientists.

Military Ethos

The CF now has a clearly defined understanding and statement of its ethos. The military ethos is at the heart of the institution and provides a framework for this unique institution that has the commitment to *unlimited liability* at its core. This ethos and its set of beliefs, expectations, and values, are, as noted previously in the work of Kobasa and Meyer, a key contributor to individual commitment and this leads to increased motivation, performance, and most importantly, contributes to mental hardiness. This is the explanation of the CF ethos, from *Duty With Honour, the Profession of Arms in Canada*:

The Canadian Military ethos is not just a statement of values or checklist of idealized beliefs to be written and hung on a wall. *It is a living spirit* – one that finds full expression through the conduct of the members of the profession of arms.⁵²

From this definition, three key elements are worthy of further exploration. These are, (1) *the ethos*, (2) *conduct of the members*, and (3) *the profession of arms*. The latter will be examined first.

The definition of the profession arms in Canada, for the CF member, is a key ingredient towards understanding the ethos and culture of the CF as an institution. It is an ethos demands that the needs and desires, and indeed the very life of the serviceman, may be put second to the goals of the institution.

This is the description of the profession of arms in Canada, from *Duty With Honour*:

The profession of arms in Canada is composed of military members dedicated to the defence of Canada and its interests, as directed by the Government of Canada. The profession of arms is distinguished by the concept of service before self, the lawful, ordered application military force and the acceptance of the concept of unlimited liability. Its members possess a systematic and specialized body of knowledge and skills acquired through education, training and experience, and they apply this expertise competently and objectively in the accomplishment of their missions. Members of the Canadian profession of arms share a set of core values and beliefs found in the military ethos that guides them in the performance of their duty and allows a special relationship of trust to be maintained with Canadian society.⁵³

The second factor highlighted from the ethos statement is the ‘conduct of the member’. The member’s behaviour exists within a framework of four complimentary sets of rules and guidance. These are (1) the values of Canada, (2) the laws of Canada,

⁵² Department of National Defence, A-PA-005-000/AP-001 *Duty with Honour: The Profession of Arms in Canada* (Ottawa: DND Canada, 2003), 34.

⁵³ DND, *Duty with Honour...*, 10.

(3) the rules and regulations of the CF, which have the force of law, and (3) the military ethos of the CF.

The last factor to be examined is the CF ethos. This ethos identifies and explains military values and defines the subordination of the armed forces to civilian control and the rule of law. The values and beliefs of this military ethos are: (1) Duty, (2) Loyalty, (3) Integrity, and (4) Courage. *Duty with Honour* provides the detailed explanations of these values and the critical role they play in the formation and sustainment of the military ethos of the CF.

The following diagram, at Figure 6, illustrates the relationships and flow between all of the different beliefs, expectations, Canadian societal values, and Canadian military values. It illustrates how these factors combine together to shape military professionalism to achieve the desired output of “Performing Duty with Honour”.

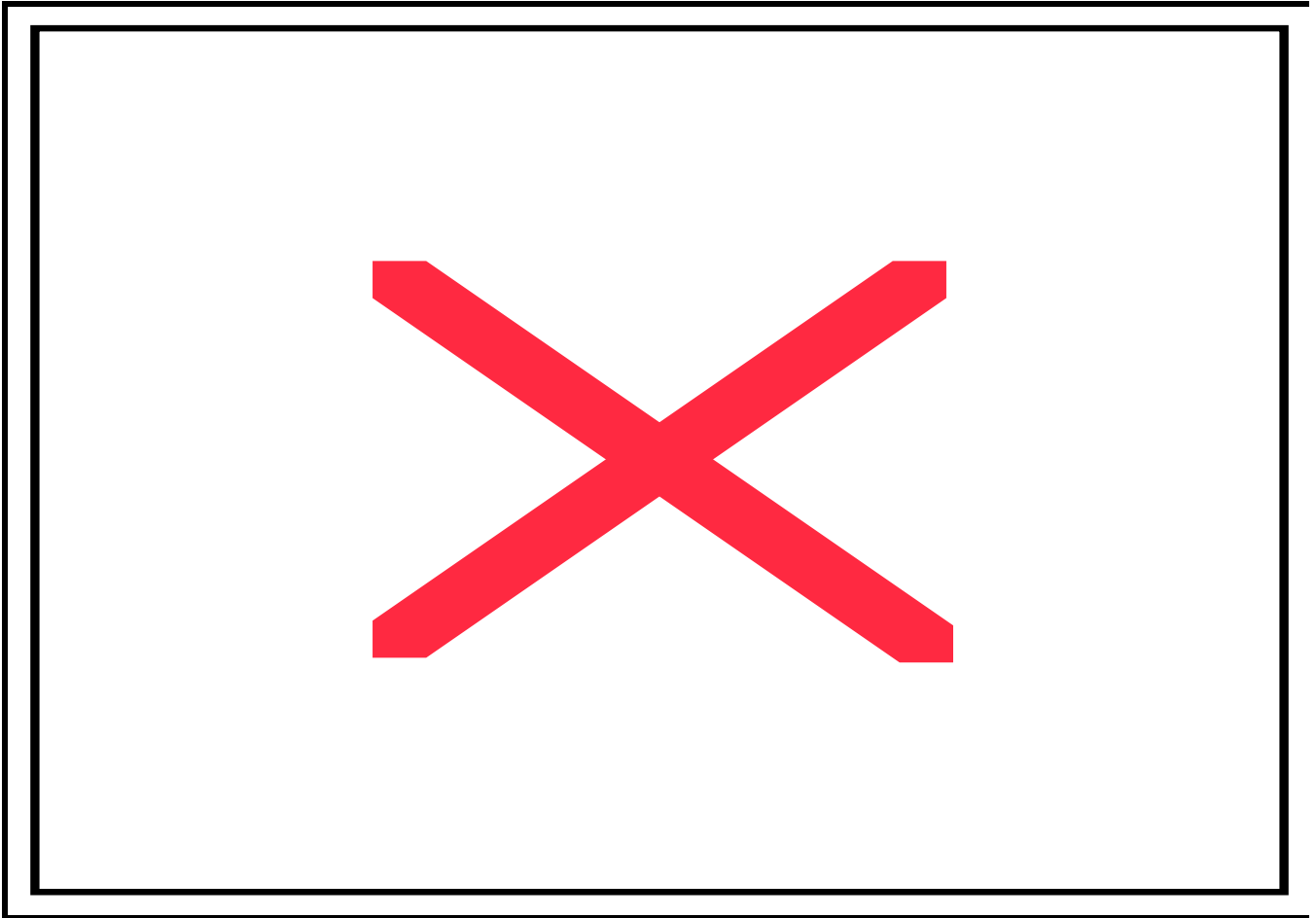


Figure 6. From *Duty with Honour*, this diagram depicts the components of the CF ethos and illustrates how they shape military professionalism to achieve the desired end of “Performing Duty with Honour”.⁵⁴

It is the deduction of this author that this definitive statement of CF military ethos, which clearly provides the core values of Canada and the CF, and showing how the interaction occurs to produce *Duty with Honour*, provides the CF serviceman with the required understanding of what the CF, as an institution, stands for. This in turn, allows for and encourages a high level of commitment from the members, as it provides an understanding of the answer to the fundamental question of *why*, when a service member

⁵⁴ DND, *Duty with Honour...*, 33.

is wounded or killed. The *why* is found within our societies' and the CF's set of stated values and beliefs – it is found within our ethos.

This clear statement of CF ethos also provides the institutional foundation necessary to ensure that the CF, as an organization, pursues goals and policies that support these values, and also provides the fundamental framework within which healthy and effective units can function effectively. These values and ethos provide the foundation for the sense of affective commitment that the service member will develop. This will promote job satisfaction, and provide social support from the members of the unit that hold the same values. All of these factors contribute to building and sustaining mental fitness.

Model and Concept of Improved Mental Fitness

This review of literature has led to the following deductions regarding the present state research into this field and the institutional preparedness of the CF to provide the foundation necessary to support the notion of enhancing mental fitness. First, there exist sufficient current, relevant, and promising research in this field to warrant further study, and indeed to study practical applications of this notion that are being used now by, for example, the British Army in the study cited in Chapter One.⁵⁵ Secondly, the development and implementation of new institutional level and unit level doctrine which has defined the CF military ethos and the CF Leadership foundations is providing the

⁵⁵ The British Army continues to conduct this type of psychological preparedness training. This fact was confirmed by Major P. De Rouffignac, a British Army student on CSC 32, on 20 April 2006. Major De Rouffignac received such an operational stress training package prior to deployment to Bosnia in 2000, and again, prior to his deployment to the Second Gulf War in Iraq, in 2003. His training and information session was conducted one-on-one with a psychiatric nurse. It covered adaptive coping strategies and it had stated aims of helping to prevent CSR and PTSD. Major De Rouffignac stated that, in his opinion, "this program is worthwhile and effective".

framework and environment that will allow what this author suggests is another key part of the total package required to maintain the health and well-being of the service member. This missing link in the concept may be a formal program aimed at enhancing the mental fitness of the CF member.

This diagram depicts the previously provided characteristics or conditions that contribute to, or perhaps enable a person to achieve improved mental fitness. It serves as visual reminder of the concepts and notions reviewed thus far. Additionally, it will serve as a visual queue demonstrating how the concept of mental fitness nests into a model of the major factors influencing the service member in the CF, at the institutional and unit levels.

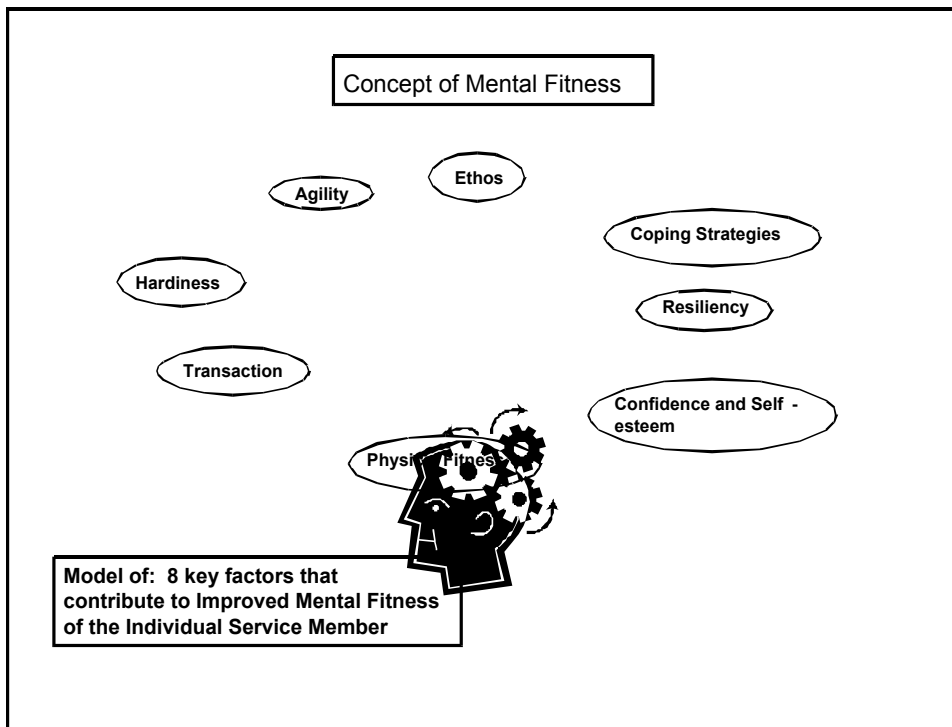


Figure 7. A depiction on the author's concept of the factors that contribute to and enable Improved Mental Fitness.

The CF serviceman does not exist in isolation. His mental and physical well-being is very much dependent upon many factors. The model at Figure 7 represents only those factors that the individual can have direct control over. The serviceman however, lives and works in a very unique institution. Unique, because for one reason in particular, it is the only institution in Canada where its members are authorized to use violence and kill people, at the order of the government, as is occurring at this very moment. The Chief of Defence Staff has stated on several occasions that the Army is in Afghanistan to hunt down and kill the Taliban. A second and more all-encompassing model is needed to depict where the serviceman and the concept of mental fitness nests within a single, larger system.

This diagram, Figure 8, provides the author's perception of a model which identifies the fundamental factors that lead to the CF being able to deploy effective operational forces, while achieving the goal of lower levels of mental injury. The key components are: **1** - The CF as an institution, **2** - the unit as the core element in the CF upon which all elements of organization, administration and discipline are based, **3** -the serviceman – the critical element without which there is no CF. These elements, working together, produce **4** - effective operational forces while achieving the goal of lower instances of the full range of stress related injuries, including OSI.

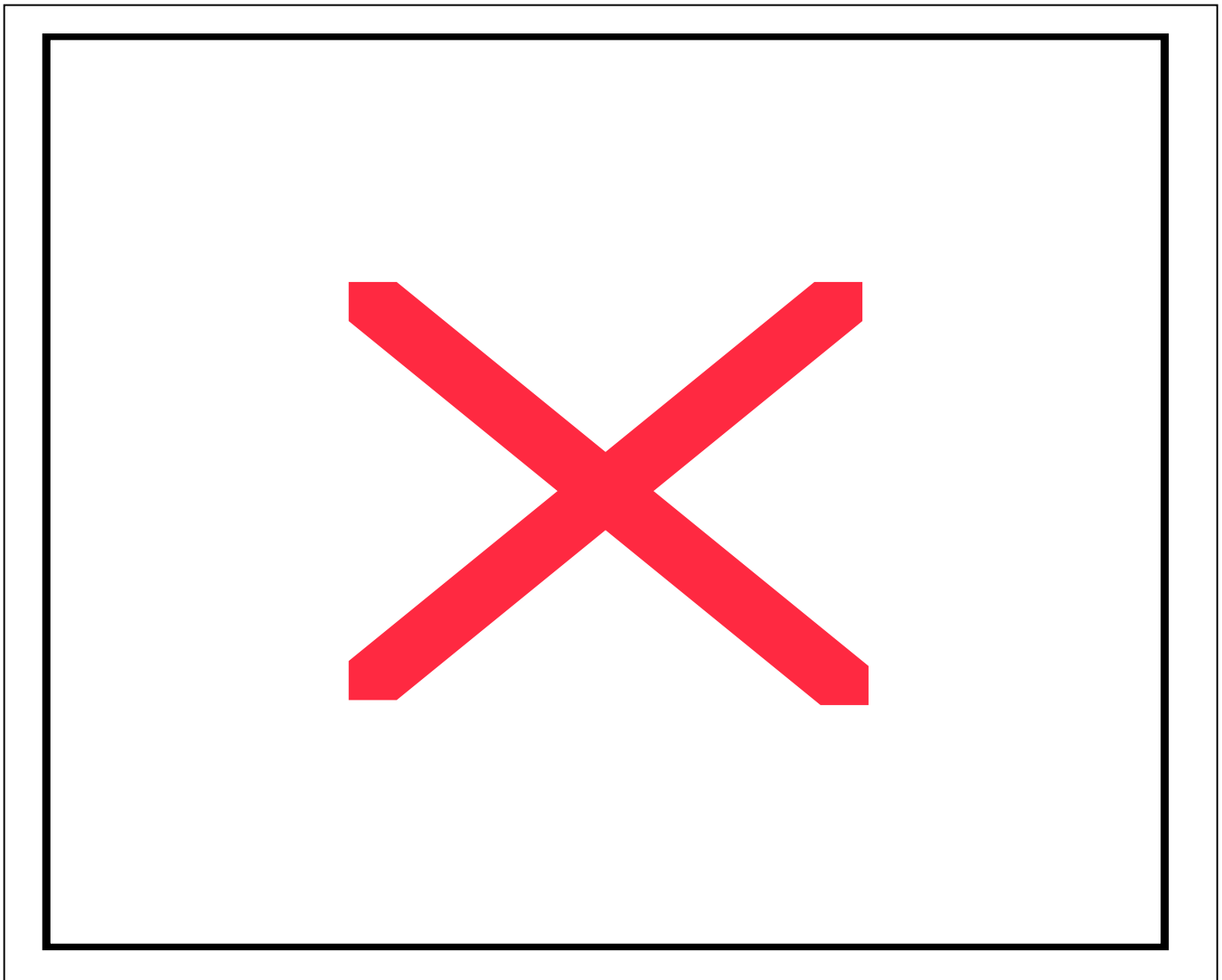


Figure 8. Model of Improved Mental Fitness which leads to the goal of lower incidences of CSR, PTSD, Depression, burn-out and Suicide. It shows how Mental Fitness supports the service member who is part of the larger organization represented by the Unit and the CF.

The serviceman is depicted as the foundation of the model, but the arrows demonstrate the dynamic of the model. Each of the three key elements are dependent on the others for specific items, guidance, and inputs. The serviceman at position **3**, as an individual, is supported by two important pillars: physical fitness; and mental fitness. This thesis is concerned with strengthening that particular pillar of support, mental

fitness. The factors previously discussed, as depicted at Figure 7, and supported by current research have the potential of improving mental fitness for the CF serviceman. Some of the specific training ideas and programs that have scientific validity will now be discussed. These methods warrant further research and could potentially be included in a CF Improved Mental Fitness training program or possibly into an Operational Stress Training package as preparation for deploying forces.

Stress Related Training Programmes and Techniques

Certain militaries, notably the U.S. Army and British Army, have initiated stress training programs. However, there is no forces wide program for stress training or inoculation in the CF. The results of this shortcoming are noted here in research by Epstein:

Too often...the individual is left to his own devices in learning to control thoughts and emotions. Yet it is evident that emotions and thoughts can affect behaviour and may be elements critical to the acquisition of proficiency.⁵⁶

The training programs of our allies should be examined and a determination made regarding their applicability to the CF. Of particular interest is the U.S. Army 'Battlemind' program.⁵⁷ This program has been developed by the U.S. Walter Reed Army Institute of Research and although certain of its component parts are still being produced it appears to be being developed to achieve the same goal as offered by this

⁵⁶ Epstein in Thompson and McCreary, "Enhancing Mental Readiness...", 57.

⁵⁷ The Battlemind program material is available from the Walter Reed Army Institute of Research-Psychiatry and Neuroscience. The core of its program includes and describes "10 Tough Facts about Combat and What Leaders Can Do to Mitigate Risk and Build Resilience". When development is complete it will comprise the following sections: Battlemind Pre-deployment, Transition Training 1 for at Post-Deployment, Transition Training 2 for Post-Deployment (3-6 months), Battlemind Family, and Battlemind unit Needs Assessment. This program incorporates several of the characteristics and factors that are included in the construct for improved mental fitness presented in this essay. "Battlemind", <http://www.battlemind.org/>; Internet; accessed 20 April 2006.

thesis, which is to lower the rates of incidences of CSR, and PTSD. The Battlemind program should be studied by CF Health professionals.

Application of the Transactional model has the potential to provide the required cognitive control over negative thoughts and emotions. However, complete success over stress cannot be guaranteed and therefore current programs and techniques aimed at dealing with or mitigating the effects of stress are needed. Four stress training programs or methods will now be briefly discussed in order provide an understanding of some of the stress training methods that are available for use today. Their potential applicability to the concept of improved mental fitness in the CF will also be examined.

Stress Inoculation Training

Stress inoculation training (SIT) is a cognitive-behavioural approach to stress management that has shown considerable promise in a clinical setting. The concept of SIT was developed by psychologist Donald Meichenbaum at the University of Waterloo. In his SIT program test anxiety, stress over personal and social relationships, and various types of performance anxiety have been successfully treated.⁵⁸ Individuals are taught to recognize their own negative thoughts and to replace them with positive ones. They learn how to talk to themselves using positive coping strategies to dispel worry and provide self-encouragement.

SIT involves three overlapping phases. The first phase, conceptualization, is an education phase that emphasizes the development of a warm, collaborative relationship

⁵⁸ Wood, *The World of Psychology...*, 387.

through which a careful assessment and problem re-conceptualization are completed. The second phase, skill acquisition and rehearsal, target and develop a repertoire of palliative and instrumental skills for anxiety reduction. The third phase, application and follow-through, focuses upon activities that transfer coping skills to real life and prevent relapse.⁵⁹

Although SIT has a promising title, it has been developed primarily for clinical use and for the treatment of persons who have already developed some type of stress related illness or problem that can be addressed through counselling. The principles upon which SIT is based, primarily its cognitive approach and development and use of adaptive coping strategies could be contributors to improved mental fitness. However, these elements would need to be reworked to allow SIT to be taken out of the clinical setting and provided to a larger training audience for this program to be relevant and accessible to the CF service member.

Stress Exposure Training

Stress Exposure Training (SET) takes a different approach which aims to provide a framework in which fear can be attenuated and tasks can be trained such that performance withstands the aversive effects of stress. This program, based on medical, psychological, and military research has been developed by James Driskell and Joan Johnston.⁶⁰ The SET program is a three stage approach of (1) information provision, (2) skills acquisition, and (3) application and practice with the goal of confidence building.

⁵⁹ Donald H. Meichenbaum, "Stress Inoculation Training," *The Counselling Psychologist*, Vol. 16 no 1 (January 1988): 69.

⁶⁰ James Driskell and Joan Johnston, "Stress Exposure Training", in *Steeling the Mind...*, 99.

SET is specifically designed to enhance the performance of “normal” people in stressful working conditions. The three goals of SET are shown here:

- To build skills that promote effective performance under stress.
- To build performance confidence.
- To enhance familiarity with the stress environment.⁶¹

SET has the potential to be a direct contributor to improved mental fitness. The enhancement of skills execution under stressful conditions will increase confidence and self-esteem. Additionally, more familiarity with the stress environment has the potential of lessening the impact of the physiological effects of stress, as they will have already been experienced. These elements of SET could be incorporated into a training program aimed at improving mental fitness.

Progressive Relaxation Training

Progressive relaxation training is one of the most commonly used stress reduction techniques found in research literature today. Healthful physical relaxation requires lying quietly and alternately tensing and relaxing every voluntary muscle in one’s body, from head to toe, in part to how to recognize muscle tension, in part to learn how to relax your body. Breathing exercises can also play an important part in relaxation training, if one is tense, deep rhythmic breathing is difficult, but learning to do so relieves bodily tension. However, the research results concerning relaxation are not conclusive, as reported here by Driskell:

⁶¹ Thompson and McCreary, “Enhancing Mental Readiness...”, 63.

A meta-analysis of the literature on relaxation training was conducted to determine the overall effects of relaxation training and identify conditions under which relaxation training has a positive and significant effect on reducing subject anxiety. Moreover, moderators such as the type of subject population, mode of presentation, and size of the training group revealed that relaxation training is equally effective in a variety of different environments and under different conditions. However, there is a lack of data on the effects of relaxation training on performance.⁶²

Progressive Relaxation Training does not appear to be a direct contributor to the concept of improved mental fitness. It does have the potential to be used as a technique to mitigate the effects of stress, and as such has value in contributing to general mental well-being rather than to improved mental fitness.

Mental Rehearsal

Mental practice refers to the symbolic rehearsal of an activity in the absence of overt physical performance. Driskell, in his study, reported that a recent U.S. National Research Council report on training techniques concluded that “the available research on mental practice is consistent enough to support a recommendation for the Army to conduct evaluation studies for operational military tasks.” Results of his research analysis revealed that mental practice is moderated by type of task, the retention interval between practice and performance, and the length and duration of the mental rehearsal intervention.

Mental rehearsal techniques could be applied to a training program for improved mental fitness. The application could be in the form of vignettes where symbolic rehearsals of operational scenarios are rehearsed. This technique could have benefits in

⁶² Driskell, “Simulation and Training for Stress Environments...”, 3.

the areas of transaction and coping strategy selection, agility, and in building confidence and self-esteem.

Summary of Literature of Literature Review and Deductions

This review of literature has provided a foundation of scientific knowledge which explains that stressors can be dealt with effectively using cognitive processes. This concept is central to the Lazarus Transactional Model of Stress and Coping. In the Transactional Model primary and secondary appraisal processes work together leading to the cognitive selection of an appropriate adaptive coping strategy. The Transactional model will allow the service member to overcome the initial physiological and emotional responses to stressful situations. This concept was then incorporated as a critical element contributing to improved mental fitness. It is posited that these cognitive skills can be developed and honed within the individual CF service member. From the Transactional Model two important factors were incorporated into the characteristics of improved mental fitness: Effective Transactions and Adaptive Coping Strategies.

Also presented and discussed were six additional factors that contribute to or enable the serviceman to achieve improved mental fitness. A model was also provided which depicted how mental fitness is a key part of the foundation leading to the eventual goal of the CF providing effective operational forces. It was also posited that improved mental fitness should help achieve the goal of lower levels of mental illnesses and injuries seen in the forms of depression, suicide, CSR and PTSD.

The next chapter will examine current CF Mental Health programs and determine their impact and contribution to this concept of improved mental fitness.

CHAPTER 3

CF STRESS MANAGEMENT PROGRAMS

All my life I have been attracted to adventure – Mount Everest, overland to the South Pole, driving jet boats up the lengths of the Ganges River, and a multitude of other challenges. There has always been an element of danger – but if there hadn't been, I doubt I would have gone to the trouble. Danger is stimulating and makes every effort worthwhile. So in a way, I have enjoyed stress, and life would have been rather boring without it.

Sir Edmund Hillary

Introduction

Sir Hillary's positive view of the effects and benefits of stress are what the CF should expect of a serviceman who has a high-level of mental fitness. This is the view of a person who is more likely to appraise potentially stressful events as challenges rather than as threats. As we have come to learn in Chapter 2, the challenge appraisal of a stressor is much more likely to produce effective outcomes for the situation and for the serviceman. CF stress management and training programs will now be reviewed in order to determine their contribution or impact upon the development of improved mental fitness and better coping strategies.

In the past several years the CF has taken the issue of stress related injuries far more seriously than during the pre-1990 period. The transition from ignorance to acknowledgement, knowledge and action was initially tentative. However, the experiences with OSI of senior officers, such as General Romeo Dalairé, brought this concern out of the shadows and into the health care focus. This new level of attention is

evidenced in the number of programs and the resources now being directed to this important health issue.

CF programmes related to mental health care and well-being will now be discussed. One of the primary issues will be whether a program is aimed at treatment or prevention, as the theme of this thesis is directed towards prevention and what can be done, through the construct of improved mental fitness, to achieve the goal of lower levels of depression, suicide and OSI in CF personnel.

Strengthening the Forces

Strengthening the Forces is the official title of the Canadian Forces health promotion program. It is a Canadian Forces centrally directed and funded program which is available to all members of the Army, Navy and Air Force. It is a voluntary program, designed to assist service members in taking personal control of their health and well-being. The program states the benefits of maintaining a healthy lifestyle as it relates to life in the Canadian Forces, “Maintaining a high level of health improves one's ability to perform effectively and safely on CF operations, and to enjoy a high quality of life.”⁶³

Within this program, health promotion regimes are researched, developed and evaluated by a team health and fitness experts.. The programs are delivered by staff hired under the terms of a Service Level Arrangement with the Canadian Forces Personnel Support Agency and are located at bases and wings across Canada.

⁶³ CF Strengthening The Forces, http://www.forces.gc.ca/health/services/health_promotion/Engraph?what_is_STF_e.asp; Internet accessed 8 April 2006.

The program directors have the mandate to deliver national health promotion programs and to identify and relay to the program development team the specific needs and issues at their respective bases and wings.

The programs offered within *Strengthening the Forces* fall into four broad categories:

- Active Living and Injury Prevention
- Nutritional Wellness (healthy eating, weight management, diabetes and heart disease prevention)
- Addiction Free (alcohol and other drug abuse, tobacco use cessation, problem gambling)
- Social Wellness (stress management, anger management, family violence prevention, health families, suicide prevention, spirituality).⁶⁴

One of the central themes of the Strengthening the Forces program is its focus on healthy physical living, thereby achieving and maintaining a healthy and fit body. There are specific programs and annual campaigns aimed at helping CF personnel quit smoking, adopt an active lifestyle, achieve a healthy weight and consider proper nutrition while so doing. This focus and these specific programs directly encourage the achievement and maintenance of personal physical fitness. These programs which directly support the healthy physical living and improved levels of physical fitness are contributors to the concept of improved mental fitness. Specifically, the programs noted above contribute to building confidence and self-esteem, improved levels of physical fitness, and the adoption of adaptive coping strategies. Also important, participants in these programs are taught that mal-adaptive coping strategies, such as alcohol and drug

⁶⁴ CF Strengthening The Forces, http://www.forces.gc.ca/health/services/health_promotion/Engraph?what_is_STF_e.asp; Internet accessed 8 April 2006.

use, smoking and anger have negative effects on both their physical and mental well-being.

Specifically related to the management of the effects of stress is the “Stress: Take Charge!” program which falls within the *Strengthening the Forces* program mandate. The program advertises the objectives of enabling a person to: “increase your stress hardiness, enhance your performance and ramp up your resilience”.⁶⁵ This program promotes a self-directed approach to stress management. It stresses the ideas and techniques of self-awareness, behavioural change, and skill building as methods to mitigate the negative effects of stress. Its stated objective is, “to support participants in their identification of the strategies that they already use and those that they will begin to implement in order to optimize their stress hardiness.”⁶⁶

These are the stated learning objectives of this program:

- Understand the stress reaction in the military context and its links to hardiness.
- Assess their level of stress using StressMap.
- Choose and practice specific skills that they will use to increase performance and decrease stress.
- Benefit from regular practice of the relaxation response.⁶⁷

This particular program appears to have promise and could be a contributor to improved mental fitness, particularly in the areas of hardiness, transaction and coping strategies. However, because of its classroom program setting and delivery by a civilian

⁶⁵ CF Strengthening the Forces, Health Services site, http://www.forces.gc.ca/health/Services/health_promotion/Engraph/think_stress_e.asp; Internet; accessed 8 April 2006.

⁶⁶ *Ibid.*

⁶⁷ *Ibid.*

it may lack a degree of relevance to the operational setting. This observation was reported by Megan M. Thompson in *The Psychology of the Peacekeeper*:

The specifics of psychological education and briefing need continued refinement. Far too often these stress briefings are taught in general terms and at a junior university level. Presentation must be tailored to the specific deployment stressors and events, using terms to which the troops can relate. If the briefing points are not made relevant to the peacekeeping context, many troops will fail to the personal relevance of the information and forget the messages.⁶⁸

It may be that the “Stress: Take Charge!” program is focused on the more routine garrison types of stressors, the kinds of situations found in every workplace. While not detracting from the objectives and goal of improving mental fitness, it may that a more operationally focused program would be more effective in preparing the serviceman for operations.

Another specific program offering is titled “Managing Angry Moments” (MAM). Anger is an emotion. Lazarus would support this approach of understanding the emotion and using cognitive processes to enable a person to develop an effective response to the situation that has or is causing this emotion to arise.

MAM is a prevention-oriented psycho-educational workshop that is based on best practices that are effective in helping participants identify personal anger generating situations and applying learned skills to successfully manage these events. The purpose of the MAM workshop is to examine and address issues of anger (while they are still

⁶⁸ Megan M. Thompson and Luigi Pasto, “Psychological Interventions in Peace Support Operations: Current Practices and Future Challenges,” in *The Psychology of the Peacekeeper*, ed. Thomas W. Britt and Amy b. Adler, 223-241 (Westport, Connecticut: Praeger, 2006), 236.

manageable) in order to prevent the possibility of their escalation to physical or verbal aggression. MAM is a valuable program which aims to educate and change behaviour concerning this mal-adaptive coping strategy. This program also has potential to be modified for an operational audience and to use situations and scenarios that are applicable to specific operational settings.

The last area of the “Strengthening the Forces” programs to be examined will be the anti-addiction programs. These programs and information campaigns are aimed at assisting servicemen with quitting smoking, alcohol use control, drug awareness and control, safe sex education, and other addiction issues. These programs are contributors to mental fitness because many of these negative-health habits are used by people as coping strategies to deal with stress. However, these activities clearly do not fall within the category of adaptive coping skills offered by Lazarus and discussed in Chapter 2; rather they are mal-adaptive strategies that foster denial, and avoidance of the actual stressor being experienced.

In summary of the “Strengthening the Forces” program there is a focus on the prevention of mental illness through programs that do meet some of the requirements of mental fitness. Specifically, the focus on healthy physical living, the “Stress: Take Charge” program, the “Managing Angry Moments” program, and the anti-addiction programs can all be contributors to improved mental fitness. Their contribution is primarily related to education and fostering behavioural change concerning mal-adaptive coping strategies. However, an operationally focused stress training program would probably be more effective in preparing servicemen for specific operational missions.

One major limitation to the Strengthening the Forces health promotion strategy is that the programs and information is available purely on a voluntary access basis to the service member. That is to say, these programs are not mandatory and therefore service members who truly need the assistance and new coping strategies offered by these programs cannot be mandated to attend. Incorporating the key principles and concepts into the CF training system would overcome this serious shortcoming.

Mental Injury Treatment

The CF has made the effective treatment of serviceman one of its health care priorities. The Department of National Defence, Veterans' Affairs Canada (VAC), and the Royal Canadian Mounted Police (RCMP) have pooled resources to establish the Joint Mental Health Care Project which has the broad goal of improving the mental health services provided to CF members, veterans, and serving and retired RCMP officers. Still under development, this new project will result in a number of improvements including the development of a consistent approach to access to and delivery of mental health services, be it at a CF or VAC clinic. In addition, there is to be improved accessibility, coordination and integration of programs. This new project is yet another example of an initiative aimed at improving mental health care for the serviceman.

Veterans Affairs Canada has been re-invigorated and has received a new and expanded mandate and substantial new funding to allow it to meet the objectives of the new Veterans Charter:

On April 1, 2006, the Government of Canada brought into force the New Veterans Charter to better meet the needs of modern-day Canadian Forces (CF) members, Veterans and their families as they transition from military to civilian life. It is the most profound change to Veterans' benefits in more than half a century.⁶⁹

Other examples of CF programs aimed at the treatment of stress caused injuries are: the establishment of five Operational Trauma Stress Support Centres (OTSSC) across the county, support to operations provided by deploying mental health care providers in-theatre on larger missions, a CF Member Assistance Program, the Operational Stress Injuries Social Support (OSISS) Project, and the establishment of Military Family Support Centres at all major CF bases to support military families.

The assessment of the DND and CF mental health initiatives is that the CF health care system is primarily focused on the treatment of stress related injuries not on the prevention of the same. In the pages of information available concerning CF Mental Health Programs, published in November 2005, only a short paragraph was dedicated to the subject of prevention:

Prevention

Through mission preparation and training, stress awareness education, unit cohesion and social support are the best ways to reduce the risk of mental health problems.⁷⁰

From an average service member's perspective it appears that the CF is now taking effective action and implementing the necessary resources and programs in its

⁶⁹ Details of the many changes relating to improved programs and benefits packages may be found on-line. The Government of Canada, through VAC and the new Charter have recognized their moral and financial responsibilities to those who serve the nation.
<http://www.vac-acc.gc.ca/clients/sub.cfm?source=forces/nvc/intro>; Internet; accessed 8 April 2006.

⁷⁰ Canadian Forces Mental Health Programs – Update; available from
http://www.forces.gc.ca/site/newsroom/view_news_e.asp?id=1804; Internet; accessed 20 November 2005.

medical services to provide effective care and treatment to those servicemen who are suffering from a stress related injury. The efficacy of these programs are not the subject of this thesis, therefore these programs will be accepted in good faith as meeting the care and treatment needs of the injured CF serviceman.

Summary of CF Stress Management and Mental Health Care

This review has demonstrated, first that the CF Health Care system is primarily focused on the treatment of mental illness, rather than on prevention. Secondly, the CF *Strengthening the Forces* is conducting valuable and worthwhile programs which should help the serviceman to mitigate the negative effects of stress, it is apparent that these programs do not meet all eight of the requirements of the Improved Mental Fitness Model and additionally that these programs lack any operational focus which could make them an effective part of preparing servicemen for the mental rigors of operations. Additionally, because these programs are not mandatory a large percentage of service members will probably never benefit from the programs. It would appear that the focus of these programs is on routine work situations and the “stressors” encountered in the office and not on the “combat stressors” discussed in Chapter 2.

The fourth and final chapter will conduct a brief discussion of some of the cultural elements of the CF examining their impact on the mental well-being and fitness of the serviceman. Finally, a conclusion will be provided to summarize this thesis and provide some thoughts on the way ahead for the CF in the realm of improving mental fitness.

CHAPTER 4

CF INSTITUTIONS, CULTURE AND CONCLUDING COMMENTS

*Ethos is the heart of the military profession and operational effectiveness.*⁷¹

Introduction

Thus far, this thesis has focused primarily on the individual service member, examining the characteristics and factors that contribute to improved mental fitness, and in the previous chapter, specifically examining and analyzing the contributions and impacts of CF health promotion programs aimed at improving mental and physical health and well-being. Referring back to the Model of Improved Mental Fitness provided at Figure 8 it is apparent that the serviceman forms but one side of that triangle. The other two sides, the Institution and the Unit, are heavily dependent upon the factors, characteristics, principles and culture of the institution. These contributing factors must be resident and be effective in order to complete the model, which has as its goal Improved Mental Fitness which results in lower levels of CSR, PTSD, depression, burn-out, and suicide. These contributing factors will now be examined and the effectiveness of their contribution assessed.

As one of his objectives for CF Transformation, the Chief of Defence Staff has stated that CF culture must be clearly defined. It is understood that this specific project is still underway and that a CF culture manual is to be published in the future. Even

⁷¹ Excerpt from the Final Report of the Minister's monitoring Committee on Change in the Department of National Defence and the Canadian Forces. Department of National Defence, *Duty With Honour...*, 25.

without such a manual, it will still be a worthwhile endeavour to discuss the factors that could form part of an over-arching CF culture, within which the environmental sub-cultures can exist. These cultural factors and/or institutions themselves must be examined to determine their effectiveness.

CF Ethos

The CF military ethos has been stated and clearly explained in *Duty With Honour*. This manual, published in 2003, established the foundation for an over-arching CF culture. Its clear expression of Canadian values, and the CF military values of Duty, Loyalty, Integrity, and Courage combined with personal beliefs and expectations to form the living spirit of the CF ethos. This ethos leads to the goal of “Performing Duty With Honour” and is therefore also linked to the goal of providing effective operational forces.

Our servicemen must to be educated regarding the CF ethos, and as those beliefs and values of the institution are understood and internalized, the objective of increased affective commitment should occur. A high level of affective commitment should support increased hardiness. Increased hardiness is factor contributing to improved mental fitness. This statement of CF ethos provides a solid basis for the “Institution” as portrayed as one side of the triangle in the model of Improved Mental Fitness at Figure 8 in Chapter 2.

Leadership and Unit Cohesion

The CF has now stated the conceptual foundations of its leadership theory, which are contained in *Leadership in the Canadian Forces*, published in 2005. This manual provides the theoretical foundations necessary for a common understanding and approach

to leadership across all of the environments. The manual considers leadership from two perspectives: skills and techniques required for leading people, and secondly, for leading the institution. With a clear understanding of the importance of cohesion to unit effectiveness and to the mental well-being of serviceman, coupled with an effective and common leadership model and theory to follow, it is considered that the “Unit” side of the model of Improved Mental Fitness has the required leadership basis to function effectively.

This new leadership theory for the CF is another important and potentially unifying part of CF Culture. As the CF organizational structure and operations become more joint in nature, shared understandings of important unifying concepts such as ethos and leadership theory become important enablers. Effective leadership at the unit, which understands the importance of both the physical and mental aspects of fitness for the service member, will be an important element in the model.

CF Messes

The CF Mess system and traditions are perhaps one of the most challenging institutions for the non-military person to understand. In times of scarce financial resources it seems that public support of the Messes is always an area targeted for reductions. Fortunately, the senior leadership of the CF has resisted attempts to remove public funding for this institution which plays an important role in maintaining military culture. The positive aspects and effects of the messes need to be capitalized upon, while the negative aspects of the mess must be guarded against. The positive aspects of the mess, as an institution within CF culture, are: a source of social support for members of

the same rank groups, a venue for teaching/passing on the values of the CF and the environment (these sets of values, if different, must be complimentary), a venue for learning and passing on the traditions of units and branches of the service, and finally it allows for mentoring of junior members by more senior personnel. Negative activities that can occur in the Mess environment are: using the mess as a venue to avoid responsibilities and relationships (escapism), and alcohol abuse (a negative coping strategy). It is a leadership responsibility to ensure that the mess environment supports the positive aspects of this institution. The positive aspects, of this institution, are important contributors to the model of improved mental fitness.

Strong Environments

The new CF profession of arms manual, *Duty With Honour*, recognizes and accepts the importance of the separate environments within the CF maintaining strong identities and unique aspects of their cultures. Indeed, for joint operations and a joint CF culture to thrive there must be strong environments contributing effective operational forces to the force employing commands. The explanation of how the unique environmental traditions contribute to and strengthen the CF military ethos is explained here:

Environmental identities are further formed within the context of a unified and integrated force that socializes new members in the forces' training and educational establishments, and uses a common set of badges and symbols of rank to designate non-commissioned members and officers.

A wide range of customs and traditions associated with membership in the Canadian Forces, including brand and Environmental affiliations, form the distinguishing characteristics that bond its members together. These customs and traditions produce special social structures that contribute to a sense of organic unity and military identity. This is further reinforced by the Canadian military

ethos that provides members with a common understanding of the values that guide individual and collective action.⁷²

This concept of strong environments living within the CF culture supports the model by providing and fostering the sense of identity and belonging that the service member will have. A strong environment will strengthen its culture ensuring that its members are fully aware of the values and ethos of the organization. This in turn will strengthen commitment and job satisfaction which supports the model and the concept of improved mental fitness.

Operational Focus

The Chief of Defence Staff has repeatedly stated one of the key objectives of CF Transformation is to create a CF that is more operational focused in all of its activities. This objective is clearly defined in the “End State” paragraph of the CDS Planning Guidance document for CF Transformation:

End State. A CF that is strategically relevant, operational responsive and tactically decisive, supported by an effective, efficient and adaptable defence institution; capable of operating with a dynamic and evolving security spectrum.⁷³

The purpose of the CF is to provide the Government of Canada with effective operational forces. These forces will be used in the defence of Canada and employed in many situations at home and abroad which are deemed to be in the national interests of Canada. These forces must perform their duty with honour as explained in *Duty With Honour*. The model for Improved Mental Fitness, at Figure 8, has the objective of producing effective operational forces as one of its outputs; however, this objective must be achieved with lower levels of psychological injuries occurring.

⁷² DND, *Duty With Honour...*, 20.

⁷³ Department of National Defence, 1950-9 (CT) CDS Planning Guidance – CF Transformation, 18 October 2005, 2.

Physical Fitness

Physical fitness is supposedly already an integral part of CF culture; however, it is not approached with the same amount of vigour by the different environments. One could summarize from a heuristic judgment viewpoint that physical fitness is not considered to be of paramount importance to many in the CF. This view is supported by recent initiatives by the Chief of Defence Staff to raise the standards of the current CF EXPRESS physical fitness test and to put some additional force of regulation behind the requirement to complete and pass the fitness test. Currently, there are not any truly effective methods available to discipline those who do not recognize the importance of personal physical fitness and provide the incentives, positive or negative in nature, to encourage servicemen to achieve the objectives.

High standards of individual physical fitness are enablers for operations in the Three Block War battlespace. Additionally, pre-deployment training periods may be reduced if personnel are already physically fit. Furthermore, high standards of personal physical fitness, particularly in the area of aerobic capacity, are a contributor to improved mental fitness through its effectiveness in mitigating the negative effects of stress and perhaps certain other psychological benefits inherent in exercise. More emphasis should be given to personal physical fitness in the CF. The equipment and support personnel are there in the form of the many new gymnasiums and Canadian Forces Personnel Support Agency physical trainers. What are required is legitimate regulations and a leadership push to get personnel focused on this important enabler.

Concluding Comments

As the central theme of this thesis, the factors and characteristics which have been judged to contribute to or enable improved mental fitness have been presented, and discussed using the perspective of the current scientific research and findings. It is the finding of this thesis that the theories discussed, particularly the Transactional Model of Stress and Coping, and the research findings support the notion of being able to improve mental fitness and that this should lead to the desired goal of lowered levels of psychological injuries being experienced both on operations and in garrison settings. The eight factors, as depicted in Figure 7, could form the foundation for a mental fitness training program for the CF.

A very important aspect of this concept of mental fitness is contained in the Transactional Model of Stress and Coping. This theory with its cognitive processes provides the most important contribution to the concept of being able to improve mental fitness. It emphasizes a primary and secondary appraisal process of a potentially stressful event, and the classification of that event as either, harm or loss, threat, or challenge leads directly to the other characteristics of the Transactional Model. These are an enhanced capability to appraise potentially negative events as challenges rather than threats, thereby achieving better outcomes, and finally providing adaptive coping strategies for dealing with stressful situations that do occur. The Transactional Model provides the foundation for developing a concept for mental fitness that has cognitive processes as its key feature. Furthermore, adaptive coping strategies can be derived from

the Transactional Model and they could be taught to all CF members as a mandatory portion of a stress training program.

The service member and the concept of improved mental fitness was then nested into a larger model, as depicted at Figure 8, which demonstrated the linkages between the CF, as the “Institution”, the “Unit” (where the soldier, sailor or airman lives, works and fights), and the service member. In this model, physical fitness combined with mental fitness was shown to be the supporting pillars for the service member.

To achieve real progress on this issue, the CF should consider moving the prevention responsibilities for stress management and OSI preventions away from the medical community and assigning it to a military training organization. The attainment of improved mental fitness should be viewed as an objective that can be trained to, just as military skills are trained for and mastered. Programs such as those in use now with the British Army, and the US Army with its Battlemind program should be examined and their effectiveness and applicability to the CF analyzed.

The CF is cognizant of its care and treatment responsibilities for servicemen with psychological injuries. It is now the time to focus thought, research and resources towards the prevention of these injuries. The theories, concepts and ideas presented for consideration in this thesis have the potential to be melded together into a training program that can achieve improved mental fitness. Inserting a “mental fitness program” or an “operational stress inoculation training program”, which has cognitive

processes and factors at its core, directly into existing training modules should be developed and trialed.

These skills and coping strategies would be beneficial to the service member during all phases of training, from basic training at recruit school to deployment on operations with his or her unit. The creation and implementation of such a training program would be a positive step towards achieving the goal of lower levels of psychological injuries within the CF. It is clearly time to consider prevention and move towards the creation, trialing, and the implementation of such a training program that can lead to the goal of improved mental fitness.

Appendix 1

Recommendations for Command Level Actions For Enhancing Mental Preparedness and Well-being For Peacekeepers

This list of recommendations, taken from Thomas Britt's edited collection, *The Psychology of the Peacekeeper*, provides a very useful guide for commanders of actions that when taken will assist with the mental preparedness, and well-being of their soldiers both during the mission and afterwards. This list of recommendations provides an excellent summary of the findings of Britt's collection of insightful and useful articles and chapters.

In this author's professional assessment, these measures and actions are equally applicable to the full spectrum of operations, as explained by the Three Block War (3 BW) construct, as they are to 'traditional' peacekeeping. These measures should be considered for inclusion in every pre-deployment training programme. These recommendations are intended for leaders at every level: military commanders beginning at the company level, policymakers, and government, NATO and UN officials involved in planning and executing peacekeeping missions.

1. **Be Relevant.** Ensure that peacekeepers see the relevance of peacekeeping operations to their role as service members, knowing that participation in such operations will be rewarded in terms of their career path. Emphasize the need for military personnel to recognize the relevance of the full spectrum of military operations (3BW – combat, peacekeeping, humanitarian) to their role in the military, thereby creating a more differentiated conception of what it means to be a service member.

2. **Provide Meaning.** Promote positive attitudes toward peacekeeping operations by placing the operation in a meaningful context, describing the history of the conflict that led to the operation, and letting peacekeepers know how they will know when they have succeeded on the mission.

3. **Train.** Ensure adequate predeployment training for situations peacekeepers are likely to encounter when serving on an operation. This will create a strong sense of efficacy for peacekeepers as they enter the operation. If the guidelines for performance or Rules of Engagement (ROE) are likely to change, prepare soldiers for that eventuality, emphasizing flexibility. Retrain professional military personnel in combat tasks during the peacekeeping deployment to maintain their morale and readiness.

4. **Educate.** Ensure that peacekeepers have accurate knowledge of the groups involved in the peace accord. Broaden peacekeeper knowledge and interactions with local populations beyond conflict-based interactions with individuals antagonistic to the peacekeeping force.

5. **Moderate Stressors.** Although the stressors of deployment will never be eliminated, design interventions that can reduce the impact of stressors through providing clear information, justifiable compensation, opportunity for recreation, and appropriate mechanisms to process psychological reactions.

6. **Support Cultural Competency.** When the operation includes contact with peacekeepers from other nations, capitalize on the common military culture, take into account cultural differences in power distance and authoritarianism facilitate cultural communication through modeling, adaptability, and respect, and encourage the perception of superordinate goals.

7. **Appeal to Professionalism.** Emphasize that the values and professionalism espoused by the military are consistent across different types of missions. In preparing units for deployment, balance the needs of military personnel motivated by a strong combat identity with those motivated by humanitarian and adventure.

8. **Recognize the Impact of Organizational Decisions.** Acknowledge that decisions made at a political or strategic level can have psychological consequences for peacekeepers on the ground. Consider that the impact of decisions regarding such issues as ROE, timelines for disarmament, and relative deprivation can ultimately affect the adaptation, morale, and performance of peacekeepers.

9. Intervene Early. Provide early intervention with military personnel exposed to potentially traumatic events. Supplement clinical support of troops with command consultation.

10. Encourage Individual Coping Efforts. Support active coping, adaptive distraction, and social support. Provide alternative social environments that do not necessarily rely on alcohol to bring military personnel together. Contribute to the development of a coherent understanding of the mission and the individual's role in the mission in order to support an individual sense of coherence.⁷⁴

These recommendations provide a starting point for addressing the mental fitness requirements of the peacekeeper. These issues need to be considered when planning is being conducted for any 3BW operational deployment. The researchers, who contributed to this book, believe that if these recommendations are adopted and implemented, peacekeeper adaptation and performance will be enhanced.

During Op PALLADIUM Rotation II, 1998, the NATO SFOR mission to Bosnia, which I participated in as a Squadron Commander, many of these measures and programmes were implemented during the predeployment and employment phases.

⁷⁴ Thomas W. Britt and Amy B. Adler, *The Psychology of the Peacekeeper: Lessons from the Field* (Westport, Connecticut: Praeger, 2003), 314.

Appendix 2

GLOSSARY

Anxiety

- A generalized feeling of apprehension, fear, or tension that may be associated with a particular object or situation or may be free-floating not associated with anything specific.⁷⁵

Appraisal

- An action or an instance of assessing.⁷⁶

Cognition

- The mental acquisition of knowledge through thought, experience, and the senses.⁷⁷
- Cognitive Perspective: A perspective that emphasizes the role of mental processes that underlie behaviour.⁷⁸
- Cognitive Processes: Mental processes such as thinking, knowing, and problem solving, and remembering.⁷⁹

Combat Stress Reaction (CSR)

- CSR has come to encompass a number of older terms, including battle fatigue, battle shock, shell shock and combat exhaustion-the more general term neuropsychiatric casualty has been used in the past as well (World War II in particular). CSR refers to a number of reversible effects caused by the stresses associated with operations and can be the result of a critical incident or incidents. It usually involves temporary (although it can also be longer term) psychological injury that can render a soldier unable to function normally, to engage the enemy

⁷⁵ Wood, *The World of Psychology*..., 487.

⁷⁶ *The Canadian Oxford Dictionary*..., 60.

⁷⁷ *Ibid.*, 276..

⁷⁸ Wood, *The World of Psychology*, 490.

⁷⁹ *Ibid.*, 490.

or even to survive. Whereas the onus for stress management is on the individual, management of CSR is a leadership function.⁸⁰

Coping

- To make cognitive and behavioural efforts to manage psychological stress.⁸¹

Emotion

- A feeling state involving physiological arousal, a cognitive appraisal of the situation arousing the state, and an outward expression of the state.⁸²

Fear

- An unpleasant emotion caused by the threat of danger, pain, or harm.⁸³

Flexibility

- The ability to bend without breaking.⁸⁴

Locus of Control

- A concept used to explain how people account for what happens in their lives- people with an internal locus of control see themselves as primarily in control of their behaviour and its consequences; those with an external locus of control perceive what happens to be in the hands of fate, luck or chance.⁸⁵

Operational Stress Injury (OSI)

- This is neither a medical or legal term. Instead, it is a generic term (used by the CF) to identify any stress injury that develops from an operational deployment. Any number of stressors, including financial and family problems, can contribute to the overall stress experienced by the soldier while deployed operationally.⁸⁶

⁸⁰ DND, *ALLC Dispatches...*, 3.

⁸¹ Morris, *Psychology: An Introduction...*, 648.

⁸² Wood, *The World of Psychology...*, 493.

⁸³ *The Canadian Oxford Dictionary...*, 506.

⁸⁴ *Ibid...*, 530.

⁸⁵ Wood, *The World of Psychology...*, 497.

⁸⁶ DND, *ALLC Dispatches...*, 5.

Post-Traumatic Stress Disorder (PTSD)

- The development of characteristic symptoms following exposure to an extreme stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threats to one's physical integrity; or witnessing an event that involves death, injury, or a threat to the physical integrity of another person; or learning about unexpected or violent death, serious harm, or threat of death or injury experienced by a family member or other close associate. The person's response to the event must involve intense fear, helplessness, or horror. The characteristic symptoms resulting from the exposure to the extreme trauma include persistent re-experiencing of the traumatic event, persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness, and persistent symptoms of increased arousal.⁸⁷

Comments: Is there a relationship between CSR and PTSD?

- PTSD can result from inappropriate treatment of CSR, although this is not universal. At least one source has suggested that even with the proper treatment of CSR, a percentage of such cases have developed into PTSD. The bottom line is that the development of PTSD is not dependent on CSR. In fact, soldiers who develop PTSD may not have suffered from CSR or acute stress disorder at all.⁸⁸
- The Army Lessons Learned Centre, *DISPATCHES*, STRESS INJURY AND OPERATIONAL DEPLOYMENTS, Volume 10, Number One, February 2004, provides an excellent tactical leaders guide to OSI and the recognition, prevention and management of CSR.

Resiliency

- The tendency to return to a state.⁸⁹
- Resiliency. Resilience is commonly used in psychology and child development to describe the ability of people to cope with stress and catastrophe. It is also used to indicate a characteristic of resistance to future negative events. In this sense "resilience" corresponds to cumulative "protective factors" and is used in opposition to cumulative "risk factors". The phrase "risk and resilience" in this area of study is quite common.⁹⁰

⁸⁷ DND, *ALLC Dispatches...*, 4.

⁸⁸ *Ibid.*, 5.

⁸⁹ *The Canadian Oxford Dictionary...*, 1227.

⁹⁰ The Free Dictionary, <http://encyclopedia.thefreedictionary.com>; Internet; accessed 10 March

- Hardiness. A combination of three psychological qualities shared by people who can undergo high levels of stress yet remain healthy: 1. a sense of control over one's life, commitment to one's personal goals, and a tendency to view change as a challenge rather than as a threat.⁹¹

Stress

- A state of psychological tension or strain.⁹²
- Defining an adaptive process by which an individual interprets, consciously or unconsciously, a significant environmental event, either real or perceived, and reacts accordingly.⁹³
- Emotions and stress are products of cognition, that is, of the way a person appraises or construes his or her relationship with the environment.⁹⁴
- Psychological or physical strain or tension generated by physical, emotional, social, economic, or occupational circumstances, events, or experiences that are difficult to manage or endure.⁹⁵
- Stressor. Any event capable of producing physical or emotional distress.⁹⁶

Tension

- 1. the state of being tense. 2. mental or emotional strain. 3. a situation in which there is conflict or strain because of differing views, aims, or elements.⁹⁷

⁹¹ Wood, *The World of Psychology...*, 383.

⁹² Morris, *Psychology: An Introduction...*, 478.

⁹³ DND, *ALLC Dispatches...*, 3.

⁹⁴ Lazarus, *Fifty Years of the Research...*, 184.

⁹⁵ Andrew, M. Colman, *A Dictionary of Psychology* (Oxford: Oxford University Press, 2001) 711.

⁹⁶ Wood, *The World of Psychology...*, 505.

⁹⁷ *The Canadian Oxford Dictionary...*, 1494.

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