

An Exploratory Study on Sniper Well-Being

*Report on the First Year of Sniper Well-Being Research
(FY 2008-2009)*

Author:

J. Peter Bradley
Department of Military Psychology and Leadership
Royal Military College of Canada

Contract Scientific Authority:

Don McCreary
Group Leader, Resilience Group
Defence R&D Canada – Toronto

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Principal Author

Original signed by J. Peter Bradley, PhD

J. Peter Bradley

Department of Military Leadership and Psychology, RMC

Approved by

Original signed by Don McCreary, PhD

Don McCreary, PhD

Contract Scientific Authority

Approved for release by

Original signed by Marko Jovanovic

Marko Jovanovic

for Chair, Knowledge and Information Management Committee

In conducting the research described in this report, the investigators adhered to the policies and procedures set out in the Tri-Council Policy Statement: Ethical conduct for research involving humans, National Council on Ethics in Human Research, Ottawa, 1998 as issued jointly by the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council of Canada and the Social Sciences and Humanities Research Council of Canada.

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Abstract

This paper reports on the research conducted in the first year of a three-year study on the psychological well-being of snipers. This research began with an interview-based study of 19 snipers who had served in Afghanistan and who were still serving as snipers in Canadian army units. The results of this study show that the snipers had elevated scores on a generalized measure of psychological stress, but their scores were not as high as those of a sample of non-snipers (from another study) who had served in Afghanistan. This finding suggests that the snipers were coping as well or better than regular soldiers. When asked about specific combat experiences, the differences were more dramatic, however. Snipers experienced more combat than the non-sniper group and expressed more concern over their combat experiences than the non-snipers. In contrast to these findings, the snipers also expressed high levels of satisfaction with their careers and stated that being a sniper had been a positive influence in their lives. Given the inconsistency of these findings, it is proposed that this research be expanded to include more standardized measures of possible outcomes and a larger sample during the second and third years of the project.

Résumé

Ce document contient les résultats des travaux de recherche menés au cours de la première année d'une étude trisannuelle portant sur le bien-être psychologique des tireurs d'élite. Ces travaux de recherche ont commencé par une série d'entrevues menées auprès de 19 tireurs d'élite qui avaient servi en Afghanistan et qui étaient toujours tireurs d'élite dans des unités de l'Armée canadienne. Les résultats démontrent que les tireurs d'élite ont obtenu une note élevée dans la mesure du stress psychologique de Kessler, mais leur note n'était pas aussi élevée que celle d'un échantillon de soldats autres que des tireurs d'élite (provenant d'une autre étude) qui avaient servi en Afghanistan. Cette constatation suggère que les tireurs d'élite s'adaptaient aussi bien ou même mieux que les soldats ordinaires. Lorsqu'on les a interrogés sur des expériences de combat particulières dans l'Échelle du stress durant les opérations, les différences étaient considérables. Les tireurs d'élite ont vécu plus d'expériences de combat et ils se sont dits plus préoccupés par ces dernières que les autres soldats. Paradoxalement, les tireurs d'élite se sont dits très satisfaits de leur carrière au cours des entrevues et ils ont affirmé que le fait d'être un tireur d'élite avait une influence positive sur leur vie. Étant donné les contradictions apparentes de ces conclusions, on propose d'étendre cette recherche de façon à inclure des mesures plus normalisées des résultats possibles et un plus grand échantillon pendant les deuxième et troisième années du projet.

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Executive summary

An Exploratory Study on Sniper Well-Being: Report on the First Year of Sniper Well-Being Research (FY 2008-2009)

J. Peter Bradley, DRDC Toronto CR 2009-196; Defence R&D Canada – Toronto; July 2010.

Background: During Fiscal Year (FY) 2008-2009, the Chief of Land Staff called for a study on the psychological well-being of snipers. Beyond suggestions in the popular press (e.g., Ficolanti, 2007a, 2007b) that some snipers might be suffering emotional trauma because of their combat experiences, little was known about the consequences of sniper employment. Given that Canada had been deploying snipers on operations for the previous 16 years, the Government of Canada and the Canadian Forces (CF) has a responsibility to understand the impact that sniper employment has on the health and well-being of soldiers employed in this role. As a result, a formal study of sniper well-being was commissioned.

Method: This research began in FY 2008-2009 with an interview-based study of 19 snipers who had served in Afghanistan and who were still serving as snipers in Canadian army units. The snipers also completed two scales: The Kessler Psychological Distress Scale, a measure of generalized stress, and the Stress on Operations Scale from the CF's Human Dimension in Operations Survey, which asks respondents to rate how often they had experienced 38 stressful combat events and to report how much concern each of these stressful situations has caused them.

Results: Results show that the snipers had elevated scores on the Kessler measure of psychological stress, but their scores were not as high as those from a sample of non-snipers (from another study) who had served in Afghanistan. This finding suggests that the snipers were coping as well or better than regular soldiers. When asked about specific combat experiences in the Stress on Operations Scale, the differences were dramatic. Snipers experienced more combat than the non-sniper group and expressed more concern over their combat experiences than the non-snipers. At the same time, the snipers expressed high levels of satisfaction with their careers in research interviews and stated that being a sniper had been a positive influence in their lives.

Significance: It is possible that snipers are coping well because of the sniper selection system that was established several years ago, but the sample in this study was too small and the number of constructs measured were too few to draw conclusive results from this initial study.

Future plans: This research will be expanded to include more standardized measures of possible outcomes and a larger sample during the second and third years of the project (FY 2009-2010 and FY 2010-2011). Future research will also sample former snipers, both those who are still in the CF and those who have left the CF.

Sommaire

An Exploratory Study on Sniper Well-Being: Report on the First Year of Sniper Well-Being Research (FY 2008-2009)

J Peter Bradley; DRDC Toronto CR 2009-196; R & D pour la défense Canada – Toronto; Juillet 2010.

Contexte: Au cours de l'année financière (AF) 2008-2009, le Chef d'état-major de l'Armée de terre a demandé une étude portant sur le bien-être psychologique des tireurs d'élite. Hors mis des suggestions dans la presse populaire (p. ex. Ficolanti, 2007a, 2007b) selon lesquelles certains tireurs d'élite pourraient souffrir d'un traumatisme émotionnel à cause de leurs expériences en situation de combat, on connaissait peu de choses sur les conséquences du travail de tireur d'élite. Étant donné que le Canada déployait des tireurs d'élite dans le cadre de ses opérations militaires depuis seize ans, le gouvernement du Canada et les Forces canadiennes (FC) ont la responsabilité de comprendre les répercussions qu'a le travail de tireur d'élite sur la santé et le bien-être des soldats employés dans ce rôle. On a donc demandé une étude formelle du bien-être des tireurs d'élite.

Méthode: Ces travaux de recherche ont commencé au cours de l'AF 2008-2009 par une série d'entrevues menées auprès de 19 tireurs d'élite qui avaient servi en Afghanistan et qui étaient toujours tireurs d'élite dans des unités de l'Armée canadienne. Les tireurs d'élite ont également répondu à deux questionnaires : celui de l'Échelle de détresse psychologique de Kessler, qui sert à mesurer le stress de façon générale, et celui de l'Échelle du stress durant les opérations de l'étude Dimension humaine des opérations des FC, dans lequel les répondants doivent indiquer à quelle fréquence ils se sont trouvés dans 38 événements de combat stressants et révéler à quel point chacune de ces situations stressantes les ont préoccupés.

Résultats: Les résultats démontrent que les tireurs d'élite ont obtenu une note élevée dans la mesure du stress psychologique de Kessler, mais leur note n'était pas aussi élevée que celle d'un échantillon de soldats autres que des tireurs d'élite (provenant d'une autre étude) qui avaient servi en Afghanistan. Cette constatation suggère que les tireurs d'élite s'adaptaient aussi bien ou même mieux que les soldats ordinaires. Lorsqu'on les a interrogés sur des expériences de combat particulières dans l'Échelle du stress durant les opérations, les différences étaient considérables. Les tireurs d'élite ont vécu plus d'expériences de combat et ils se sont dits plus préoccupés par ces dernières que les autres soldats. Du même coup, les tireurs d'élite se sont dits très satisfaits de leur carrière au cours des entrevues et ils ont affirmé que le fait d'être un tireur d'élite avait une influence positive sur leur vie.

Importance: Il est possible que les tireurs d'élite d'adaptent bien à leur rôle en raison du système de sélection des tireurs d'élite établi depuis plusieurs années, mais l'échantillon étudié dans le cadre de cette étude est trop petit et le nombre de « constructs » mesurés était trop faible pour que l'on puisse tirer des résultats concluants de cette étude initiale.

Recherches futures: Cette recherche sera étendue de façon à inclure des mesures plus normalisées des résultats possibles et un plus grand échantillon au cours des deuxième et

troisième années du projet (AF 2009-2010 et 2010-2011). Les recherches futures incluront aussi d'anciens tireurs d'élite qui sont toujours dans les FC ou qui les ont quittées.

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1 Research on the Psychological Aspects of Killing

Much has been written about the brutalizing effect of war on people. Some of these works focus on the trauma experienced by civilians caught up in the destructive web of war, while others deal with the soldiers who fight in war. This study examines the psychological impact of war on a particular type of soldier, the sniper. Many books and articles have been written about snipers, a good portion of which are personal accounts written by snipers themselves (Coughlin, Kuklman, & Davis, 2005; Culbertson, 2003; Henderson, 2005, 2000). Fewer in number, but equally important in understanding the place of the sniper in war, are scholarly works providing an historical perspective on the role of the sniper (Dockery, 2006; Pegler, 2004). Unfortunately, both categories focus mostly on sniper technology (weapons and equipment) and the types of operations snipers engage in. The present study is interested more in the personal consequences of sniper employment, particularly the social-emotional outcomes affecting the sniper as a result of his or her work.¹ To begin, the following paragraphs give a brief summary of research and other published accounts that describe how serving as a sniper impacts on the mental health and well-being of soldiers employed in that role.

By most accounts killing is a squalid business, so an important question is: what impact does this work have on those who do the killing? Some research-based works by Dyer (2005), Bourke (1999), Grossman (1995, 2004), MacNair (2002) and others suggest that many people who have killed in combat experience some level of remorse and then need to spend time rationalizing and accepting their actions. Whether this remorse necessarily leads to post-traumatic stress disorder or other serious mental health issues is not certain, however, because research has shown that not everyone who has killed in combat will suffer social-emotional consequences (Hendin & Haas, 1984a, 1984b). Some people cope better than others, perhaps because of certain personal characteristics like hardiness or resilience. It is also possible that more dire outcomes are experienced by soldiers engaged in close-quarter, face-to-face killing, leaving long-distance shooters like snipers, artillery men and women, and pilots less prone to suffer much remorse or guilt from their combat experiences.

Dave Grossman, a former lieutenant-colonel in the United States Army, has written extensively on the psychological dimensions of killing (Grossman, 1995, 2004) and has amassed considerable anecdotal evidence that many veterans become emotionally scarred as a result of killing in combat. (It should be pointed out that one aspect of Grossman's work, his contention that humans have a natural resistance to killing, has been criticized [Engen, 2008; Ghiglieri, 1999], but his work is still widely cited by scholars, perhaps because he is one of the few people who has written on this topic.) Based largely on interviews with US veterans of the Vietnam War and historical accounts from British scholars, Grossman's 1995 book examines the killing experiences of combat veterans in general, so there are only a few references to sniper experiences in this work. Although each soldier's experiences are unique to a certain degree, Grossman (1995) contends that many soldiers who have killed in combat go through up to three stages of reaction. First, there is a sense of satisfaction or euphoria much like that experienced by hunters. This stage is not experienced by everyone who has killed, but enough authors have reported on this sensation (MacNair, 2007; Nadelson, 1992; Solursh, 1988; Wikler, 1980) to

¹ Most snipers are men, but there have been female snipers. For example, the Russian army employed many female snipers during the Second World War.

suggest its validity. Some individuals bypass euphoria and go directly to remorse, the second stage in Grossman's model, and the one that can sometimes lead to mental health problems. Third is the stage of rationalization, in which the soldier tries to make sense of the killing. In some cases this stage can occupy much of the soldier's remaining life. Grossman contends that not everyone goes through all stages and that some individuals can become immobilized in a particular stage.

In contrast to Grossman's (1995) work, Rachel MacNair's (2002) research is more quantitative in nature, yet supports Grossman's findings. Using data collected from 1638 participants of the National Vietnam Veterans Readjustment Study (NVVRS), a government-sponsored survey of Vietnam veterans, she reanalysed these data to explore differences between survey respondents who had killed in combat and those who had not. (A note of caution should be introduced here. The original NVVRS research was based on retrospective responses collected in the 1980s, which for some respondents was more than a decade after their wartime experiences, so it is possible that the perceptions of these veterans had become biased during this interval.) With that said, MacNair found significant differences on post-traumatic stress disorder (PTSD), as measured by the Mississippi Scale for Combat Related PTSD (Keane, Caddell & Taylor, 1988). The average PTSD score for the 621 veterans who reported that they had killed, or thought they had killed someone in Vietnam, was 93.4, as compared to 71.9 for the 932 veterans who reported that they had not killed in combat. Scores were even higher for those who had killed civilians. The average PTSD score for the 272 veterans who reported that they were involved in killing civilians was 105.6, as compared to 79.4 for the 157 veterans who reported that they had only seen killings of civilians. The results are clear: those who killed had higher PTSD scores than those who hadn't killed and those who had killed non-combatants had higher scores yet. Of course, it is possible that unseen, extraneous variables might help explain such differences, so MacNair conducted further analyses to ensure that her results could not be explained by other variables such as the intensity of combat experienced by the respondents (soldiers in more intense combat would have greater chance to kill). With these additional analyses, she showed that elevated PTSD scores were correlated with killing in combat even when the intensity of combat was controlled, but she was unable to determine if the elevated PTSD scores were caused by seeing the results of the killing, by thinking about the killing, by the lack of social support and disapproval of those involved in killing, or simply because the respondents with higher scores had been involved in more killings than those with lower PTSD scores.

2 Sniper Research

While most of the published research relevant to the present study of Canadian Army snipers is historical (Bourke, 1999), anecdotal (Grossman, 1995), or based on archival data (MacNair, 2002), there is one published account of an interview-based study of snipers in combat. Bar and Ben-Ari (2005) interviewed 31 Israeli snipers, who had served in the Al-Aqsa Intifada, and found that their reactions to killing were complex. The authors noted that the snipers held conflicting attitudes vis-à-vis their enemy, dehumanizing them somewhat while simultaneously recognizing their humanity. Many of the snipers felt remorse and regret at having killed enemy combatants, but they also felt justified, particularly in those cases where their target was engaged in hostile action against Israeli forces. How the remorse or guilt influenced the snipers' well-being is uncertain, as the study did not explore mental health outcomes.

An important question is whether mental health issues are experienced more by soldiers engaged in close-quarter, face-to-face killing than soldiers who kill from long distances (like snipers and artillery personnel). Many of the personal accounts written by veteran snipers suggest that sniping is a personal business (see Coughlin et al., 2005, for an example of this genre), possibly because of the solitary, one-on-one nature of the business, the fact that snipers work independently, or perhaps because it is the sniper who chooses who dies and when. Unlike other soldiers who can deflect their responsibility for killing by rationalizing that they were led into battle by their officers, or had to kill in order to stay alive, snipers have more autonomy than conventional combat soldiers and often have discretion as to who they kill and who they don't. One might also question the personalizing aspect of sniping as the distances involved in sniping would be expected to create some psychological distance between shooter and target that could contribute to the dehumanization of the enemy. While it is true that snipers are usually some distance from their targets, enhancing the us-versus-them distinction, this is not always the case, particularly in the case of Canadian Army snipers operating in Afghanistan. Snipers can spend a great deal of time observing their targets close-up, through a scope, and this may permit them to humanize the enemy by seeing the enemy up close, as a real person, perhaps performing everyday, soldierly tasks much like those the sniper does himself. It is possible that this sort of contact with the enemy might work to reduce the psychological distance between sniper and target, and in some cases lead to the target being more humanized than dehumanized.

Dehumanizing the enemy is thought to make the business of killing easier. The more human the target is, the more likely that the sniper will have difficulty taking the shot, or if taking the shot is not a problem, perhaps the sniper will be more likely to suffer remorse later. For example, Coughlin, et al. (2005) reported that "The 'acquaintances' I saw drop in the scope of my rifle after I killed them will still come by for a visit for a few minutes in my dreams, but I hope not for much longer (p. 293)." Here is a similar account from Gibbore (2001):

That's the time I knew that I had de-evolved back from a man to some sort of animal ... a thing, I never missed one shot. Fourteen men lay dead ... I counted down each one as I pulled down on them. This is only one of the pictures my mind carries around and will carry around all the days of my life.

Is it possible that most soldiers will be able to cope with killing at the time and shortly thereafter, but will have more difficulty with this later in life? There is some research to support this hypothesis. For example, Sleek (1998) has reported cases of veterans who displayed little if any symptoms of PTSD for most of their lives and then started showing symptoms later on retirement. Unfortunately, it is not clear in Sleek's report whether the veterans had no symptoms, or the symptoms were simply undetected for many years. Sasser and Roberts (1990) quote a sniper in the Second World War, who had no difficulty at the time of killing, but

Later, much later, when times were normal again, all this bothered me. I woke up sometimes sweating from nightmares. But for that time, in that place, killing was an everyday fact of life (p. 37).

Unfortunately, this quote refers to the killing of a handful of German soldiers who were then scalped by the American snipers, so it is unclear if this example of post-combat trauma is due to the sniping, the scalping, or a combination of the two.

2.1 Canadian Sniper Selection Research

Several years ago, CF researchers developed a system of tests and measures to identify soldiers who possessed the characteristics necessary for sniper training and employment. This work began with an analysis of the army sniper role by Scholtz and Girard (2004) to determine the personality attributes (i.e., dispositions) needed for successful performance as a sniper. They asked 25 experienced snipers to complete several measures to determine which personality traits from the Big Five model of personality (Digman, 1990) are related to the tasks and duties required of snipers. It was concluded from this work that successful snipers would be those with the following personality profile: (a) low scores on Neuroticism (or strong scores in measures of Emotional Stability, the trait at the opposite end of the Neuroticism factor), (b) strong scores on Conscientiousness, and (c) lower scores in Tender Mindedness, a facet within the Agreeableness factor.

In a subsequent study, Girard and Scholtz (no date given) tracked the performance of 29 sniper applicants and found that their performance on basic sniper training was indeed correlated with their scores on the above-mentioned personality traits. Unfortunately, this sample of sniper applicants was too small to confirm the predictive validity of the personality measures, but the results were encouraging. It is also noteworthy that senior snipers have reported that the selection system correctly identifies those who will succeed in the sniper role. With that said, these positive impressions on the validity of the sniper selection system still need to be empirically validated once a sufficient number of applicants have worked their way through the selection-training cycle.

2.2 Research Aim

The present study represents the first year of a three-year project. As an exploratory study, the purpose of this research was to determine if there is sufficient evidence to support a more comprehensive examination of sniper well-being.

3 Methodology

In this study 19 snipers from across the Canadian Army were interviewed. During the interview the snipers also completed two scales described below.

3.1 Procedure

Commanding officers of Canada's regular force infantry battalions were notified by email of the study's aims and asked if members of their sniper sections could participate. Commanding officers then communicated with their sniper sections and the researcher was contacted by the senior snipers of the army units interested in participating. Prior to each interview, informed consent was obtained by advising the participants of the research aims and informing them of their rights to refuse to participate.

3.2 Ethics Review

This study was reviewed by the ethics review boards of Defence Research and Development Canada (DRDC) and the Royal Military College of Canada. The ethics review procedures of both institutions follow the guidelines of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (1998).

3.3 Subjects

The research subjects were chosen by unit master snipers. All 19 subjects had served as snipers in Afghanistan in the previous three years, with their deployments to that theatre lasting between 4 to 8 months ($M=6.6$). All of the snipers had been back in Canada for at least six months, an important consideration, as most operational stress injuries do not emerge in the six months immediately following redeployment (Zamorski, 2008). Each of Canada's regular force infantry regiments was represented in the sample, but some battalions were not included because they were away on operations or training at the time of the interviews. Most of the snipers had killed in combat. The snipers ranged in rank from private to sergeant. Three-quarters of the sample were junior soldiers who had been snipers for 3-5 years. Five of the subjects were more senior and had been snipers for 9 or 10 years.

3.4 Measures

During the interview, subjects were asked to complete two measures, the Kessler Psychological Distress Scale (Kessler, Andrews, Colpe, Hiripi, Mroczek, Normand, Walters, & Zaslavsky, 2002) and the Stress on Operations scale from the Human Dimension in Operations (HDO) Survey (Garabedian & Blanc, 2008).

The Kessler Psychological Distress Scale is a measure of nonspecific (i.e., generalized) psychological stress developed as a screening tool. There are two versions of the Kessler scale, one with 10-items (K10) and another with six-items (K6). The rationale behind screening tests of this sort is twofold: (a) they can be used in large samples to estimate mental illness in a population, and (b) they can be used in either a survey or interview format to identify personnel

who should be examined by a mental health professional for diagnosis. The K6 was derived from the original K10 items and used in the US National Health Interview Survey (Kessler, Barker, Colpe, Epstein, Gfroerer, Hiripi, Howes, Normand, Manderscheid, Walters, Zaslavsky, 2003). The K10 has been used in numerous studies, including Australian mental health surveys (Kessler, Andrews, Colpe, Hiripi, Mroczek, Normand, Walters, & Zaslavsky, 2002), and has also been administered to Canadian soldiers as part of the CF's research on the human dimensions of operations (Garabedian & Blanc, 2008). A Canadian study of the K6 and K10 determined that they are effective screening instruments (Cairney, Veldhuizen, Wade, Kurdyak & Streiner, 2007).

Items on the Kessler scales ask respondents to rate, using a 5-point response format, the extent to which they have experienced anxiety and depressive symptoms in the past month (1=none of the time, 2=a little of the time, 3=some of the time, 4=most of the time, 5=all of the time) (Andrews & Slade, 2001). Scores on the K10 can range from 10 to 50 and researchers have derived rules for predicting stress injury from these scores. For example, a report from Australia's Department of Health (2002) states that individuals scoring 30 or higher are considered to have a high risk of developing a stress injury, individuals with scores of 16 to 29 are thought to have a medium risk, and individuals with scores of 10 to 15 are at low-or-no risk. It should be noted that this simple scoring method of summing item responses is not discussed in academic studies on the K10, and there is very little mention in K10 studies of the three risk categories described in the Australian (2002) report above, which suggests that these categories should be used with great caution. A number of studies has examined alternative scoring procedures for diagnostic purposes, some of which are quite complex (Furukawa, Kessler, Slade, & Andrews, 2003; Kessler et al., 2002).

Participants in this study also completed the Stress on Operations Scale from the HDO Survey (Garabedian & Blanc, 2008). Many of the items on this scale are adapted from U.S. measures (Hoge, Castro, Messer, McGurk, Cotting, & Koffman, 2004). The items ask respondents to rate how often they had experienced 38 stressful combat events on their most recent deployment using a five-point response format (1=never, 2=one time, 3=two to four times, 4=five to nine times, 5=ten or more times). Respondents are also asked to report how much concern each of these stressful situations has caused them on a five-point scale (1=no trouble or concern, 2=little trouble or concern, 3=some trouble or concern, 4= much trouble or concern, 5=very much trouble or concern).

3.5 Interviews

The interviews were semi-structured, 90-120 minutes in duration, and focused on the following issues:

Adjustments on returning to Canada from the most recent deployment to Afghanistan.

Questions were posed on this theme to get a sense of how the snipers managed the transition from being in combat in Afghanistan, to arriving home to family and friends, to returning to life and work in Canada.

Attitudes towards seeking professional help for a stress injury. In the military there is a certain stigma attached to seeking help for a mental health issue (Britt, 2000). Because the sniper community is small, elite, and somewhat detached from the other subunits in an

infantry battalion, it is possible that snipers might be reluctant to seek help for mental health issues.

Reactions to killing in combat. Questions were asked on this theme to determine the extent to which the research subjects fit the Grossman (1995) three-stage model of euphoria-remorse-rationalization.

Attitudes towards the enemy. It is widely believed that soldiers generally dehumanize the enemy as a means of making killing easier. Consequently, questions were posed to determine how the research participants felt about the enemy as a way of exploring the dehumanization hypothesis.

Career satisfaction. Career satisfaction is an important outcome measure because satisfied personnel stay with the organization longer and are generally more productive than less satisfied individuals.

Family attitudes about the sniper's career. Other Canadian Forces research (Dursun, 2008) has shown that family support is an important contributor to career satisfaction.

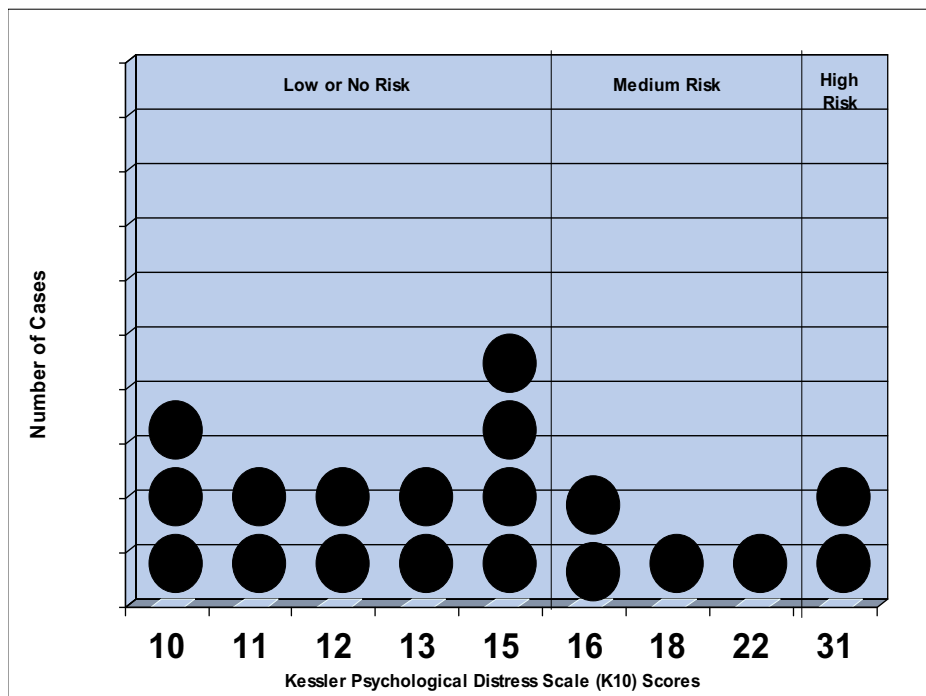
Overall impact of sniper employment. One of the aims of this research was to determine the extent to which sniper employment had a positive or negative impact on the individual snipers.

4 Questionnaire Results and Discussion

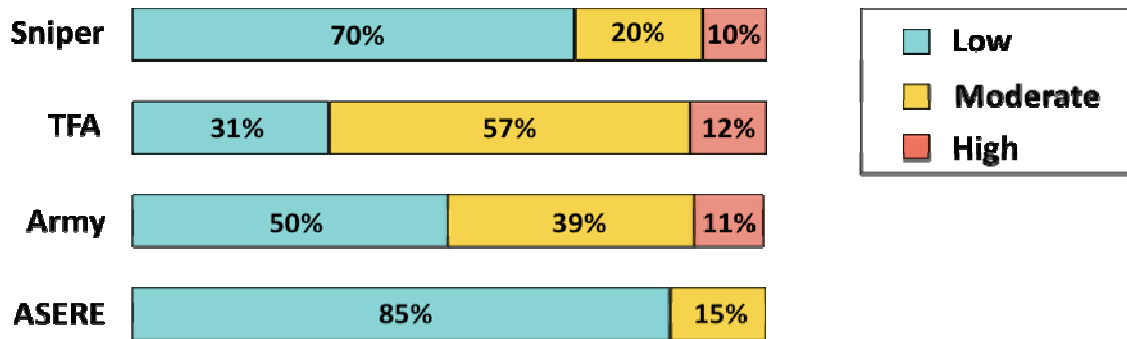
4.1 Psychological Well-Being

K10 results. The Kessler Psychological Distress Scale (K10) scores, depicted in Figure 1, show that 6 of the 19 snipers, one-third of the sample, fell in the medium to high risk categories for having a mental disorder determined by Australia's Department of Health (2002). Four snipers (20%) scored in the medium risk category and two of the snipers (10%) were at the low end of the high risk category. Figure 2 shows that the sniper sample had fewer respondents in the moderate and high risk categories than either the Task Forces Afghanistan sample or the Army norm sample reported by Garabedian and Blanc (2008).

4.2 Figure 1. Sniper K10 Scores



4.3 Figure 2. Comparison of Sniper K10 Risk Categories with Data From Other CF Samples



Note. Low risk = K10 scores of 10-15. Moderate risk = 16-29. High = 30-50.

Unfortunately, the average scores of the Canadian Task Force Afghanistan (TFA) sample and the Army norm sample are not available for comparison. Table 1 depicts the average K10 scores of the current sniper sample along with the average K10 scores obtained from Canadian Forces personnel enrolled on the Advanced Survival, Evasion, Resistance and Escape (ASERE) training course, an intensive course designed to prepare air crew in case they are taken hostage by hostile forces (see McCreary and Thompson [2005] for more details about the ASERE study). The data in Table 1 show that the average K10 score of the sniper sample was higher (15.6) than the average scores of the ASERE sample obtained on three administrations of the K10: pre-course (12.5), post-course (12.4), and follow-on administrations (12.6).

4.4 Table 1. Average K10 Scores of the Current Sniper Sample and Candidates on the ASERE Course

Average K10 Scores of the Current Sniper Sample and Candidates on the Advanced Survival, Evasion, Resistance and Escape (ASERE) Training Course

Sample	<i>M</i>	<i>SD</i>	<i>N</i>
Current Sniper Sample	15.6	6.23	19
ASERE Pre-Course Sample	12.5	2.46	52
ASERE Post-Course Sample	12.3	3.12	50
ASERE Follow-on Sample	12.6	2.89	25

Note. ASERE candidates completed the K10 three times: just prior to beginning the course, immediately on finishing the course, and six weeks after the course.

4.5 Table 2. Most Experienced Combat Stressors

Stress on operations. Two aspects of combat exposure are of interest in this study: (a) the amount of combat exposure the participants experienced, and (b) the concern this exposure has caused. Appendix 1 at the end of this paper shows the full responses on these items. Tables 2 and 3 include the major results from Appendix 1.

Amount of combat exposure. Table 2 lists the combat stressors (from Appendix 1) that the snipers reported experiencing most often during their most recent deployment to Afghanistan along with comparable data from TFA 2007 reported by Garabedian and Blanc (2008). Overall, the data in Table 2 show that the snipers in the present study had more exposure to combat stressors than the TFA sample. For example, all of the snipers (100%) reported working in areas that were mined or contained improvised explosive devices compared to 51% of the TFA sample.

Item	Stressor	Sniper (N=19)	TFA (N=667)
3.	Receiving small arms fire	100 %	
9.	Knowing someone who had been seriously injured/ killed	100 %	73 %
12.	Working in areas that were mined or had IEDs	100 %	51 %
19.	Clearing or searching homes or buildings	100 %	
24.	Receiving incoming artillery, rocket or mortar fire	100 %	71 %
2.	Seeing destroyed homes and villages	95 %	62 %
11.	Improvised IED/booby trap exploded near you	95 %	
16.	Shooting or directing fire at the enemy	94 %	
25.	Being directly responsible for the death on an enemy	84 %	
28.	Having a member of your own unit become a casualty	84 %	
1.	Being attacked or ambushed	79 %	52 %
17.	Calling in fire on the enemy	79 %	
4.	Seeing dead bodies or human remains	74 %	
8.	Seeing dead or seriously wounded Canadians	74 %	
13.	Having hostile reactions from local civilians	74 %	
34.	Successfully engaged the enemy	74%	

Note. IED = improvised explosive device. TFA = Task Force Afghanistan 2007. TFA data are taken from (Garabedian & Blanc, 2008).

4.6 Table 3. Most Troubling Combat Experiences

Impact of combat stressors. Table 3 lists the combat experiences (from Appendix 1) that the snipers found most troubling. Figure 3 provides more detailed information on the stressors listed in Table 3 including some comparisons with TFA 2007 where comparable data were reported by Garabedian and Blanc (2008). Where comparable data are available in Figure 3, it seems that the sniper sample generally found their combat experiences more troubling than TFA 2007 soldiers, perhaps because they experienced more of these stressors more frequently (see Table 2) than the TFA sample. These results contrast with those in Figure 2 showing that snipers scored lower on the K10 than TFA 2007 respondents. How can snipers have lower scores on a general measure of distress (i.e., the K10) than the TFA sample, but higher scores on concern with specific combat stressors? It is not apparent from the present study, but this is clearly a matter for further research.

Item	Experience
9.	Knowing someone seriously injured or killed
28.	Having a member of your own unit become a casualty
24.	Receiving incoming artillery, rocket or mortar fire
11.	Improvised IED or booby trap exploded near you
15.	Being in threatening situations when you were unable to respond because of ROEs
8.	Seeing dead or seriously wounded Canadians
23.	Seeing ill or injured people you were unable to help
12.	Working in areas that were mined or had IEDs
29.	Had a close call; dud landed near you
4.	Seeing dead bodies or human remains

4.7 Figure 3. Most Troubling Combat Stressors

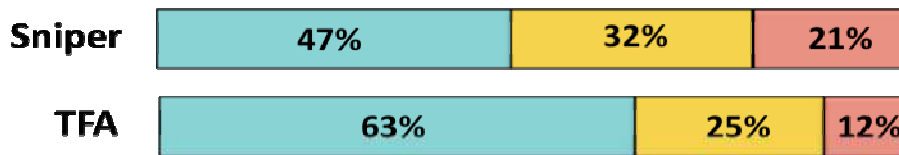
Sample sizes = sniper (N=19), TFA 2007 (N=667).

How much trouble or concern has this caused you?

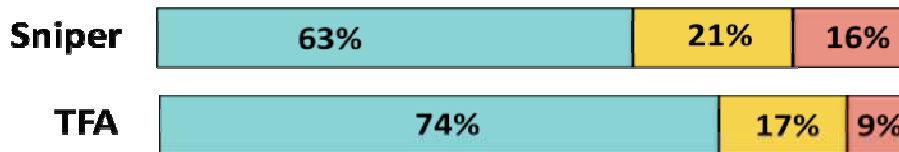


Note: “Very troubling” includes the two Appendix 1 response categories “much trouble” and “very much trouble”

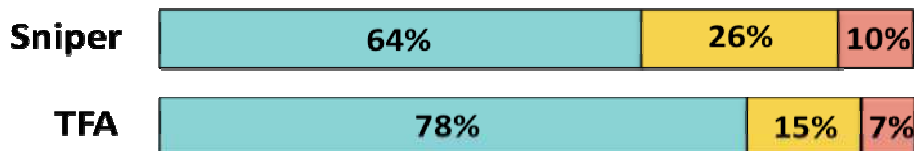
9. Knowing someone seriously injured or killed



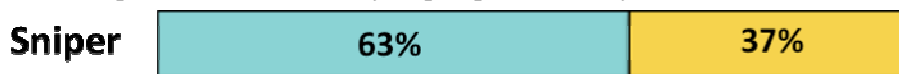
28. Having a member of your own unit become a casualty



24. Receiving incoming artillery, rocket or mortar fire

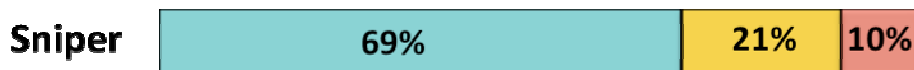


11. Improvised IED or booby trap exploded near you



TFA No Data Available

15. Being in threatening situations when you were unable to respond because of ROEs



TFA No Data Available

How much trouble or concern has this caused you?



8. Seeing dead or seriously wounded Canadians



23. Seeing ill or injured people you were unable to help



TFA No Data Available

12. Working in areas that were mined or had IEDs



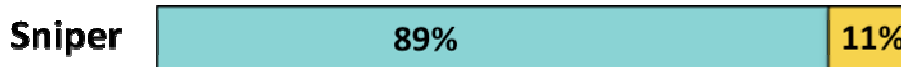
TFA No Data Available

29. Had a close call; dud landed near you



TFA No Data Available

4. Seeing dead bodies or human remains



TFA No Data Available

5 Interview Results and Discussion

5.1 Adjustment on Returning to Canada From the Most Recent Deployment

Two-thirds of the sample reported experiencing a period of adjustment with family and friends when they returned home from their most recent deployment to Afghanistan. Three snipers reported increases in alcohol intake when they returned home, but most said that their drinking patterns were unchanged from their pre-deployment drinking habits.

5.2 Seeking Professional Help for Stress

About a third of the sample stated that they would likely seek help if they had a stress injury. Another third said they would first approach their sniper peers for advice. Three snipers stated that they had already sought professional help. About two-thirds of those with an opinion on the matter stated they would prefer CF mental health professionals over civilian professionals. Personal attitudes of the snipers on seeking professional help for themselves differed somewhat from their opinions on what other snipers would think and do. When asked about the attitudes of their sniper peers on seeking professional help, about half the sample said it was unlikely that their sniper peers would seek professional help if they had a stress injury. Slightly less than a third said their peers would likely seek help, and two subjects suggested that most snipers would seek advice from their peers first. These differences between the snipers' personal attitudes on seeking professional help and their sense of the sniper norm on this subject are remarkable and worthy of further study. Social norms are usually widely held in cohesive groups like sniper sections, but the fact that a number of snipers in this study expressed positive attitudes about seeking professional help for mental health issues while at the same time believing that some of their peers don't feel the same way may indicate that this norm is not firmly fixed. In turn, this may suggest that recent attempts by the CF and DND to remove the stigma associated with stress injuries are having some effect. Future research should examine this issue further as a more robust measure of sniper attitudes on seeking professional help for mental health problems will help clarify the sniper norm on this matter and aid in understanding snipers' perspectives on seeking help.

5.3 Attitudes Towards the Enemy

When asked how they felt about the enemy, about one-third of the snipers expressed hatred or contempt for the enemy. Another third stated that they respected the enemy and believed them to be "smart." The remainder were indifferent or stated they did not think about the enemy. From these answers, it appears that there was some dehumanization of the enemy, but not a large amount. Nevertheless, dehumanization should always be monitored as it is one of the factors that can lead to atrocities on the battlefield (Kelman & Hamilton, 1989).

5.4 Reactions to Killing

Recall that Grossman (1995) found that many, but not all, veterans reported that they passed through three stages of reaction to killing in combat: initial euphoria, remorse, and then

rationalization. In the current sample of snipers, several reported feeling an adrenalin rush and one said it was a validating experience, but no one expressed any regrets about the killings they had participated in. A third of the sample stated that they had no feelings about the killing; they said it was just a job. Everyone stated that they felt justified in killing the enemy because of the threat the enemy posed to Canadian troops and Afghan civilians.

This response pattern contrasts with many works written on and by snipers that make reference to feelings of regret or guilt about killing. So, why would most of the 19 soldiers interviewed for this study express no regret over their actions? There are three possibilities: (a) They may have no regrets; (b) they may have some regrets, but do not want to express remorse for one reason or another; or (c) perhaps they have no regrets now, but may develop some later in life.

5.4.1 No Regrets

The simplest answer is that the snipers have no regrets and are coping well. This is possible in several ways. First, killing in combat may not be as traumatic as one might think. Humans have been killing one another in combat for millennia (Ghiglieri, 1999). Second, even if we assume that killing in combat is traumatic, not everyone suffers after experiencing trauma (Tedeschi & Calhoun, 1996). Snipers go through a rigorous selection system designed to identify those who have the traits needed to handle the demands of this role. If this selection system is effective, one would expect that those chosen to be snipers would have little difficulty with this line of work. Third, there is always a delay between any trauma and the reaction to the trauma, and sometimes the delay can be lengthy (MacNair, 2002; Herrmann & Eryavec, 1994).

5.4.2 Unexpressed Regrets

Another possibility is that some snipers are not coping so well, but are concealing any suffering they may be experiencing. But, why would they do this? Several reasons could explain this behaviour. First, it is possible that snipers have conflicting emotions about their work. For example, they could believe that they perform an important role in ensuring the security of their comrades and helping defeat the enemy, while at the same time they might believe that killing is wrong. In cases such as this, when people realize that a number of their beliefs are in conflict with each other, tension follows, and the individual strives to reduce this tension by modifying one or more of the conflicting beliefs. Called cognitive dissonance (Festinger, 1957), such rationalization is often used by individuals to reconcile conflicting views on issues. Along this vein, it is possible that a sniper experiencing remorse would deny feeling any regret, because such feelings conflict with his other belief that his work is justified. Second, it is possible that the snipers are trying to protect their place in the sniper community, perhaps from fear of being transferred out of their sniper unit if they are found to be having problems. Being a sniper is a highly valued assignment and most don't want to lose this position for a number of reasons. Whether they are a sergeant, corporal or private, snipers have more autonomy and fewer constraints on their daily actions than soldiers of the same rank serving in the companies and many snipers do not want to give up this freedom. Snipers are considered top soldiers and weakness is not consistent with the sniper image. Third, snipers may be harbouring feelings of remorse, and, at the same time, be reluctant to talk with outsiders about this for a number of reasons. For example, MacNair (2002) reported research showing that Vietnam veterans who had killed in combat were more reluctant to talk about what went on in the army. She did not explain

the reasoning behind this reluctance, only that those who had killed were more likely than soldiers who had not killed to agree with the statement, “never tell anyone about something that was done in the military.”

5.4.3 Regrets Later in Life

It is possible that some of the snipers who have expressed no regrets in this study may experience remorse later in life. While research on this matter is not conclusive, there is some evidence showing that combat veterans can live many years without having mental health issues from the combat trauma they experienced earlier (Sleek, 1998). The circumstances surrounding how such traumatic events manifest themselves at a later point is not well understood. There are many possible explanations. Perhaps the individual was able to manage the stress with alcohol, hard work, or exercise and only experienced trouble when he/she gave up drinking, retired, or had a physical injury that precluded further exercise. It is also possible that the reactions to the past trauma could be part of a larger reaction to a more recent trauma and only become problematic when the more recent trauma occurs.

5.5 Career Satisfaction

Most of the sample expressed high levels of satisfaction with their military career and expressed intentions to remain in the CF. Three of the subjects were dissatisfied and stated they would be leaving the CF soon.

5.6 Family Support

For the most part, the subjects in this study felt that their families supported their military career. Most of them reported that their wives were proud of their military career and almost everyone stated that their parents were proud of them. These responses are consistent with other CF research showing that the support of family members has an impact on the psychological well-being of military personnel (McCreary, Thompson, Pastò, 2003) and military employment attitudes like morale and attitudes about deployments (Dursun, 2008).

5.7 Overall Impact of Being a Sniper

Most of the sample felt that being a sniper had been a positive influence in their life. Only one individual felt that being a sniper had had a negative effect on his life.

6 Limitations of the Present Study

An important question, and one which unfortunately cannot be answered, is: how valid are the findings of this research? Given the small sample size and the fact that the study is largely interview-based, the findings of this study may not reflect the true attitudes of the Canadian Army sniper community.

It is possible that the sample in this study is not representative. It is a small sample of snipers who were available at the time of the study, a sample of convenience, chosen by sniper leaders. The sample did not include snipers who have been removed from their sniper duties or snipers who have left the CF. Consequently, the research sample may not reflect the full range of attitudes and opinions one might obtain from the entire population of soldiers who have passed through sniper ranks.

Another limitation is that interview research is subjective by nature and can lead to biased conclusions. For example, it is natural for people to hold conflicting views on complex topics, so when they are questioned on such matters, they may present one view or the other depending on the way the question is posed or depending on their mood at the time.

When interviewed in the present study, a number of the snipers were reluctant to tell much about the combat actions in which they had killed. Why this reluctance? Operational security might be an explanation, but the interview was focused more on feelings and beliefs than tactical matters and there are ways of talking about these things without divulging classified information. In the interviews, everyone to a man expressed a clear conviction that their killings were justified. When asked about remorse, no one expressed any reservations or guilt about what they had done. So, if they felt justified with their killing, why the reluctance to talk about it? Possible explanations include: (a) they might be ambivalent about what they have done, (b) they might worry that they will be judged on what they did, or (c) perhaps they only speak about such matters freely with very close friends within their sniper community. This is certainly consistent with MacNair's (2002) finding that Vietnam veterans who had killed were more reluctant to talk about "something that was done in the military (p. 18)."

Surveys are often used in research because they are more objective than interviews. But surveys have potential problems as well. For example, in the present study it is possible that some snipers wished to show themselves and the sniper community in the most positive light. Perhaps, given the high status accorded snipers in the army and the sniper culture of strength and perseverance, the respondents in this study may have felt obliged, consciously or unconsciously, to present themselves and their sniper comrades as dealing with the challenges of their occupation somewhat better than they actually are. This may explain the contrast between the snipers' relatively low K10 scores (as compared to TFA 2007 in Figure 2) and the higher scores in Figure 3 on concerns related to specific combat stressors. Is it possible that the K10 scores are an under-estimate of the snipers' distress levels? One can never be certain with single studies of such phenomena and the only way to be certain is to conduct multiple studies to obtain more reliable measures.

7 Conclusion and Future Research

The results of this study are inconclusive, suggesting that further research is warranted. Some of the major themes requiring further examination are described below.

7.1 Coping

On the one hand, the interview results suggest that many active duty snipers are coping well with their combat experiences. At the same time, survey results showed that almost a third of the sample scored in the moderate and high risk categories on the K10 measure of generalized distress (Figure 1) and many of the respondents reported feeling concerned or troubled over a number of their combat experiences (Figure 3). Two of the snipers with higher K10 scores reported in the interview that they were already seeing a professional counsellor, as did another sniper who had a score of 15, just below the moderate risk category. Given these ambiguous results, it is recommended that this issue be examined further. Specific research questions could include:

- a. How well are snipers coping (based on standardized measures of mental health symptoms)?
- b. What coping strategies are snipers employing?
- c. To what extent are snipers using mental health resources?

7.2 Sniper Norms on Seeking Help

The interview responses on questions about seeking help for mental health issues suggest that there are varied opinions on this matter within the sniper community. Given the importance (both to the individual soldier and the CF as a whole) of providing soldiers with the help they need to recover from combat trauma, the sniper norm on seeking help needs to be better understood. This line of inquiry should also explore perceived and actual barriers to accessing help.

7.3 Career Satisfaction

We know that satisfied personnel stay in the CF longer than dissatisfied individuals. Given the time and costs associated with developing regular soldiers into snipers, it is important that the CF has an accurate sense of sniper satisfaction when trying to manage sniper retention and attrition. In the interviews, most snipers expressed satisfaction with their careers, and while this is a positive finding, it would be a more reassuring if supported by more objective survey data. Thus, future research should include a standardized measure of sniper satisfaction.

7.4 Growth

The interview results indicated that most snipers felt they had been positively affected by their experiences as a sniper, but the full range of such positive outcomes were not revealed in the interviews.

These outstanding issues require elaboration and should be examined further using a broader array of more rigorous measures on a larger sample of snipers. A detailed account of proposed follow-on research will be produced separately.

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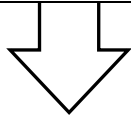
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Annex A *Frequencies of the Number of Snipers Who Experienced Combat Stressors on Their Most Recent Deployment to Afghanistan and the Extent to Which These Experiences Cause Them Concern*

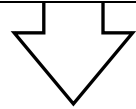
How often have you experienced any of these stressful situations?

- 1 - Never
- 2 - One time
- 3 - Two to four times
- 4 - Five to nine times
- 5 - Ten or more times



How much trouble or concern has this caused you?

- 1 - No trouble or concern
- 2 - Little trouble or concern
- 3 - Some trouble or concern
- 4 - Much trouble or concern
- 5 - Very much trouble or concern



1	2	3	4	5		1	2	3	4	5
4		3	4	8	1. Being attacked or ambushed.	8	7	3	1	
1	1	3	4	10	2. Seeing destroyed homes or villages.	13	3	3		
	2	5	3	9	3. Receiving small arms fire.	6	9	4		
5		4	4	6	4. Seeing dead bodies or human remains.	9	7	2		
11	4	4			5. Handling or uncovering human remains.	13	4	1		
7	4	7		1	6. Witnessing an accident which resulted in serious injury or death.	11	3	3	1	
9	4	2	1	3	7. Witnessing violence with the local population or between ethnic groups.	14	3	2		
5	2	10	1	1	8. Seeing dead or seriously injured Canadians.	6	7	5	1	
	3	6	5	5	9. Knowing someone seriously injured or killed.	1	8	6	3	1
14		1	2	2	10. Participating in demining operations.	16		2		
1	7	6	3	2	11. Improvised IED/booby trap exploded near you.	5	7	7		
	1	3	1	14	12. Working in areas that were mined or had IED's.	4	10	5		
5	2	7	1	4	13. Having hostile reactions from local civilians.	9	7	3		
14	3	1	1		14. Disarming civilians	16	2			
9	2	6	1	1	15. Being in threatening situations where you were unable to respond because of ROE's.	10	3	4	2	
1	2	2	3	10	16. Shooting or directing fire at the enemy.	11	5	2		
4	5	3	3	4	17. Calling in fire on the enemy.	11	7	1		
19					18. Engaging in hand-to-hand combat.	17				
	3	6	5	5	19. Clearing/searching homes or buildings.	9	8	2		
14	2	2		1	20. Clearing/searching caves or bunkers.	15	3			
13	4	1		1	21. Witnessing brutality/mistreatment toward non-combatants.	18				
14	5				22. Being wounded/injured.	16	1		1	
7	4	5	2	1	23. Seeing ill/injured people you were unable to help.	11	2	6		
	1	3	3	12	24. Receiving incoming artillery, rocket, or mortar fire.	4	8	5	1	1
3	2	6	2	6	25. Being directly responsible for the death of an enemy.	10	8			
17	2				26. Observing violations of Laws of Armed Conflicts/Geneva Conventions.	17	1			
19					27. Being responsible for the death of Canadian or ally personnel.	17				
3	3	7	4	2	28. Having members of your own unit become a casualty.	5	7	4	3	
8	4	3	2	2	29. Had a close call; dud landed near you.	11	4	3	1	
15	2	2			30. Had a close call; a bullet or shrapnel hit a piece of your personal equipment.	16	1		1	
19					31. Had a close call; was shot or hit but protective equipment saved you.	18	1			
15	4				32. Had a buddy shot or hit who was near you.	17	1			
10	3	1			33. Informed unit member/friend of a soldier's death.	10	1	1	1	
1	3	2		8	34. Successfully engaged the enemy.	9	4			
1	1		5	6	35. Demonstrated success in your training.	11	1			
	3	6	1	3	36. Encountered grateful civilians.	11	1	1		
8	3	1	1		37. Provided aid to the wounded.	8	3	1		
11	2	1			38. Saved the life of a soldier or civilian.	12	1			

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(U) This paper reports on the research conducted in the first year of a three-year study on the psychological well-being of snipers. This research began with an interview-based study of 19 snipers who had served in Afghanistan and who were still serving as snipers in Canadian army units. The results of this study show that the snipers had elevated scores on a generalized measure of psychological stress, but their scores were not as high as those of a sample of non-snipers (from another study) who had served in Afghanistan. This finding suggests that the snipers were coping as well or better than regular soldiers. When asked about specific combat experiences, the differences were more dramatic, however. Snipers experienced more combat than the non-sniper group and expressed more concern over their combat experiences than the non-snipers. In contrast to these findings, the snipers also expressed high levels of satisfaction with their careers and stated that being a sniper had been a positive influence in their lives. Given the inconsistency of these findings, it is proposed that this research be expanded to include more standardized measures of possible outcomes and a larger sample during the second and third years of the project.

(U) Ce document contient les résultats des travaux de recherche menés au cours de la première année d'une étude trisannuelle portant sur le bien-être psychologique des tireurs d'élite. Ces travaux de recherche ont commencé par une série d'entrevues menées auprès de 19 tireurs d'élite qui avaient servi en Afghanistan et qui étaient toujours tireurs d'élite dans des unités de l'Armée canadienne. Les résultats démontrent que les tireurs d'élite ont obtenu une note élevée dans la mesure du stress psychologique de Kessler, mais leur note n'était pas aussi élevée que celle d'un échantillon de soldats autres que des tireurs d'élite (provenant d'une autre étude) qui avaient servi en Afghanistan. Cette constatation suggère que les tireurs d'élite s'adaptaient aussi bien ou même mieux que les soldats ordinaires. Lorsqu'on les a interrogés sur des expériences de combat particulières dans l'Échelle du stress durant les opérations, les différences étaient considérables. Les tireurs d'élite ont vécu plus d'expériences de combat et ils se sont dits plus préoccupés par ces dernières que les autres soldats. Paradoxalement, les tireurs d'élite se sont dits très satisfaits de leur carrière au cours des entrevues et ils ont affirmé que le fait d'être un tireur d'élite avait une influence positive sur leur vie. Étant donné les contradictions apparentes de ces conclusions, on propose d'étendre cette recherche de façon à inclure des mesures plus normalisées des résultats possibles et un plus grand échantillon pendant les deuxième et troisième années du projet.

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psychological well-being; operational stress injuries; sniper; army