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Psychological Resilience:

A Brief Review of Definitions, and Key Theoretical, Conceptual, and Methodological Issues

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Defence R&D Canada
Technical Report
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Abstract

The ongoing need to design and implement interventions aimed at increasing psychological resilience among returning military members means that some of the key conceptual and methodological challenges in the field of psychological resilience have to be identified and addressed before investing in large-scale resilience interventions. The aim of this technical report was to review these conceptual and methodological issues and to outline ways of addressing them in both research and policy settings in military organizations. We started with an earlier literature review of psychological resilience contracted by Defence Research and Development Canada – Toronto (DRDC Toronto) in 2006 and conducted a focused literature review ourselves to cover the literature since 2006. Our focused review suggests that there are key theoretical, conceptual, and methodological issues in the field of psychological resilience which need to be addressed before large-scale resilience interventions can realize their full promise in military organizations. Future research at DRDC Toronto will aim to resolve some of the conceptual and methodological debates in the field of military psychological resilience in the context of ongoing resilience interventions in the Canadian Forces.

Résumé

Comme il faut sans cesse concevoir et effectuer des interventions visant à renforcer la résilience psychologique des militaires qui rentrent de mission, il s'avère nécessaire de recenser les principaux obstacles d'ordre conceptuel et méthodologique sur lesquels on bute dans le domaine de la résilience psychologique et de les surmonter avant d'investir dans des interventions d'envergure en matière de résilience. Le présent rapport technique avait pour objet d'examiner ces problèmes conceptuels et méthodologiques et d'énoncer des moyens de les régler dans des contextes de recherche et d'établissement des politiques au sein des organisations militaires. Nous avons pris comme point de départ un examen antérieur de la documentation sur la résilience psychologique commandé par contrat par Recherche et développement pour la défense Canada – Toronto (RDDC Toronto) en 2006, puis nous avons effectué nous-mêmes l'examen de la documentation publiée depuis 2006 sur ce sujet. Notre examen documentaire ciblé nous porte à penser qu'il est nécessaire de régler d'importants problèmes d'ordre théorique, conceptuel et méthodologique dans le domaine de la résilience psychologique pour que les interventions à grande échelle puissent être totalement efficaces au sein des organisations militaires. Dans l'avenir, RDDC Toronto orientera ses recherches de façon à clore certains débats d'ordre conceptuel et méthodologique dans le domaine de la résilience psychologique des militaires, dans le contexte des interventions effectuées actuellement en matière de résilience dans les Forces canadiennes.

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Executive summary

Psychological Resilience:: A Brief Review of Definitions, and Key Theoretical, Conceptual, and Methodological Issues

Deniz Fikretoglu; Donald R. McCreary; DRDC Toronto TR 2012-012; Defence R&D Canada – Toronto; December 2012.

Introduction or background: In the last decade, there has been an increased interest in the construct of psychological resilience among military researchers. This has been partly driven by two major wars, one in Iraq, and the other in Afghanistan, in which hundreds of thousands of military members from the United States, the United Kingdom, Canada, and other allied nations served, and continue to serve, often in multiple deployments. The ongoing need to design and implement interventions aimed at increasing psychological resilience among returning military members means that some of the key conceptual and methodological challenges in the field of psychological resilience have to be identified and addressed before investing in large-scale resilience interventions. The aim of this technical report was to review these conceptual and methodological issues and to outline ways of addressing them in both research and policy settings in military organizations.

Results: We started with an earlier literature review of psychological resilience contracted by Defence Research and Development Canada – Toronto (DRDC Toronto) in 2006 and conducted a focused literature review ourselves to cover the literature since 2006. Our results show that there are indeed a number of theoretical, conceptual, and methodological issues in the field. Among these: there is no agreed-upon definition of adversity and positive adaptation, two key terms that need to be clearly defined. Also, there is disagreement as to how protective and vulnerability factors should be defined and how their presence should be statistically detected in research studies.

Significance: Our focused review suggests that there are key theoretical, conceptual, and methodological issues in the field of psychological resilience which need to be addressed before large-scale resilience interventions can realize their full promise in military organizations. At the same time, current resilience interventions and the research testing the efficacy of these interventions can be used to start addressing some of the theoretical, conceptual and methodological issues.

Future plans: Future research at DRDC Toronto will aim to resolve some of the conceptual and methodological debates in the field of military psychological resilience in the context of ongoing resilience interventions in the Canadian Forces.

Sommaire

Psychological Resilience:: A Brief Review of Definitions, and Key Theoretical, Conceptual, and Methodological Issues

Deniz Fikretoglu; Donald R. McCreary; DRDC Toronto TR 2012-012; R & D pour la défense Canada – Toronto; novembre 2012.

Introduction ou contexte : Au cours de la dernière décennie, les chercheurs du domaine militaire ont manifesté un intérêt accru pour le concept de la résilience psychologique. Cet intérêt découle en partie de deux grandes guerres, l'une en Iraq, l'autre en Afghanistan, auxquelles des centaines de milliers de militaires des États-Unis, du Royaume-Uni, du Canada et d'autres pays alliés ont participé et participent toujours, souvent à de multiples reprises. Comme il faut sans cesse concevoir et effectuer des interventions visant à renforcer la résilience psychologique des militaires qui rentrent de mission, il s'avère nécessaire de recenser les principaux obstacles d'ordre conceptuel et méthodologique sur lesquels on bute dans le domaine de la résilience psychologique et de les surmonter avant d'investir dans des interventions d'envergure en matière de résilience. Le présent rapport technique avait pour objet d'examiner ces problèmes conceptuels et méthodologiques et d'énoncer des moyens de les régler dans des contextes de recherche et d'établissement des politiques au sein des organisations militaires.

Résultats : Nous avons pris comme point de départ un examen antérieur de la documentation sur la résilience psychologique commandé par contrat par Recherche et développement pour la défense Canada – Toronto (RDDC Toronto) en 2006, puis nous avons effectué nous-mêmes l'examen de la documentation publiée depuis 2006 sur ce sujet. Nos résultats démontrent qu'il y a en effet un certain nombre de problèmes d'ordre théorique, conceptuel et méthodologique dans le domaine. Nous avons remarqué, entre autres, qu'il n'existe aucune définition acceptée de deux termes clés, soit « adversité » et « adaptation positive ». Ces termes doivent être définis de façon claire. De plus, on ne s'entend pas sur la définition des facteurs de protection et de vulnérabilité et sur la manière de détecter leur présence de façon statistique dans les travaux de recherche.

Importance : Notre examen documentaire ciblé nous porte à penser qu'il est nécessaire de régler d'importants problèmes d'ordre théorique, conceptuel et méthodologique dans le domaine de la résilience psychologique pour que les interventions à grande échelle puissent être totalement efficaces au sein des organisations militaires. En même temps, on peut se fonder sur les interventions actuelles en matière de résilience et sur les recherches visant à en vérifier l'efficacité pour régler certains des problèmes d'ordre théorique, conceptuel et méthodologique.

Perspectives : Dans l'avenir, RDDC Toronto orientera ses recherches de façon à clore certains débats d'ordre conceptuel et méthodologique dans le domaine de la résilience psychologique des militaires, dans le contexte des interventions effectuées actuellement en matière de résilience dans les Forces canadiennes.

Table of contents

Abstract	i
Résumé	i
Executive summary	iii
Sommaire	iv
Table of contents	v
Introduction	7
Historical Context for the Emergence of the “Resilience” Construct.....	8
What is Resilience? Definitions, Key Constructs, and Conceptual Challenges	11
Definitions.....	11
Key Constructs, and Conceptual and Methodological Challenges	12
What Factors Undermine or Promote Resilience? Understanding Vulnerability and Protective Factors	18
Conclusions and Future Directions for Research	20
References	22

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Introduction

“If I had a formula for bypassing trouble, I would not pass it round. Trouble creates a capacity to handle it. I don't embrace trouble; that's as bad as treating it as an enemy. But I do say meet it as a friend, for you'll see a lot of it and had better be on speaking terms with it.”

~Oliver Wendell Holmes

Exposure to adversity is a universal human experience. Epidemiological research conducted over the past several decades has consistently shown that most people will experience at least one traumatic event, as defined by the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (American Psychiatric Association, 1994), over the course of their life (Breslau et al., 1998; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Similarly, research on the cumulative effects of exposure to multiple - non-traumatic - negative life events has shown that almost everyone will experience adversity in the form of negative life events during their lifetime (Holmes & Rahe, 1967). Military personnel, by virtue of their occupation, are not only at greater risk for experiencing negative and traumatic events, but in addition, are exposed to the types of events (e.g., combat, witnessing human suffering) that have been found to be the most traumatogenic (i.e., the ones most likely to lead to significant distress) (Prigerson, Maciejewski, & Rosenheck, 2001).

And yet, not everyone exposed to adversity, whether in the form of a single traumatic event, a series of (non-traumatic) negative life events, or both (which is often the case for military personnel), will experience debilitating psychological distress as a result. This finding is true in the civilian research literature (Breslau et al., 1998; Kessler et al., 1995) and is being replicated in the emerging military epidemiological literature as well. In the military context, whether the population studied is limited to those who have served in a specific conflict or mission (Hoge et al., 2004; Hotopf et al., 2006), or whether it includes all active military members at a given time-point (e.g., all current members of the Canadian Forces) (Fikretoglu, Brunet, Schmitz, Guay, & Pedlar, 2006; Sareen et al., 2008), the general finding is that not every military member exposed to a traumatic event will go on to develop stress-induced psychological problems such as posttraumatic stress disorder (PTSD) (American Psychiatric Association, 1994). In fact, when viewed in their totality, epidemiological studies in both civilian and military populations are unequivocal in showing that significant distress in the face of adversity is the exception rather than the rule; said differently, the ability to adapt well in the face of trauma, or psychological resilience, is more common than we might think (Bonanno, Westphal, & Mancini, 2011).

Despite these findings, as well as the proliferation of research on psychological resilience over the last two decades, the fact remains that there is still a small but significant number of individuals in military organizations who are unable to adapt successfully in the face of adversity. Research conducted, for example, with United States (U.S.) and the United Kingdom (U.K.) military members deployed to Iraq and Afghanistan clearly indicates that a significant percentage show signs of psychological distress upon returning home (Hotopf et al., 2006; Milliken, Auchterlonie, & Hoge, 2007). Furthermore, despite the current pressing need to identify and intervene with those struggling the most, military organizations are still limited in their ability to predict who will need the most help in the aftermath of a stressful deployment. For example, researchers have found increased risk for psychological problems among certain subgroups, such as reservists (Hotopf et al., 2006; Milliken et al., 2007). However, there are relatively few empirical studies to

predict who among the reservists (and active members) will experience significant psychological distress and develop mental health problems, and which psychological mechanisms confer that extra risk. As such, military interventions to foster psychological resilience, especially amongst those at the greatest risk of experiencing psychological distress, are hampered by not knowing exactly who the various target audiences for the intervention should be, as well as not understanding fully what kinds of interventions will work best for each of those audiences.

In this technical report, we argue that there are basic definitional and conceptual issues in the field of military psychological resilience that limit our ability to meaningfully predict who will do well and who will not (and the processes by which these differences emerge). This limited ability to conceptualize resilience in a meaningful way also makes it more difficult to design efficacious interventions that foster psychological well-being among those working in stressful military environments.

To that end, in this technical report, we focus on definitions, and key theoretical, conceptual, and methodological challenges in the field of military psychological resilience. The report presents various definitions of psychological resilience. Due to space limitations, only the most commonly adopted definitions are reviewed. Then, we review the major theoretical and conceptual challenges and controversies, especially those that are particularly relevant in the military setting, and propose solutions to resolve these controversies. Thus, our focus is on major theoretical issues that need to be resolved in order for the field of military psychological resilience to move forward, rather than detailed descriptions of various theories of resilience, which the readers can access from the original source references.

For this technical report, we use as our starting point a comprehensive literature review on psychological resilience that was completed in 2006 as part of a government contract for Defence Research and Development Canada – Toronto (DRDC Toronto) (Wald, Taylor, Asmundson, Jang, & Stapleton, 2006), supplemented by a more informal and targeted review of the literature since 2006. Given the rapidly expanding literature in the field of psychological resilience, when reviewing the literature from the past 5 years, we focus primarily on systematic, critical reviews that summarize the major definitional, theoretical, and methodological issues and controversies in the field. Due to space limitations, we do not provide a comprehensive summary and a critical review of the existing instruments used to measure psychological resilience; this can be found elsewhere in the literature (Wald et al., 2006). Instead, we review, where appropriate, the measurement implications of each definitional and conceptual debate that we introduce. To put military psychological resilience into historical context, we start with a brief history of the construct of psychological resilience in civilian child, adult and military populations, moving quickly into definitional issues that are of special relevance in the military.

Historical Context for the Emergence of the “Resilience” Construct

Resilience is a relatively new concept in the field of stress and coping. Historically, the focus in both the child and adult stress and coping literature has been on negative and pathological reactions to stress or trauma (Luthar, Cicchetti, & Becker, 2000; Rutter, 1985). The emergence of psychological resilience as a scientific construct, however, can be traced to studies of child and adult schizophrenia conducted in the early 1970s. Most notably, adult schizophrenia research of that era looked at adaptive outcomes and showed that patients with the most positive outcomes in adulthood had shown relative competence in important life domains prior to developing

schizophrenia (Zigler & Glick, 1986). Those with the most positive outcomes also had a number of premorbid characteristics which afforded them greater psychological resilience, although the term psychological resilience was not used at the time (Luthar et al., 2000). Similarly, in the child clinical psychology literature, studies investigating functioning in children of schizophrenic mothers found that many children thrived despite the significant adversity associated with having an ill parent (Garmezy & Streitman, 1974).

Emmy Werner was one of the first pioneers in the field to coin the term “resilience” when describing those well-adapted children (Werner, 1982). She developed a research program focusing on adaptive functioning among Hawaiian children, many of whom faced significant adversity because they grew up in an economically depressed area and had parents with significant psychological problems (e.g., alcoholism). Werner found that approximately one-third of these children did not exhibit any maladaptive outcomes despite the adversity they faced.

As outlined in recent critical reviews (Luthar, 1993; Luthar et al., 2000; Luthar, Sawyer, & Brown, 2006), the early work in both the child and adult psychological resilience literatures focused on protective factors that conferred an adaptive advantage to those showing positive outcomes in the face of adversity. This early work focused mostly on protective factors that resided *within* the person (e.g., personality characteristics such as autonomy or self-esteem) (Luthar et al., 2000). In subsequent years, this focus gave way to an increased appreciation of the important forces *outside* of the individual (i.e., environmental factors) that played just as important of a role in contributing to adaptive outcomes. More recently, psychological resilience research has moved beyond merely trying to identify both internal and external protective factors and has started looking at “*how* such factors may contribute to positive outcomes” (Luthar et al., 2000, p. 543; emphasis in original) (i.e., the *processes* or *mechanisms* by which psychological resilience unfolds).

In their 2006 review paper, Wald and colleagues observed that the emergence of psychological resilience as an important construct in military psychology research could be traced to the mid-to-late 1980s, approximately a decade after the emergence of the same construct in the civilian child and adult psychology literatures (Wald et al., 2006). Interestingly, the shifting of focus observed a decade earlier in civilian resilience research, from trying to identify protective factors within and outside of the individual, to understanding how the processes by which such protective factors confer an adaptive advantage, can also be detected in recent military psychological resilience research.

What may be the earliest study of psychological resilience conducted with a military sample was a case study of ten Vietnam veterans who did not develop PTSD (Hendin & Haas, 1984). As summarized by Wald et al. (2006), this case study identified a number of resilience factors that protected these veterans from developing PTSD, including “calmness under pressure, intellectual control, acceptance of fear, and a lack of excessively violent or guilt-arousing behaviours during combat” (p. 54). The majority of subsequent studies conducted over the next decade focused on and identified additional protective factors that reside within the individual, such as problem-focused coping (Solomon, Mikulincer, & Avitzur, 1988), adaptive attribution styles following combat/military service (Elder & Clipp, 1989; Mikulincer & Solomon, 1988), perceived beneficial effects of combat/military service (Aldwin, Levenson, & Spiro, 1994), and hardiness (Bartone, 1999; D. W. King, King, Foy, Keane, & Fairbank, 1999; L. A. King, King, Fairbank, Keane, & Adams, 1998; Taft, Stern, King, & King, 1999). These internal protective factors were

reported among diverse military populations, including veterans from World War II, the Korean War, the Vietnam War, the 1982 Lebanon War, and the first Persian Gulf War.

As the focus in military psychological resilience research shifted to protective factors that reside outside of the individual (i.e., environmental protective factors), a number of studies began identifying general social support and positive homecoming reception as variables that contribute to resilience. For instance, in a study of Israeli Prisoners of War (POWs) and combat veterans, greater social support at homecoming was found to predict lower levels of PTSD (Neria, Solomon, & Dekel, 1998). Similarly, in three separate studies using data from the U.S. National Vietnam Veterans Readjustment Survey (NVVRS), greater social support at homecoming was found to predict better outcomes, such as greater psychological well-being among veterans (D. W. King et al., 1999; L. A. King et al., 1998; Taft et al., 1999).

More recent studies in military psychological resilience research have started looking at the underlying mechanisms or processes that confer protection, rather than focusing solely on the intra- and extra-individual factors that lead to more adaptive outcomes. For instance, in a study among U.S. Army personnel deployed to Iraq, Schaubroeck and colleagues found that the cognitive process of positively appraising stressful events explained a considerable portion of the relationship between a set of protective personality traits collectively labeled positive psychological capital (i.e., self-efficacy, optimism, hope, ego-resilience) and overall psychological and physical well-being (Schaubroeck, Riolli, Peng, & Spain, 2011).

As outlined in recent critical reviews of the resilience construct (Cicchetti, 2010; Luthar, 1993; Luthar et al., 2000; Luthar et al., 2006; Rutter, 1985), understanding the mechanisms or processes by which certain variables such as optimism and hope confer a protective advantage in the face of adversity is important not just for theoretical, but for applied intervention and policy reasons, as well. To give an example, it has been shown recently that the process of perceiving negative and traumatic events as not threatening to the self may account for the relationship between optimism and more adaptive outcomes in soldiers returning from recent deployments (Schaubroeck et al., 2011); if replicated, this finding should inform both the refinement of our theoretical models and interventions for military psychological resilience. More specifically, our theoretical models should include threat appraisal processes as mediating factors between the personality trait of optimism and adaptive postdeployment outcomes. Similarly, our interventions should include anxiety reduction techniques that may directly or indirectly lower military members' threat appraisal during and after critical incidents.

It could be argued that the shift from identifying correlates of military psychological resilience to uncovering underlying protective processes and mechanisms that promote resilience in military personnel could not have come at a better time. For the last decade, the United States and its close allies have been involved in major combat and peacekeeping operations in multiple theatres. During these operations, deployments have tended to be long, frequent, and have relatively short dwell times in between. These deployment-related factors are associated with increased risk for adverse psychological reactions (Castro & McGurk, 2007; Reger, Gahm, Swanson, & Durma, 2009), which in turn have been identified as the number one reason for premature release from the military (Hoge et al., 2002) during an era where retaining highly trained military members has never been more important.

Thus, the need to design and rapidly implement validated psychological resilience interventions has never been greater. To meet this need, military organizations in different countries have mobilized to put evidence-based psychological resilience interventions into place. Early on, the

U.S. and the U.K. launched and tested the efficacy of the Battlemind and the Trauma Risk Management (TRiM) programs, respectively. More recently, the U.S. has expanded its psychological resilience training into the Comprehensive Soldier Fitness (CSF) program, perhaps the largest resilience intervention to date in any population or organization. Similarly, Canada has expanded its Third Location Decompression program and now offers psychological resilience training, under the rubric of the Road to Mental Readiness (R2MR) program. While initially rolled out to those undergoing predeployment training, the R2MR program is being expanded to encompass the entire military career cycle. Even with the development and implementation of these programs, questions remain as to whether or not we know enough about the processes and mechanisms underlying military psychological resilience to design and implement resilience interventions. As a recent commentary in the American Psychological Association's monthly magazine, *The Monitor*, states: "Critics aren't convinced that the research findings [in positive psychology] are strong enough to move so swiftly toward applications [such as the CSF]" (Azar, 2011, p. 32).

Since uncovering the underlying processes that confer a protective advantage to military members who have come back from a stressful deployment is important for theoretical and intervention/policy reasons, one must ask how military psychological resilience researchers can best go about accomplishing this goal. In the next section, we argue, as others have done elsewhere in civilian literature (Cicchetti, 2010; Luthar, 1993; Luthar et al., 2000; Luthar et al., 2006; Rutter, 1985), that an important first step in uncovering the processes underlying military psychological resilience is the need to clearly define and operationalize resilience and the various terms and constructs related to it. Thus, terms such as adversity, positive adaptation, protective and vulnerability factors all need to be clearly defined, with additional emphasis on the unique context of military organizations. As we show below, the plethora of differing definitions in the field of resilience in general (and more specifically in the field of military psychological resilience) can be traced back to disagreements as to how these key constructs need to be defined and what exactly they mean.

What is Resilience? Definitions, Key Constructs, and Conceptual Challenges

Definitions

"There is no universally accepted scientific definition of [resilience]" (Wald et al., 2006, p. 1). To give readers an appreciation of the wide range of definitions that do exist, and to serve as examples of how definitions of key constructs can lead to widely different views of what constitutes resilience (which we address in the next subsection), we provide a few examples of existing definitions below:

"The capacity to recover quickly from difficulties; toughness" (Oxford Dictionary Online, 2011, <http://oxforddictionaries.com/definition/resilience>).

"Resilience refers to a dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar et al., 2000, p. 543).

"Resilience is a dynamic process in which psychological, social, environmental and biological factors interact to enable an individual, at any stage of life, to develop, maintain or regain their

mental health despite exposure to adversity” (Preventing Violence Across the Lifespan Research Network, www.prevailresearch.ca, personal communication).

“Resilience embodies the personal qualities that enable one to thrive in the face of adversity” (Connor & Davidson, 2003, p. 76).

“Resilience is characterized by transient symptoms, minimal impairment, and a relatively stable trajectory of healthy functioning even soon after [a] PTE [potentially traumatic event]... recovery is distinguished from resilience by elevated symptoms and some functional impairment after the PTE, followed by a gradual return to normal levels of functioning” (Bonanno et al., 2011, pp. 514-515).

“Soldiers need resilience in order to maximize effectiveness in full spectrum operations. Resilience is the capacity to recover quickly, resist, and possibly even thrive in the face of traumatic events and adverse situations. Resilience may be achieved by the enhancement of, and interplay among, both individual and group level characteristics. Some of the individual influences include: (1) physical and medical fitness; (2) mental toughness and confidence; (3) adaptability; (4) realistic training and (5) effective utilization of peer and family networks. Some of the group characteristics include: (1) small group cohesion; (2) morale; (3) leadership; and (4) organizational support for members and their families” (Canadian Forces Army Terminology Panel)(Major J.M.L. Cyr, personal communication, June 17, 2009).

“Psychological resilience comprises the sum total of psychological processes that permit individuals to maintain or return to previous levels of well-being and functioning in response to adversity” (The Technical Cooperation Program (TTCP), Human Factors Technical Panel 13 (Psychological Health and Operational Effectiveness) (Zamorski, 2008).

Key Constructs, and Conceptual and Methodological Challenges

As is evident from the small sample of definitions provided above, there is considerable variation in the existing definitions of psychological resilience. The variations in definition can in part be traced to both uncertainty and disagreement as to what is meant by two key terms or constructs: adversity and positive adaptation.

Adversity. That psychological resilience is viewed as something that unfolds only within the context of adversity is obvious from the many existing definitions. Yet what constitutes *significant* adversity has been a source of contention. Some influential theories of psychological resilience have defined adversity as a single, short-lived traumatic event (Bonanno et al., 2011) whereas others have defined it as the aggregate of a series of multiple negative life events that are not necessarily traumatic in nature (Luthar et al., 2000). Others (such as the Canadian Forces definition above) have argued that adversity can be either or both.

Such differences in what is meant by adversity have in turn lead to questions about whether or not psychological resilience is an *outcome* of exposure to a specific, discrete, (traumatic) event or a *process* that unfolds over time in response to multiple negative (traumatic and/or non-traumatic) life events. Those in favor of defining adversity in terms of discrete, short-lived traumatic events – at least in adult populations, including military members - (Mancini & Bonanno, 2010) have argued that “because developmental resilience researchers usually study enduring stressors, such as socioeconomic disadvantage, parental mental illness, neglect, and maltreatment.” (pp. 259-

260), it makes sense for them to view resilience as a “*.process* [emphasis added] unfolding across chronological and developmental time” (p. 260). According to this view, “when considering the impact of acute stressors in adulthood, it makes sense to consider adaptation as an *outcome* [emphasis added] determined by a person’s reaction to a specific event, usually of brief duration” (p. 260). Thus, according to Mancini and Bonanno (2010), whether one views resilience as an outcome or a process is based on “the different questions being asked, populations being studied, and the duration of the stressors under study” (p. 260).

We find the argument provided by Mancini and Bonanno - that resilience in adults should be viewed as an outcome of exposure to a discrete traumatic event - problematic for adult psychological resilience research, and more specifically, highly problematic for military psychological resilience research. Focusing on the military (although the arguments we provide can also be applied to civilian adult populations), it should be noted that among military members exposed to *at least* one traumatic event in their lifetime, the vast majority report experiencing two or more (i.e., multiple) traumatic events (Fikretoglu, Brunet, Schmitz et al., 2006; Kessler et al., 1995); furthermore, research on recent U.S. military missions in Iraq and Afghanistan (Vogt et al., in press) suggests that, during a given specific deployment, many military members experience multiple traumatic events. Thus, a military member may be exposed to incoming enemy fire, see a unit member get killed, see other buddies get seriously injured, experience an ambush or an improvised explosive device (IED) attack, all in a single deployment lasting no more than 6-18 months (12-18 months among U.S. troops and about six months among Canadian troops). Just as important, in the military context, these deployment-related traumatic events all too often take place in the midst of multiple, concurrent, non-traumatic negative life events (e.g., difficult living and working conditions due extreme heat, lack of sleep and rest, unhygienic conditions, not finding the support expected from one’s unit in theater, finding out that family members back home are not coping well). That such non-traumatic stressors constitute additional adversity is now well-established (Fikretoglu, Brunet, Poundja, Guay, & Pedlar, 2006).

It is important to note that in the military context, not only do traumatic and negative life events frequently co-occur in the space of a single deployment, but military members now commonly deploy multiple times, often with a relatively short dwell time in between. These *multiple, interrelated* traumatic and non-traumatic negative life events occur for military members in the context of a decades-long career. The military career itself, apart from deployment-related stressors, puts strain on both the members and their families, due to repeated relocation and work-related travel (so-called perstempo) and other common stressors (e.g., long work hours). We argue, that in the context of such interrelated, multiple, traumatic and non-traumatic negative life events, and other occupational stressors, all unfolding over the course of a decades-long military career, studying resilience as an outcome in response to a single, traumatic events does not make sense and has limited utility for designing military intervention programs to foster greater psychological resilience.

An additional challenge in defining what constitutes adversity has to do with whether adversity should be defined purely in objective terms or whether subjective perceptions should also be taken into account. In their review of the resilience construct, Luthar and colleagues quote from Gordon and Song (1994) ... “that the meaning of a particular adverse event to the individual experiencing it can differ substantially from that of the resilience researcher... Some individuals may see themselves as being relatively well off, even though scientists may define their life circumstances as being highly stressful.” (Luthar et al., 2000, p. 550) Many military members, despite multiple deployments, exposure to traumatic and non-traumatic life events, and additional

stressors common to military careers, indeed see themselves as well off and fortunate; in fact, emerging literature on post-deployment reintegration suggests that seemingly stressful, and in fact, even highly traumatogenic deployments, such as the current Canadian mission in Afghanistan, may lead to a better appreciation of one's own life upon returning home (Blais, Thompson, & McCreary, 2009; Fikretoglu & McCreary, 2010). Thus, seemingly stressful deployments may be subjectively seen (at least after the fact) just as much as opportunities for growth as potential risks for distress.

Shifting opinions (driven by emerging new research) in the field regarding the extent to which subjective perceptions should define what constitutes adversity can also be seen in the American Psychiatric Association's Diagnostic and Statistical Manual (DSM) definition of a traumatic event (used for the purposes of diagnosing PTSD) (Friedman, Resick, Bryant, & Brewin, in press; O'Donnell, Creamer, Bryant, Schnyder, & Shalev, 2003). Whereas DSM-III did not require subjective fear at the time of the event, DSM-IV did (in the form of criterion A2: fear, helplessness, and horror experienced at the time of the event); and the upcoming DSM-V likely will not (Friedman et al., in press). One argument offered for the removal of the A2 criterion (peritraumatic subjective distress) is that a sizable number of trauma-exposed individuals, and more specifically, "trained military personnel may not experience fear, helplessness, or horror during or immediately following a trauma because of their training. They may only experience emotions after being removed from the war zone, which could be many months later" (p. 7).

In addition, those individuals who develop PTSD after experiencing a mild traumatic brain injury (mTBI), "may be unaware of their responses for weeks or months after the event" (p. 7). Given the prevalence of mTBIs in military members returning from recent operations in Iraq and Afghanistan (Tanielian & Jaycox, 2008), requiring the presence or absence of strong subjective reactions at the time of the event has implications for calculating the prevalence of adaptive and maladaptive (e.g., PTSD) outcomes in military psychological resilience research. To complicate matters, while empirical findings suggest that the presence of A2 is not a good predictor of who will develop PTSD (a maladaptive outcome), the absence of A2 is a good predictor of who will *not* develop PTSD (i.e., absence of PTSD, an adaptive outcome sometimes equated with resilience, especially in military populations) (Friedman et al., in press).

Thus, although empirical findings suggest that excluding subjective perceptions of fear at the time of a traumatic event as a criterion for diagnosis will only slightly increase prevalence rates of PTSD (Karam et al., 2010) (or, alternatively, slightly decrease prevalence rates of resilience), there may still be a place for including the assessment of A2 in military psychological resilience research, both to predict who will not develop PTSD, and to understand what underlying psychological mechanism or process accounts for how the absence of A2 symptoms leads to more adaptive outcomes. Therefore, for now, we advocate for continuing to assess for subjective reactions at the time of traumatic events and explicitly addressing what Matthew J. Friedman, the chair of the Trauma, PTSD, and Dissociation DSM-V work subgroup, called the "gnarly issue" of the extent to which subjective distress should define what constitutes adversity (McNamara, 2009). Stated more simply, at a minimum, military resilience researchers should justify the strategy used to operationalize adversity, explicitly stating their reasons for including/excluding subjective perceptions of distress at the time of a stressor or traumatic event, until the larger issue of how useful subjective perceptions are in predicting maladaptive and adaptive outcomes is fully resolved.

Positive Adaptation. Just as there is significant variation in how adversity is defined in military psychological resilience research, there is also significant variation in how positive adaptation is defined. There are at least five key underlying conceptual challenges that lead to such variation.

Extent of psychological distress. The first of these has to do with *how much* initial psychological distress (and associated functional impairment) can be expected or allowed in the presence of positive adaptation. According to some investigators (Mancini & Bonanno, 2010), individuals displaying resilience in the face of adversity experience only mild-to-moderate, subsyndromal distress that does not significantly interfere with their ability to continue functioning” (p. 264). According to the same view, there is a second group of individuals who, in the face of adversity, experience similar (albeit perhaps slightly higher) levels of moderate distress, but their distress *does* interfere with functioning. This group is said to be experiencing “recovery.” Thus, among those experiencing mild-to-moderate psychological distress, only those with no or minimal functional impairment can be said to exhibit positive adaptation, and hence, resilience. There are two obvious problems with this definition: one is the arbitrary cut-off between those displaying minimal and significant functional impairment; the second is that resilience is defined as an outcome without giving consideration to the processes that protected some individuals but not others, a point we challenged earlier in the section on conceptual challenges in defining adversity.

Transient vs. longer-lasting distress. According to other definitions, positive adaptation, and hence resilience, can occur following both subclinical (mild-to-moderate) and clinical, (moderate-to-severe) distress, suggesting that it is not so much the level of the initial distress and functional impairment per se, but the transient nature of such distress and impairment that distinguishes positive adaptation (see Wald et al., 2006, for examples of such definitions). Thus, positive adaptation occurs when individuals *quickly* overcome their distress and return to their normal level of functioning, regardless of the level of *initial* distress or functional impairment.

This, however, introduces a second conceptual challenge in that the cut-off between what may be considered temporary/transient versus more long-lasting/chronic is just as arbitrary as that suggested for distinguishing between non-significant and significant functional distress and impairment (i.e., resilience versus recovery). Furthermore, to add to the complexity of defining when distress and impairment go from being transient to chronic, some military members returning from a recent deployment may not initially display significant distress and impairment, and that it may be several months post-deployment before such problems become apparent (Milliken et al., 2007). These findings suggest that in the military context, definitions of positive adaptation may need to be even more complicated, allowing for an initial period of minimal distress/impairment (in theater and immediately post-deployment), followed by mild-to-moderate distress/impairment, which in turn may be followed by a return to minimal or no distress and healthy functioning among those displaying positive adaptation.

Domains of adaptation. A third conceptual challenge in defining positive adaptation is whether individuals should be expected to show it in *all* important life domains or whether it is possible to display positive adaptation in *some but not all* important life domains. As reviewed in the child psychological resilience literature (Luthar et al., 2000), it is not uncommon to see children displaying good adjustment in the face of adversity on the basis of positive adaptation in one domain (e.g., academic), but exhibiting less than optimal adjustment in other domains (e.g., social-emotional). Generally speaking, the common-sense approach to resolving this conceptual challenge has been to suggest that: (1) resilience is a multidomain construct, and that (2) while it makes sense to expect “uniformity across *theoretically similar* adjustment domains” (p.549,

emphasis added), it does not make sense to expect uniformity across dissimilar adjustment domains.

While unevenness or heterogeneity in functioning across different adjustment domains is widely accepted as a fact in child development and children's psychological resilience literature, the adult psychological resilience literature in general, and military psychological resilience literature in particular, have not yet fully and explicitly addressed this issue. In our own research program on post-deployment reintegration among members of the Canadian Forces, we have found significant variation in adjustment across important life domains (i.e., work, family, and personal) (Fikretoglu & McCreary, 2010), suggesting that military members may show differing levels of positive adaptation in different life domains and that it may not be realistic to expect positive adaptation in all life domains in the post-deployment period, especially following a stressful deployment.

If we accept that resilience in military populations may be just as multidimensional as resilience in at-risk child populations, the issue then becomes determining the implications of this for military resilience research and interventions. For military resilience research, the clearest implication is that more than one domain (such as mental health) needs to be assessed in monitoring positive adaptation in the military. For military resilience interventions, one issue that comes up is whether or not less than optimal functioning in one domain may undermine initial positive adaptation in another and whether or not this is something that needs to be addressed, especially in intervention programs aimed at increasing psychological resilience. For instance, if a military member returning from a stressful deployment displays resilience in the work domain, quickly reintegrating back into garrison work roles, and performing well on the job, but is struggling in personal relationships, it is likely that relationship difficulties may, over time, create work difficulties.

“Bouncing back”. A fourth conceptual challenge has to do with determining the exact level of functioning individuals *should* return to/achieve after the initial period of distress in order to be viewed as displaying positive adaptation and resilience. As can be seen from the few examples of definitions of resilience we provided earlier, the level of functioning individuals are expected to achieve after some initial distress (and perhaps some impairment) varies all the way from the “baseline” or “typical” level of functioning the individual displayed prior to being exposed to adversity (i.e., the most common approach to defining positive adaptation and psychological resilience), to “thriving”, and all the way to “posttraumatic growth.” As Wald et al. (2006) note, “thriving” and “posttraumatic growth” both reflect attainment of higher than pre-trauma levels of functioning. However, thriving is distinguished from posttraumatic growth in that it is tied to the notion that there should be “decreased reactivity and faster recovery from subsequent stressors” (Carver, 1998, p. 245). Posttraumatic growth, on the other hand, is tied to the notion that there should be adaptive schema reconstruction which leads to more adaptive beliefs about the self, others, and life in general (with no expectation that this in turn would affect response to subsequent stressors) (Linley & Joseph, 2004; Tedeschi & Calhoun, 2004). To complicate matters, some researchers seem to equate posttraumatic growth to positive adaptation and do not make an effort to distinguish it from psychological resilience. Similarly, in the psychological resilience field, some seem to suggest that positive adaptation (return to pre-trauma levels of functioning) and thriving (attaining higher than pretrauma levels of functioning) can be equally suggestive of psychological resilience (see for instance the definitions provided earlier by Connor & Davidson (2003) and the Canadian Forces Army Terminology panel (2009)).

Related to the problem of determining what level of functioning individuals are expected to achieve after initial distress, is the problem of *if* and *how* researchers should take into consideration individual differences in baseline functioning. For instance, if someone's baseline functioning was rather poor, improves somewhat after some distress, but still falls short of what might be considered good, can he or she be considered resilient? Similarly, if someone's baseline functioning was very good, and after some initial distress returns to a still relatively good (but not as good) of a level, can he or she be deemed resilient?

As with all the conceptual challenges we have outlined here, determining what we mean by "bouncing back" has implications for estimating the prevalence rate for positive adaptation (and resilience). The implications for resilience interventions are equally far-reaching: Assuming the processes associated with return to normal functioning may be different than those associated with thriving or posttraumatic growth, should the aim in multi-million dollar resilience intervention programs be to enable people to return to pre-trauma levels of functioning or something better (as in thriving)?

Measurement issues. A fifth challenge (but perhaps also an opportunity) is the way in which positive adaptation should be measured in adult psychological resilience research. As noted in existing reviews of the differences between resilience research on adults versus children, "in work with children, researchers usually consider behavioral competence, or the degree to which they meet society's expectations in stage salient tasks. [As a result], assessments [of positive adaptation] are based on reports from [others, including] their teachers, their classmates, and their parents about whether they are getting good grades, getting on with peers, and are generally well-behaved" (Luthar et al., 2006, p. 112). The focus in adult resilience research is on how the adult himself or herself feels (i.e., self-report of outcomes such as psychological distress and subjective well-being). And yet in the military context, one might question whether or not, for soldiers who are always operating as part of a group (e.g., unit, battalion), it makes sense to rely exclusively on *self-report* to assess positive adaptation. As an organization, is it only the person's own sense of how well he or she is doing in the aftermath of adversity, or is it additionally their unit's or battalion's or commander's sense that also defines psychological resilience that is operationally relevant? Thus, should one rely solely on *self-* or *multiple-informant* reports in assessing adaptive outcomes in military resilience research?

In conclusion, a careful review of the major conceptual and methodological challenges in defining positive adaptation reveals that there is significant disagreement as to what positive adaptation means and how it should be measured. Given the limited literature that explicitly addresses these definitional issues, we do not believe that there is sufficient empirical support to advocate for one definition over another. On the other hand, we do believe that it is helpful to distinguish positive adaptation from outcomes such as thriving and posttraumatic growth. We therefore encourage researchers to be explicit in justifying the level of initial and subsequent distress and impairment allowed in the presence of positive adaptation in their studies (on the basis of both theoretical and empirical reasons), and as well justifying the time-point at which disappearance of transient symptoms should be expected. Finally, we believe that in the military context, where soldiers are always operating as part of a larger unit, it may be more informative, especially in assessing functioning in the work domain, to take into consideration reports of others (in addition to those of self).

What Factors Undermine or Promote Resilience? Understanding Vulnerability and Protective Factors

In addition to the key conceptual and definitional challenges in describing what is meant by the key constructs of adversity and positive adaptation, there are a number of additional definitional challenges that have important methodological implications in military (and more generally, child and adult) psychological resilience research. If the goals of military psychological resilience research are: (1) to identify vulnerability and protective factors that undermine or promote psychological resilience for military members, (2) having identified these factors, to uncover the mechanisms or processes by which these “vulnerability” and “protective” factors exert their influence, and (3) having uncovered these key mechanisms and processes, to design interventions to promote those processes that lead to greater positive adaptation, then, how we define “vulnerability” and “protective” factors becomes critically important. As described in detail in key critical review papers in the field (Cicchetti, 2010; Luthar, 1993; Luthar et al., 2000; Luthar et al., 2006; Rutter, 1985; Wald et al., 2006), “in the literature on resilience, discussions on the notions of vulnerability and protection have reflected considerable confusion around definition, measurement, and interpretation of statistical findings” (Luthar et al., 2006, p. 106).

The key confusion in defining these key terms seems to derive from disagreement as to whether “protective” and “vulnerability” factors exert their influence through main effects or through interaction effects. In the main effect model, a protective factor, such as social support, would exert its effects (i.e., increasing the chances of positive adaptation), regardless of whether or not the population studied has been exposed to adversity. In the interaction effect model, a protective factor, such as social support would exert its effects *only* for those who have been exposed to adversity, but not for those who have not been exposed to adversity.

To avoid the confusion that has resulted from simultaneously using the terms “protective” and “vulnerability” factors to refer to *both* main effects and interactions, some have advocated using different terms to describe variables with main effects and interaction effects. For instance, Rutter (1985) has distinguished between *protective* factors that predispose towards positive adaptation only in the presence of adversity, and *positive experiences* that predispose towards positive adaptation in both the presence and absence of adversity. As reviewed in Wald et al. (2006), other investigators similarly advocate distinguishing between variables that predispose towards positive adaptation only in the presence of adversity (i.e., *protective* factors) and those that predispose towards positive adaptation regardless of whether the individual has been exposed to adversity or not (i.e., *resource* factors); and between factors that predispose towards negative adaptation only in the presence of adversity (i.e., *vulnerability* factors) versus those that promote towards negative adaptation regardless of presence/absence of adversity, (i.e., *risk* factors).

Interestingly, other prominent investigators argue that perhaps a better strategy might be to allow investigators to use the labels of *protective* and *vulnerability* factors to describe *both* main and interaction effects but to do this in a manner that still allows investigators to distinguish between which protective factors exert their influence through main effects and which do through interaction effects: According to Luthar (2000), the term *protective* could be used to describe main effects operating in both the presence and absence of adversity, and more differentiated terms could be used to describe the various types of interaction effects: e.g., “*protective-stabilizing* (when the attribute in question confers stability in competence despite increasing risk..)”, “*protective-enhancing* (when it allows..[engagement] with stress such that ..competence is augmented with increasing risk..)”, and “*protective but reactive* (when the attribute generally

confers advantages but less so when stress levels are high than low..)” (p. 547). Similarly, the term vulnerability would be used to describe main effects, and terms such as “vulnerable-*stable* and... vulnerable but *reactive*” would be used to describe more complicated interaction effects (p. 548).

In future military psychological resilience research, we believe that investigators should be explicit in how they define and operationalize protective and vulnerability factors (whether they view them as main effects, interaction effects, or both). Moreover, in the case of interaction effects, researcher should explain precisely the type of interaction they are hypothesizing, justifying their definitions and operationalizations based both on theory and/or existing empirical findings. Being precise in definitions of protective and vulnerability factors will be important not just for being able to make sense of disparate findings across studies in a field that is burgeoning, but also for identifying what may be common/unique to resilience interventions aimed *only* at those with the greatest adversity exposure, and interventions aimed at each and every military member, *regardless of* adversity exposure.

For example, a number of existing large-scale resilience interventions, including the U.S. Army’s CSF program and the Canadian Forces’ R2MR, currently target *every* member (Casey, 2011). Yet, it is not clear whether or not the assumption is that every military member will be exposed to similarly high levels of adversity and would equally benefit from being taught skills that promote the development and maintenance of protective mechanisms (i.e., promoting adaptive outcomes in high adversity exposure conditions, which is an interaction effects model). The competing assumption is that there will be variation in adversity levels among military members but despite this adversity everyone will benefit from being taught a given skill that promotes protective mechanisms (i.e., a main effects model). Similarly, a number of existing programs that target specific subgroups or subsets of military members, such as the U.S. Navy’s BOOT STRAP program for navy recruits at risk for depression (Williams et al., 2004), do not explicitly state whether the assumption is that the intervention would work only for those at high risk for depression, or whether the intervention may be equally successfully used for those at no or low risk. Being explicit in definitions and operationalizations of protective and vulnerability factors, and using applied interventions as natural experiments in which assumptions about whether certain variables exert their influence through either main effects or through interaction effects would move the field of military psychological resilience research forward, and as well allow us to identify resilience promoting skills that can be taught only to specific subsets of military members, and skills that should be taught to all military members.

Conclusions and Future Directions for Research

With the era of “*persistent conflict*”, with “protracted confrontation among state, non-state, and individual actors who are increasingly willing to use violence to accomplish their political and ideological objectives” (Casey, 2011, p.1, emphases in original) continuing for the foreseeable future, many military organizations have embraced resilience building and enhancing interventions and have devoted increased funding for psychological resilience research. From a practical perspective, this makes perfect sense: if such protracted conflict and engagement in multiple theaters of operation is putting strain on military members, and the goal is to keep those military members healthy and fit for duty, then it makes sense to put into place military resilience interventions.

The argument for resilience interventions is further strengthened when one considers the economic and operational costs of quickly recruiting and training new members to replace well-trained, seasoned members who might otherwise release from the military due to psychological problems. Moreover, in an organization where the day-to-day, operational and historical cultural norm is for commanders to not wait for high-risk actions to lead to negative outcomes but to “assess and mitigate” (p. 5) risk to prevent those negative outcomes (Cornum, Matthews, & Seligman, 2011), it makes sense to introduce resilience interventions to prevent psychological injuries from multiple, repeated, stressful deployments. It could also be argued that the implicit social contract that makes it obligatory for military organizations to care for those military members who are injured in the line of duty (i.e., duty to care), should also be extended to prevent injury in the line of duty, through fostering and enhancing psychological resilience. Along similar lines, military organizations have always emphasized the importance of training to enhance fitness and to prevent injury; historically, the focus has been on physical fitness. Now psychological resilience interventions expand that training to target important domains of functioning that had been relatively neglected until recently, including emotional, social, and family functioning.

And yet, before military psychological resilience interventions can fully deliver on their promises, important conceptual and methodological issues that have traditionally plagued resilience research and applications, must be addressed. In this report, we outlined key conceptual and methodological challenges in the field and have discussed how these challenges can have implications for real-life policy and intervention applications in the military context. Given the importance of these theoretical and methodological issues for making real-life applied policy and intervention decisions, we argue that the controversies and debates introduced in this report are not just academic exercises or semantic debates but involve important questions, answers to which have important implications for individual military members, their unit and family members, and their commanders. The questions of how we define and measure adversity and adaptive outcomes, how we define, measure, and test the effects of protective and vulnerability factors, how we use research findings to inform policy and interventions, and in turn, how we use interventions to test our theoretical models are thus not just of relevance to academics. They are equally important to the military commanders who have put their faith and support behind the notion that psychological resilience can enhance functioning and performance. That the debate as to how we can best go about addressing the challenges in military psychological resilience will be a lively and at times heated one is obvious from the attention and the criticism military psychological research and applications have drawn from academics and laypersons alike (Azar, 2011; Stix, 2011a, 2011b).

Despite the conceptual and methodological problems and challenges we outline in this report, and the debates as to how they can best be addressed and resolved, resilience remains a relevant and compelling concept for military institutions. This is evidenced by the burgeoning military psychological resilience research, and as well, by the expansion of various, large-scale military intervention programs aimed at increasing resilience. Given the timeless relevance of the “resilience” concept to military institutions, continued efforts are needed to conduct research that can inform interventions for building and maintaining psychological resilience in military organizations. At the same time, resilience interventions must be designed and implemented in such a way that interventions serve as opportunities to directly target thorny theoretical questions and test competing theoretical models, with the findings fuelling further theory development and refinement.

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The ongoing need to design and implement interventions aimed at increasing psychological resilience among returning military members means that some of the key conceptual and methodological challenges in the field of psychological resilience have to be identified and addressed before investing in large-scale resilience interventions. The aim of this technical report was to review these conceptual and methodological issues and to outline ways of addressing them in both research and policy settings in military organizations. We started with an earlier literature review of psychological resilience contracted by Defence Research and Development Canada – Toronto (DRDC Toronto) in 2006 and conducted a focused literature review ourselves to cover the literature since 2006. Our focused review suggests that there are key theoretical, conceptual, and methodological issues in the field of psychological resilience which need to be addressed before large-scale resilience interventions can realize their full promise in military organizations. Future research at DRDC Toronto will aim to resolve some of the conceptual and methodological debates in the field of military psychological resilience in the context of ongoing resilience interventions in the Canadian Forces.

Comme il faut sans **cesse concevoir** et effectuer des interventions visant à renforcer la résilience psychologique des militaires qui rentrent de mission, il s'avère nécessaire de recenser les principaux obstacles d'ordre conceptuel et méthodologique sur lesquels on bute dans le domaine de la résilience psychologique et de les surmonter avant d'investir dans des interventions d'envergure en matière de résilience. Le présent rapport technique avait pour objet d'examiner ces problèmes conceptuels et méthodologiques et d'énoncer des moyens de les régler dans des contextes de recherche et d'établissement des politiques au sein des organisations militaires. Nous avons pris comme point de départ un examen antérieur de la documentation sur la résilience psychologique commandé par contrat par Recherche et développement pour la défense Canada – Toronto (RDDC Toronto) en 2006, puis nous avons effectué nous-mêmes l'examen de la documentation publiée depuis 2006 sur ce sujet. Notre examen documentaire ciblé nous porte à penser qu'il est nécessaire de régler d'importants problèmes d'ordre théorique, conceptuel et méthodologique dans le domaine de la résilience psychologique pour que les interventions à grande échelle puissent être totalement efficaces au sein des organisations militaires. Dans l'avenir, RDDC Toronto orientera ses recherches de façon à clore certains débats d'ordre conceptuel et méthodologique dans le domaine de la résilience psychologique des militaires, dans le contexte des interventions effectuées actuellement en matière de résilience dans les Forces canadiennes.

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