



# Post-traumatic Stress Disorder and the Mental Health of Military Personnel and Veterans

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# **CONTENTS**

1		INT	RODUCTION1	1
	1.1	Th	ne Human Cost of Military Operations1	1
	1.2	Tł	ne Social and Public Issue1	1
2		WH	AT IS POST-TRAUMATIC STRESS DISORDER?	2
	2.1	Na	ature of the Disorder and Diagnosis2	2
	2.2	Fr	rom "Shell Shock" to Post-traumatic Stress Disorder	1
	2.3	Po	ost-traumatic Stress Disorder Today	1
	2.4	Th	ne Causes of Post-traumatic Stress Disorder	5
	2.5	Th	ne Link Between Post-traumatic Stress Disorder and Suicide	3
	2		ne Prevalence of Post-traumatic Stress Disorder in ilitary Members and Veterans	7 7
3			ERATIONAL STRESS INJURIES IN NADIAN MILITARY MEMBERS AND VETERANS	7
	3.1	Fr	om Military Member to Veteran: The Division of Responsibilities	3
	3.2	O	perational Stress in Military Personnel	3
	3.3	Po	ost-operational Stress in Veterans	9
	3.4		ne Risks Associated with Operational Stress Injuries: rom Absenteeism to Suicide10	)
4		LOC	DKING TO THE FUTURE	I
	4.1	Sc	cope of the Problem11	I
	4.2	Th	ne Current Capacity of Veterans Affairs Canada11	I
	4.3	M	onitoring of Veterans 12	2
5		CON	NCLUSION	2

# POST-TRAUMATIC STRESS DISORDER AND THE MENTAL HEALTH OF MILITARY PERSONNEL AND VETERANS

# **1 INTRODUCTION**

#### 1.1 THE HUMAN COST OF MILITARY OPERATIONS

On 7 July 2011, after nine and a half years in Afghanistan, Canada officially terminated its military combat operations in that country. Approximately 1,000 members of the Canadian Forces (CF) will nevertheless remain there until 2014 to provide training support for Afghan security forces.

A total of approximately 30,000 Canadian service personnel were deployed to Afghanistan, which in terms of strength exceeds Canadian participation in the Korean War between 1950 and 1953, thereby making the deployment in Afghanistan the largest Canadian military operation since the Second World War. One hundred and fifty-eight soldiers and four civilians died, and by the end of 2010, a total of 1,859 military members had been wounded.<sup>1</sup>

Canada's participation in the conflict in Afghanistan was at the centre of political debate over the redefinition of Canada's role in the world after the events of 11 September 2001. The debate absorbed both houses of Parliament and received sustained media coverage. The human face of the Afghanistan mission frequently showed itself in the tragic experiences of some representatives of this new generation of military personnel, who sometimes paid with their mental health for their service in the war.

The potential psychological after-effects of involvement in military operations are usually described by the medical term "post-traumatic stress disorder" (PTSD), or the military and police term "operational stress injury." These after-effects are more difficult to anticipate than physical injuries because they are less visible, reluctantly reported by those who suffer from them, and because the symptoms may only appear years after the traumatic event. Our understanding of the condition is therefore imperfect, and there are no certainties, except for the distress of those affected.

### 1.2 THE SOCIAL AND PUBLIC ISSUE

The proportion of serving members suffering from PTSD tends initially to be close to that of the general population, but it becomes significantly higher as exposure to combat or atrocities increases.

The proportion of veterans who suffer from PTSD is higher than the proportion of serving members who have the disorder. The highest proportion – 42.5% – is found among veterans receiving services from Veterans Affairs Canada (VAC) since the coming into force of its New Veterans Charter on 1 April 2006.

With the end of combat operations in Afghanistan, between 25,000 and 35,000 military members will have been released from the CF between 2011 and 2016. At least 2,750 of them can be expected to suffer from a severe form of PTSD, and at least 5,900 will suffer from a mental health problem diagnosed by a health professional.

To meet the anticipated needs of the thousands of service personnel who will become veterans over the coming years, the services introduced over the past 10 years will need to be made available on an even broader scale.

This is the context within which this paper addresses the following three main points. They concern:

- what can be affirmed with some scientific certitude about the diagnosis of PTSD itself;
- what we know about the prevalence of PTSD and other mental health problems in members of the CF and veterans; and
- what can be concluded with respect to future challenges.

# 2 WHAT IS POST-TRAUMATIC STRESS DISORDER?

#### 2.1 NATURE OF THE DISORDER AND DIAGNOSIS

The diagnosis of PTSD is becoming well established in the psychiatric community, leading to the standardization of diagnostic criteria.

In North America today, a diagnosis of PTSD is normally based on the criteria established by the American Psychiatric Association (APA) in its *Diagnostic and Statistical Manual of Mental Disorders* (DSM).<sup>2</sup>

With the 2013 release of the fifth edition of the DSM (DSM-5), PTSD is no longer classified as an anxiety disorder, but rather as one of five "trauma- and stressor-related disorders."<sup>3</sup>

The diagnosis is based on eight criteria or groups of criteria:

- A. Exposure to actual or threatened death, serious injury, or sexual violence, either directly experiencing the traumatic event(s); witnessing, in person, the event(s) as the event(s) occur(s) to others; learning that the traumatic event(s) occurred to a close family member or close friend; or experiencing repeated or extreme exposure to aversive details of the traumatic event(s).
- B. Recurrent, involuntary and intrusive distressing memories; distressing dreams or flashbacks related to the traumatic event(s); or intense or prolonged psychological distress or marked physiological reactions to cues that recall the event(s).
- C. Efforts to avoid distressing memories, thoughts or situations that could serve as reminders of the traumatic event(s).

- D. Negative alterations in cognitions and mood as evidenced by two (or more) of the following:
  - a. inability to remember an important aspect of the traumatic event(s);
  - b. persistent and exaggerated negative beliefs or expectations about oneself, others or the world;
  - c. persistent, distorted cognitions about the cause or consequences of the traumatic event(s) that lead the individual to blame himself/herself or others;
  - d. persistent negative emotional state;
  - e. markedly diminished interest or participation in significant activities;
  - f. feelings of detachment or estrangement from others;
  - g. persistent inability to experience positive emotions.
- E. Marked alterations in arousal and reactivity as evidenced by at least two of the following symptoms:
  - a. irritable behaviour and angry outbursts (with little or no provocation) typically expressed as verbal or physical aggression toward people or objects;
  - b. reckless or self-destructive behaviour;
  - c. hypervigilance;
  - d. exaggerated startle response;
  - e. problems with concentration;
  - f. sleep disturbance.
- F. "Duration of the disturbance (Criteria B, C, D, and E) is more than 1 month."
- G. "The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning."
- H. "The disturbance is not attributable to the physiological effects of a substance ... or another medical condition."<sup>4</sup>

The diagnosis may also include dissociative symptoms (experiences of feeling detached from oneself or of being in a dream, or of unreality of surroundings).<sup>5</sup> One feature of the disorder that makes its consequences difficult to predict for both health professionals and policy makers is the fact that "there may be a delay of months, or even years, before criteria for the diagnosis are met."<sup>6</sup> If at least six months pass between the traumatic event and the onset of sufficient symptoms so that the full diagnostic criteria are met, the condition is diagnosed as "PTSD with delayed expression." Symptoms disappear within three months for half of adults, although some continue to experience symptoms over 50 years following the event. Symptoms may also worsen when the individual reaches an advanced age.<sup>7</sup>

While Canadian practitioners and researchers generally adhere to the APA's diagnostic criteria for PTSD, other countries rely on the definition from the World Health Organization's International Classification of Diseases:

a delayed or protracted response to a stressful event or situation (of either brief or long duration) of an exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone.<sup>8</sup>

#### 2.2 FROM "SHELL SHOCK" TO POST-TRAUMATIC STRESS DISORDER

During the First World War, the term "shell shock" was understood as a brain injury brought on by exposure to artillery barrages. When it was discovered that similar symptoms could be found in military personnel who were not exposed to barrages, physiological explanations were gradually abandoned for the general diagnosis of "war neurosis." In the first edition of the DSM in 1952, "war neurosis" became "gross stress reaction."

During the Second World War, the U.S. government instructed recruiting offices to screen out all those who were psychologically at risk. As a result, 1 million men were declared unfit for service. Even with that tight screening, about 10% of American troops in Europe were declared "psychiatric casualties."<sup>9</sup> In 1944, Americans reintroduced a program that had been used shortly after the First World War for treating psychiatric casualties on site, and the psychiatric casualty rate declined to 3%. This treatment program, known as the Salmon Program, was deemed so successful that it was put in place at the start of the Vietnam War, and it is credited for a relatively low rate of psychiatric casualties of 5% during the 1965–1967 period.

With the success of military treatment programs during the first years of the Vietnam War, "gross stress reaction" was not detected, and it was dropped from the second edition of the DSM (DSM-II), which appeared in 1968. Consequently, psychiatrists no longer had access to an official diagnosis. Nevertheless, they found themselves treating a high number of Vietnam veterans who seemed to suffer from a delayed onset of "war neurosis." These veterans were also having more trouble receiving treatment and benefits for service-related psychiatric conditions.

Public awareness was roused in 1971 by the story of a Vietnam War hero, Dwight Johnson, who was shot dead while attempting to hold up a liquor store at gunpoint barely a year after receiving the Medal of Honour. The event prompted Dr. C. F. Shatan, who had studied psychiatry at McGill University in Montréal, to coin the term, "post-Vietnam syndrome." Veterans' groups, with the support of psychiatrists, launched research projects to gather evidence in the hope that a new version of the "gross stress reaction" diagnosis would appear in the planned third edition of the DSM (DSM-III).

At the 1977 annual meeting of the APA, held in Toronto, a panel of experts examined a proposed diagnosis of "catastrophic stress disorder" which would include the subcategory of "post-combat stress reaction." In January 1978, a working group preparing DSM-III for publication changed the diagnosis to "post-traumatic stress disorder."<sup>10</sup>

### 2.3 POST-TRAUMATIC STRESS DISORDER TODAY

The term "post-traumatic stress disorder" was officially adopted by the APA in 1980 for DSM-III. Changes were made to the diagnosis criteria in the fourth edition (DSM-IV), most notably to specify that PTSD can apply to civilian populations.

According to DSM-5, individuals with PTSD have an 80% higher risk of having another mental disorder, including depression, anxiety, alcohol and/or drug abuse, and suicidal thoughts.<sup>11</sup> The co-occurrence of PTSD and major depression is well documented: a pre-existing major depression increases two- to threefold the risk of developing PTSD after exposure to a traumatic event, and PTSD increases by the same proportion the risk of having a first occurrence of major depression.<sup>12</sup> There is also a strong link between PTSD and other mental difficulties, notably anxiety and alcohol abuse.

Use of the term "disorder" was hotly debated in the lead-up to the release of DSM-5. The APA flatly rejected the arguments of military officials, who wished to see the term "disorder" replaced by "injury":

Certain military leaders, both active and retired, believe the word "disorder" makes many soldiers who are experiencing PTSD symptoms reluctant to ask for help. They have urged a change to rename the disorder posttraumatic stress injury, a description that they say is more in line with the language of troops and would reduce stigma.

But others believe it is the military environment that needs to change, not the name of the disorder, so that mental health care is more accessible and soldiers are encouraged to seek it in a timely fashion. Some attendees at the 2012 APA Annual Meeting, where this was discussed in a session, also questioned whether injury is too imprecise a word for a medical diagnosis.

In DSM-5, PTSD will continue to be identified as a disorder.<sup>13</sup>

In order to refer to "any persistent psychological difficulty resulting from operational duties," the Department of National Defence, Veterans Affairs Canada and the Royal Canadian Mounted Police use the expression "operational stress injury."<sup>14</sup>

### 2.4 THE CAUSES OF POST-TRAUMATIC STRESS DISORDER

Numerous scientific studies have attempted to identify factors to predict the onset of PTSD in military personnel. Study findings appear to be increasingly focussed on the intensity of exposure to combat as a key risk factor.<sup>15</sup> It is important to distinguish between exposure to combat and military deployment alone. A foreign deployment as part of military operations is not enough to increase the risk of developing PTSD; during these deployments, an individual must have been subjected to a traumatic event. Conversely, military personnel may have been subjected to a traumatic event without having been on a foreign deployment.

Apart from pre-existing mental health problems prior to the traumatic event, such as severe depression, the significance of other possible predisposing factors (sex, age, difficult childhood, rank, deployment, etc.) has not been clearly established.

The higher prevalence of PTSD in individuals who have left the armed forces could suggest that a number of them were hesitant to report symptoms while serving, or that some were given medical discharges, thereby excluding them from statistics on military personnel, while at the same time increasing prevalence in veterans.<sup>16</sup>

A link has been established between home-front stressors (death or illness in the family, birth of a child, relationship breakdown or financial difficulties) and the prevalence of other mental health problems.<sup>17</sup>

#### 2.5 THE LINK BETWEEN POST-TRAUMATIC STRESS DISORDER AND SUICIDE

While exposure to combat operations has been demonstrably linked to the risk of developing PTSD, the same cannot be said for PTSD and suicide risk;<sup>18</sup> the possibility of such a link remains controversial. According to DSM-5:

PTSD is associated with suicidal ideation and suicide attempts, and presence of the disorder may indicate which individuals with ideation eventually make a suicide plan or actually attempt suicide.<sup>19</sup>

The risk of suicide among military personnel and veterans appears more often to be the cumulative result of prior traumatic events (particularly childhood trauma and sexual assault) and the existence of a mental health disorder, such as depression, at the time the individual is exposed to traumatic events during military service.<sup>20</sup> In other words, although exposure to traumatic events during combat operations is sufficient to explain the appearance of PTSD, other predisposing factors are required to draw a link between PTSD developed during military service and suicide. The link therefore appears to be indirect. An individual who develops PTSD following exposure to a traumatic event during combat operations is at higher risk of having suicidal ideation if depression develops or if the person participates in, or is exposed to, combat operations once again.

#### 2.6 THE PREVALENCE OF POST-TRAUMATIC STRESS DISORDER IN MILITARY MEMBERS AND VETERANS

Two main methods are used by researchers to measure the prevalence – which means the total percentage of both new and existing cases – of PTSD: <sup>21</sup>

- measurement of the presence of symptoms in the individual *at the time of data collection* (i.e., "current prevalence"); and
- measurement of the presence of symptoms *at any point in a person's life* (i.e., "lifetime prevalence").

Lifetime prevalence tends to be two to four times higher than current prevalence. According to DSM-5, the estimated lifetime prevalence of PTSD in the U.S. is 8.7%, and the current prevalence is 3.5%. Outside North America, the current prevalence is much lower, ranging from 0.5% to 1%.<sup>22</sup> An analysis of 29 scientific studies of American or British military personnel deployed in Afghanistan, Iraq or both revealed a current prevalence in most of the studies of between 5% and 20%. Variations are due mostly to differences in the scales used to determine whether symptoms were severe enough to warrant a PTSD diagnosis.<sup>23</sup>

Various countries have shown an interest in the prevalence of PTSD among their military personnel and veterans. For comparison purposes, we will give the figures for three other countries before reviewing the situation in Canada.

#### 2.6.1 UNITED STATES

A study of U.S. military personnel deployed in Afghanistan in 2009 reports a current prevalence of 21% for "significant symptoms of mental health problems."<sup>24</sup>

Studies of PTSD in American veterans from all conflicts since the Vietnam War report a lifetime prevalence that varies between 6% and 31%, with current prevalence varying from 2% to 17%.<sup>25</sup>

A U.S. study on the war in Afghanistan from 2001 to 2004 reported a current prevalence of 11.5% when the presence of symptoms of any kind is taken into account, or 6.2% if "serious" symptoms alone are factored in. PTSD was diagnosed for 27% of American veterans who made use of government health services.<sup>26</sup>

By applying the same research criteria to civilian populations, U.S. studies demonstrate that the prevalence, both current and lifetime, is two to four times higher among veterans who were deployed in combat situations than for the general population.

#### 2.6.2 AUSTRALIA

A study of Australian military personnel serving in 2010 reported a current prevalence of 8.3% for PTSD, compared to 5.2% for the general Australian population with similar demographic characteristics.<sup>27</sup> The same study reported that 9.5% of military personnel suffer from affective disorders, compared to 5.9% of the general population.

Australian studies of Vietnam War veterans report a lifetime prevalence of PTSD of 21%. For the approximately 1,800 Australian military personnel who took part in the Gulf War, current prevalence remained at 5.4% more than 10 years after the end of the conflict. No public data are available about the conflict in Afghanistan.<sup>28</sup>

#### 2.6.3 UNITED KINGDOM

Studies of British military personnel tend to demonstrate a lower current prevalence level that varies between 2.5% and 6%.<sup>29</sup> The most recent study reports a current prevalence of 4.2% in military personnel deployed in Afghanistan or Iraq.<sup>30</sup>

### 3 OPERATIONAL STRESS INJURIES IN CANADIAN MILITARY MEMBERS AND VETERANS

In Canada, health care available to veterans is organized in a way that makes a clear distinction between military members in service and veterans. In fact, because the military environment and services provided by the CF differ from the civilian life of veterans and the services provided by VAC, the findings of studies for one of these groups do not lend themselves to extrapolation to the other. Generally speaking, the prevalence of mental health disorders appears to be much higher among veterans than among serving members.

#### 3.1 FROM MILITARY MEMBER TO VETERAN: THE DIVISION OF RESPONSIBILITIES

When a military member is injured in service and the injury, whether physical or mental, leads to permanent disability, VAC pays a disability award in one or more instalments, the amount of which varies with the severity of the disability. The award may be paid to a member who is still in service or to a veteran. In most cases, the disability does not prevent the person from continuing a career within the CF.

If the disability is serious, however, the person must leave the CF on medical grounds. A decision concerning the necessity of a release is made only once the injury can be described as having "stabilized." As long as the person is a member of the military, the CF is responsible for health care and rehabilitation. Once the decision has been made to release the member for medical reasons, two or three years usually go by before the person is permanently no longer a member of the CF. Once this time period has elapsed, and not before, VAC may begin to provide rehabilitation programs and medical services.

#### 3.2 OPERATIONAL STRESS IN MILITARY PERSONNEL

A study published in 2012 of Canadian military personnel deployed to Kandahar province, Afghanistan, in 2010 revealed that 8.5% of respondents "exceeded civilian criteria for symptoms of acute traumatic stress, major depression, or generalized anxiety."<sup>31</sup> Using stricter criteria lowers this figure to 5.5%. As a comparison, the same strict criteria yielded a current prevalence of 21% in U.S. military personnel deployed to Afghanistan:

The difference could be accounted for by the United States' much longer deployment duration; shorter dwell time (time between deployments); and higher combat exposure, all of which have an association with mental health disorders during deployments.<sup>32</sup>

Another study, released in 2013, focussed on the 30,000 Canadian service personnel deployed to Afghanistan between 2001 and 2008. It reports that, over an eight-year period following their first deployment, about 20% were diagnosed with a mental health disorder attributable to their service in Afghanistan.<sup>33</sup> Since the rate tends to stabilize six years following the first deployment, it provides a good approximation of lifetime prevalence. Specifically for military personnel deployed to Kandahar, where risks were higher, prevalence over eight years rises to 28%.

While this prevalence of PTSD is higher than what was seen in Canadian service personnel before the conflict in Afghanistan, it is worth noting that the post-deployment prevalence of other mental health disorders is similar. A major scientific study based on a special sampling developed by Statistics Canada as part of the 2001 census focussed on 8,441 active service personnel.<sup>34</sup> For a specific diagnosis of PTSD, the study reports a current prevalence of 2.3%. If the whole range of mental health disorders is included, current prevalence rises to 14.9%, of which 6.9% is for major depression alone.

Military personnel are recruited on the basis of physical and mental health criteria that make this population one that is at a lower risk than the general population. On the other hand, military personnel are exposed to many more trauma risks than the general population. These two factors cancel each other out and the end result is that the prevalence of psychiatric disorders among military personnel tends to be comparable to that of the general population.

The rates increase if only those military personnel who have taken part in combat operations or witnessed atrocities are included. The 2.3% prevalence of PTSD doubles for the former group, and quadruples for the latter to almost 10%. For major depression, prevalence increases to 9.7% for people involved in combat operations, and to 12.5% for those who witnessed atrocities.<sup>35</sup>

The study also shows that almost 20% of Canadian military personnel who were in service in 2001 and who were involved in combat operations during their careers experienced consequences from an operational stress injury in the year 2001 alone (current prevalence). If only PTSD and major depression are considered, current prevalence is just under 15%.

As lifetime prevalence tends to be two to four times higher than current prevalence, these data would indicate that at least 30% of military personnel involved in combat operations risk suffering from PTSD or major depression during their lifetime.

Although these results were obtained before the conflict in Afghanistan, they are similar to those seen in military personnel who took part in combat operations there. This tends to confirm that exposure to combat is the key risk factor for military personnel and veterans developing a mental health disorder.

#### 3.3 POST-OPERATIONAL STRESS IN VETERANS

When a member is released from the CF, that member becomes a "veteran," and responsibility for health care to address service-related injuries or illnesses shifts to VAC, as do any related financial benefits. If Second World War and Korean War veterans are excluded, there were 592,000 veterans still alive in June 2010. Of these, 313,000 were former members of the Regular Force and 279,000 were former members of the Reserve Force; 91% of these veterans were not receiving any services from VAC.

In January 2011, VAC and the Department of National Defence published a major report on the physical and mental health and living conditions of Regular Force veterans released between 1 January 1998 and 31 December 2007.<sup>36</sup> This is the first study to focus on all veterans rather than exclusively on those receiving VAC services.

For the chronic symptoms of PTSD diagnosed by a health professional, the figures for current prevalence are as follows:

- for all veterans of the Regular Force released between 1998 and 2007: 11%;
- for veterans receiving disability benefits whose application was approved before 2006 (*Pension Act*): 24.5%; and

• for veterans receiving disability benefits whose application was approved after 2006 (New Veterans Charter): 42.5%.

If the most prevalent mental health disorders that the Government of Canada includes under the term "operational stress injuries" (PTSD, depression, anxiety, mania, dysthymia and bipolar disorder) are taken into account, the figures for current prevalence are the following:

- for all veterans of the Regular Force released between 1998 and 2007: 23.6%;
- for veterans receiving disability benefits whose application was approved before 2006 (*Pension Act*): 40.2%; and
- for veterans receiving disability benefits whose application was approved after 2006 (New Veterans Charter): 59.9%.

These rates are well above those found not only in studies of active military personnel but also in studies of the general population. They indicate that veterans are at much greater risk than active military personnel. They also highlight a higher prevalence among veterans receiving VAC benefits or services than among veterans in general.

#### 3.4 THE RISKS ASSOCIATED WITH OPERATIONAL STRESS INJURIES: FROM ABSENTEEISM TO SUICIDE

When the impacts of an operational stress injury are treated in a timely and appropriate manner, full remission may result in 30% to 50% of cases.<sup>37</sup> When the symptoms become chronic, there is a significant increase in the risk of a spiral in the severity of symptoms: absenteeism, unemployment, interpersonal and family problems, alcoholism and drug addiction, trouble with the law, homelessness and suicide.<sup>38</sup> As with mental health in general, there is often a feeling of shame that makes early intervention difficult and increases the risk of chronic symptoms.

A recent study provides more information about the reasons why veterans become homeless, shedding light on why they enter the spiral of risks mentioned above.<sup>39</sup> The scope of the problem is still difficult to determine because there are no procedures in place to monitor military personnel released from the CF, except for VAC clients.

The risk of suicide remains a major concern with respect to operational stress injuries. A recent study on the causes of death for former members of the CF provided initial estimates of numbers.<sup>40</sup> The following data are for those who enrolled in the Regular Force after 1972 and were released prior to 31 December 2007:

- men (total of 96,786): 2,620 had died, 696 (26.6%) by suicide; and
- women (a total of 15,439): 204 had died, 29 (14%) by suicide.

With respect to veterans, the percentage of deaths attributable to suicide is 45% higher than for the general population and currently serving members.<sup>41</sup>

An Australian study might provide some clues that could eventually lead to prevention measures. While the number of suicides is comparable to the rate in the Australian general population, military personnel are at double the risk of having suicidal ideation or preparing a suicidal plan than the comparable Australian population.<sup>42</sup> This could mean that the higher suicide rate among veterans than among military personnel is the result of suicidal ideation during military service not acted upon until after leaving the armed forces.

# **4 LOOKING TO THE FUTURE**

### 4.1 SCOPE OF THE PROBLEM

With the end of the combat mission in Afghanistan, the first challenge to be met regarding the mental health of military personnel and veterans will be an assessment of the scope of the problem to ensure that appropriate services are put in place.

VAC expects that more than 34,000 military members or veterans will receive a disability award between 2011 and 2016.<sup>43</sup> Many of these beneficiaries will not have a serious disability and will continue their careers within the CF. As mentioned earlier, it is also expected that between 25,000 and 35,000 members will be released from the CF during the same period, and that between 6,000 and 10,000 of these members will be released for medical reasons.

If we apply the lowest rates from recent Canadian studies on current prevalence,<sup>44</sup> in the year following their release, at least 5,900 (23.6%) of these new veterans will suffer from a mental health disorder and at least 2,750 (11%) will suffer from a severe form of PTSD. The rates for those who will suffer from these symptoms at some point in their life will be higher.

At the moment, almost three quarters of the veterans taking part in VAC rehabilitation programs following their medical release from the military are suffering from a mental health disorder.<sup>45</sup>

## 4.2 THE CURRENT CAPACITY OF VETERANS AFFAIRS CANADA

At the moment, approximately 4,000 veterans are enrolled in medical and psychosocial VAC rehabilitation programs. Approximately half of these veterans suffer from a service-related psychiatric disability and, as we mentioned earlier, over 70% have mental health needs.<sup>46</sup> Despite the considerable efforts made over the past 10 years – in particular the establishment of a network of specialized external clinics, as well as a group of affiliated professionals to whom veterans can be referred as required – the government is having trouble meeting the demand.

Under the most optimistic scenarios, these needs will double over the next five years. Furthermore, because health services are involved, coordination with provincial resources will be crucial to prepare health professionals to deal with this specific problem. VAC's capacity to meet the growing demand for services over the coming years will be a major challenge for the Government of Canada.

#### 4.3 MONITORING OF VETERANS

Most members who are released from the CF for medical reasons are released against their will. They would have preferred to continue their career in the CF.<sup>47</sup> The transition to civilian life is therefore a painful step for many. The upheavals connected with the transition, and the loss of a structured occupational and social environment, constitute an additional risk from the mental health standpoint.

As long as they remain within the CF, persons at risk receive rigorous medical monitoring. Once they become veterans, only those who decide to request VAC assistance are able to benefit from the services to which they are entitled.

As isolation and reluctance to seek assistance are common among those suffering from mental health disorders, it is possible that many veterans who need specialized services do not receive them. This increases health risks for them, because early intervention is the most important factor in healing. Moreover, in the case of PTSD, symptoms may appear only several years after the event that gave rise to the trauma, which is often many years after the person has left the CF.

Providing veterans whose mental health has been affected by their military service with access to the best care possible lies with the Government of Canada. With the expected growth in mental health needs over the coming years, it will be necessary for the government to ensure that it possesses the information it needs to make the best decisions.

# 5 CONCLUSION

Post-traumatic stress disorder and mental health disorders related to military service constitute a complex problem for which only limited scientific knowledge is available. There is nevertheless a gradual convergence on how to diagnose these conditions and consequently a clear improvement in the ability to pinpoint the extent of the problem. This makes it possible to discard extreme views of the problem, both that its prevalence is overwhelming and that it does not exist.

With due regard to all the necessary precautions regarding scientific certainty, the following statements about military personnel can be described as prudent and reasonable:

- Although military personnel are in better health than members of the general public, they experience greater exposure to traumatic events, meaning that the risk that military personnel will suffer mental health problems is comparable to the risk for the general population.
- This risk increases for military personnel deployed to combat zones. In the year following deployment, it can be expected that approximately 15% will suffer from a mental health disorder and that 5% will suffer from a severe form of PTSD.
- Approximately 30% of military personnel deployed to a combat zone will suffer from a mental health disorder during their lifetime, and approximately 10% will suffer from a severe form of PTSD. Repeated exposure to combat operations will cause this proportion to increase.

The risk for veterans, no matter what the reason for their release, increases significantly:

- It can be said that more than 20% of all veterans currently suffer from a mental health disorder, and that half of those veterans will have a severe form of PTSD.
- This proportion will be twice as high for veterans who are clients of VAC: each year, approximately 40% will suffer from a mental health disorder and, in half of the cases, from a severe form of PTSD.

Because approximately 30,000 Canadian service personnel were deployed to Afghanistan, and over 5,000 will be released each year over the next five years, demand for mental health services for veterans can be expected to increase significantly and test the capacity of the Government of Canada to assume its responsibility for providing the best possible health care for its veterans.

#### NOTES

- 1. National Defence, <u>Canadian Forces' Casualty Statistics (Afghanistan)</u>, 12 January 2011.
- 2. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, DSM-5*, American Psychiatric Publishing, 2013.
- 3. DSM-5, pp. 265–290.
- 4. Ibid., pp. 271–272 (numbering taken from DSM-5, although the wording is a summary of the criteria, except when quoted).
- 5. The distinction drawn by DSM-IV between "chronic" and "acute" PTSD was dropped from DSM-5.
- 6. DSM-5, p. 276.
- 7. Ibid., p. 277.
- 8. World Health Organization, *International Statistical Classification of Diseases and Related Health Problems*, 10<sup>th</sup> revision, Version for 2007, F43.1:

Typical features include episodes of repeated reliving of the trauma in intrusive memories ("flashbacks"), dreams or nightmares, occurring against the persisting background of a sense of "numbness" and emotional blunting, detachment from other people, unresponsiveness to surroundings, anhedonia, and avoidance of activities and situations reminiscent of the trauma. There is usually a state of autonomic hyperarousal with hypervigilance, an enhanced startle reaction, and insomnia. Anxiety and depression are commonly associated with the above symptoms and signs, and suicidal ideation is not infrequent. The onset follows the trauma with a latency period that may range from a few weeks to months. The course is fluctuating but recovery can be expected in the majority of cases. In a small proportion of cases the condition may follow a chronic course over many years, with eventual transition to an enduring personality change.

- 9. For an account of these developments since the First World War, see Wilbur J. Scott, "PTSD in DSM-II: A Case in the Politics of Diagnosis and Disease," *Social Problems*, Vol. 37, No. 3, August 1990.
- 10. Ibid., p. 307.

- 11. DSM-5, p. 280.
- 12. Naomi Breslau et al., "A Second Look at Comorbidity in Victims of Trauma: The Posttraumatic Stress Disorder–Major Depression Connection," *Biological Psychiatry*, Vol. 48, No. 9, November 2000.
- 13. American Psychiatric Association, "Posttraumatic Stress Disorder," Fact sheet.
- 14. Operational Stress Injury Social Support, "<u>The Official Definition of an OSI</u>," *The invisible wounds*.
- R. Ramchand et al., "Disparate Prevalence Estimates of PTSD Among Service Members Who Served in Iraq and Afghanistan: Possible Explanations," *Journal of Traumatic Stress*, Vol. 23, No. 1, February 2010. These findings were confirmed in a Canadian context by Bryan G. Garber et al., "<u>Mental Health of Canadian Forces Members While on</u> <u>Deployment to Afghanistan</u>," *Canadian Journal of Psychiatry*, Vol. 57, No. 12, December 2012.
- M. Jones et al., "What explains post-traumatic stress disorder (PTSD) in UK service personnel: deployment or something else?," *Psychological Medicine*, Vol. 43, 2013, p. 1710.
- 17. Garber et al. (2012), p. 739.
- Shay-Lee Belik et al., "Relations Between Traumatic Events and Suicide Attempts in Canadian Military Personnel," *Canadian Journal of Psychiatry*, Vol. 54, No. 2, February 2009.
- 19. DSM-5, p. 278.
- 20. Cynthia A. LeardMann et al., "Risk Factors Associated With Suicide in Current and Former US Military Personnel," *Journal of the American Medical Association*, 2013, Vol. 310, No. 5.
- 21. It is important to distinguish studies on the mental health of military members in service from those about the mental health of veterans. Because the military environment differs from the civilian life of veterans, the findings of studies of one group do not lend themselves to extrapolation to the other.
- 22. DSM-5, p. 276.
- 23. Ramchand et al. (2010).
- 24. Quoted in Garber et al. (2012), p. 737.
- 25. Lisa K. Richardson et al., "Prevalence Estimates of Combat-Related PTSD: A Critical Review," *Australian and New Zealand Journal of Psychiatry*, Vol. 44, No. 1, January 2010.
- Erin Bagalman, Suicide, PTSD, and Substance Use Among OEF/OIF Veterans Using VA Health Care: Facts and Figures, Congressional Research Service Report for Congress, 18 July 2011.
- 27. A.C. McFarlane et al., *Mental Health in the Australian Defence Force: 2010 ADF Mental Health and Wellbeing Study: Full report*, Canberra, Department of Defence, 2011, p. xix.
- 28. Richardson et al. (2010).
- 29. Ibid.
- 30. Jones et al. (2013), p. 1705.
- 31. Garber et al. (2012), p. 736.
- 32. Ibid., p. 741.

- David Boulos and Mark A. Zamorski, "<u>Deployment-related mental disorders among</u> <u>Canadian Forces personnel deployed in support of the mission in Afghanistan, 2001–</u> <u>2008</u>," *Canadian Medical Association Journal*, Vol. 185, No. 11, 6 August 2013.
- Jitender Sareen et al., "<u>Combat and Peacekeeping Operations in Relation to Prevalence</u> of Mental Disorders and Perceived Need for Mental Health Care: Findings from a Large <u>Representative Sample of Military Personnel</u>," *Archives of General Psychiatry*, Vol. 64, No. 7, 2007.
- 35. Ibid.
- 36. Veterans Affairs Canada and National Defence, <u>Survey on Transition to Civilian Life:</u> <u>Report on Regular Force Veterans</u>, January 2011.
- House of Commons, Standing Committee on Veterans Affairs [ACVA], <u>Evidence</u>, 3<sup>rd</sup> Session, 40<sup>th</sup> Parliament, 25 November 2010, 1530 (Don Richardson, Consultant Psychiatrist, Parkwood Operational Stress Injury Clinic).
- 38. ACVA, *Evidence*, 3<sup>rd</sup> Session, 40<sup>th</sup> Parliament, 16 November 2010, 1530 (Janice Burke, Director, Mental Health, Department of Veterans Affairs).
- 39. Susan L. Ray and Cheryl Forchuk, *The Experience of Homelessness among Canadian* Forces and Allied Forces Veterans, 2011.
- Statistics Canada, <u>Canadian Forces Cancer and Mortality Study: Causes of Death</u>, Catalogue no. 82-584-XWE, 31 May 2011. According to the description on the Statistics Canada website, this report:

examines causes of death in a cohort of individuals with a history of military service in Canada's Regular Force between 1972 and 2006. Separate analyses were carried out for the entire *Canadian Forces Cancer and Mortality Study* cohort and for those who were released from the Canadian Forces between 1972 and 2006.

- 41. Ibid. Calculation based on data in Table 4, p. 9.
- 42. McFarlane et al. (2011), p. xxi.
- 43. Veterans Affairs Canada, "<u>Regulatory Impact Analysis Statement</u>," *Regulations Amending the Canadian Forces Members and Veterans Re-establishment and Compensation Regulations*, 9 July 2011.
- 44. Veterans Affairs Canada and National Defence (2011), Table 12, p. 47.
- 45. Veterans Affairs Canada, "Presentation to the Standing Committee on Veterans Affairs (ACVA) on the New Veterans Charter," 13 May 2010.
- 46. ACVA, *Evidence*, 3<sup>rd</sup> Session, 40<sup>th</sup> Parliament, 16 November 2010, 1640 (Janice Burke, Director, Mental Health, Department of Veterans Affairs).
- 47. See the many comments expressing this preference made during testimony given at the meetings of the House of Commons Standing Committee on Veterans Affairs in connection with the review of the New Veterans Charter in the spring of 2010.