

April 11, 2016

Mental Health and Well-Being of Military Veterans during Military to Civilian Transition: Review and Analysis of the Recent Literature.



R2CL / PVVC – Road to Civilian Life / Parcours Vers la Vie Civile

Prepared for:

Canadian Institute for Military and Veteran Health Research
&
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Abstract

A review of the literature on military personnel's transition from military to civilian life (MCT) was conducted, as part of Veterans Affairs Canada (VAC) five-year Road to Civilian Life (R2CL) research program. The objective was to synthesize current knowledge about supporting Canadian Armed Forces (CAF) members/Veterans undergoing the transition out of their military service and back into civilian life. An emerging consensus among international experts suggests that the circumstances of the transition peri-release period (from 6 months prior to approximately 2 years after release) may play a particularly important role in long-term transition "success" in terms of post-service functioning, community engagement or participation, and well-being. A search was carried out in December 2015 for English language documents and articles published from 2000 to the present through ten digital library catalogues as well as for government technical reports, committees' reports, and results from expert panels. An initial base-set of 901 document abstracts were reviewed by the two primary investigators resulting in 417 references being retained for more substantive review, and a final 306 articles identified for inclusion.

In this report, annotated results are presented for the 306 articles according to their primary research domain. Existing literature reviews are identified and reviewed. Current conceptual frameworks for military to civilian transition are also identified and presented. Strengths and gaps in the literature are noted and recommendations are given for future research. Recommendations include addressing the need for better coordination of research efforts, language, and priorities within and between nations. An agreed upon conceptual framework is required to inform knowledge gap analysis, as is an accepted taxonomy for organizing the research. It is recommended that a formalized international research institute be established to facilitate dialogue and collaboration.



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Dedication

To all those who have served. And to all those who work to bring them, finally and fully home.

Acknowledgements

This document represents the work product of three months from December 2015 to March 2016 to complete the literature review. Work on the project was compelling, educational and at times, daunting, and the review team have very much appreciated the support and intellectual generosity of the VAC Scientific Authority advisors, and staff of the Canadian Institute for Military and Veteran Health Research, without whose invaluable input this project could not have been completed.



Executive Summary

Objective: A review of the literature on military personnel’s transition from military to civilian life (MCT) was conducted to synthesize the knowledge about how this significant, and usually inevitable life transition impacts Veterans’ adjustment, mental health and well-being post-release. The purpose of this review was to assess the scope and complexity of the literature, and to identify gaps and limitations in the knowledge base.

Background: In 2015, Veterans Affairs Canada (VAC) launched a five-year program of research to close the knowledge gaps in understanding and supporting Canadian Armed Forces (CAF) members/Veterans undergoing the transition out of their military service and back into civilian life. The program, called *Road to Civilian Life (R2CL)*, focuses on the mental health and well-being of transitioning CAF members during the ‘peri-release’ MCT period (from 6 months prior to approximately 2 years after release). An emerging consensus among international experts suggests that the circumstances of the transition peri-release period may play a particularly important role in long-term transition “success” in terms of post-service functioning, community engagement or participation, and well-being. Despite this, there is very little research focused specifically on this time period. There is a rapidly expanding literature concerning Veterans’ health and well-being, however there is also no clear consensus on a comprehensive framework for understanding MCT. Research tends to be focused within disciplinary or special interest silos, and the R2CL program has identified that there is a need to focus the full spectrum of recent research evidence in order to understand how to influence transition trajectories and to provide early and optimal care and support for those who are struggling.

Method: A search was carried out in December 2015 for English language documents and articles published from 2000 to the present through ten digital library catalogues. Databases searched included Medline, PsychInfo, EMBASE, CINAHL, Social Work Abstracts, Sociological Abstracts, Social Service Abstracts, America History and Life, Historical Abstracts, and History of Science, Technology and Medicine. Search keywords are provided in the main document. Government technical reports, special government or government appointed committees’ reports, and results from expert panels were also collected. An initial base-set of 901 document abstracts were reviewed by the two primary investigators resulting in 417 references being retained for more substantive review. Of these, three hundred and six documents were identified that were pertinent or informative about the MCT process and were included for annotation and analysis.

Results: Results of the literature search are organized into five sections. In the first section a brief catalogue of terms in the research literature is provided – a common language is lacking in the MCT research. The second section summarizes key concepts identified in the literature. Section three explores existing MCT theories and provides an annotated bibliography of selected examples. The fourth section describes recent literature reviews pertinent to the MCT peri-release period. An annotated bibliography, categorized into thematic areas, is included in the final section.



Conclusions: Analysis of the literature reveals considerable depth and breadth to the evidence. Although outside of the scope of the current review to conduct a full, thematic analysis of the evidence, it is clear that the volume and diversity of the material presents challenges to those attempting to synthesize this research to inform policy and practice. Military to civilian transition, as an event, is not well defined in the research, and multiple terminologies are in use across nations, service types and disciplines. Multiple frameworks are being elaborated with little consensus seeming to emerge and there is also no clear consensus regarding how to organize the pertinent literature, nor agreement on how to define the scope of what is pertinent. Recommendations to address these limitations include better coordination of research efforts, language, and priorities within and between nations. An agreed upon conceptual framework is required to inform knowledge gap analysis, as well as an accepted taxonomy for organizing the research. It is recommended that a formalized international research institute be established to facilitate dialogue and collaboration.



1. Introduction

There is no career more challenging or rewarding than serving in the Forces. You will have the privilege of defending our country, being part of history-making events, and helping those in need – both in Canada and around the world.

You will obtain world-class qualifications and develop leadership skills that will take you far in your military career. You will visit more places than most people see in a lifetime and make great friends along the way. There really is no other career quite like it.

<http://www.forces.ca/en/page/lifeintheforces-75>

For members of the Canadian Forces (CAF) and militaries throughout the world, time spent in service can provide experiences that are deeply meaningful, important and relevant, and that are a source of life-long pride. Few career paths offer such opportunities to grow personally, confront and overcome adversity, make critical decisions as a trusted member of a team, and experience a strong sense of belonging to a military family – truly, there is no other career quite like it.

The necessary integration into military culture at recruitment, and throughout training and service, changes how members perceive themselves and their world, and the values and expectations they hold. In order to prepare members for work under dangerous circumstances, military training separates recruits from their former civilian identities to build a new identity predicated on discipline, professionalism, selfless sacrifice and service, and identification with the closely bonded military family (Brooks, 2010; Fox & Pease, 2012; Shields, 2015). This new identity is often experienced implicitly or explicitly as superior to civilian life and identity, and fosters ‘esprit de corps’ and pride in service (Castro & Kintzle, 2014).

For some personnel, conditions of service will demand that they engage in complex high-stakes decision making with incomplete, ambiguous or inaccurate information, under time pressures, while under conditions of sleep deprivation, extreme temperatures, dehydration, rough living conditions, noise, and ever present risk of physical injury or death. At other times, service exposes military personnel to evidence of atrocities and grave injustice, but demands that they not respond; they must provide witness without capacity to respond or alleviate suffering. Service may also be characterized by unremitting training for a crisis that never comes, instead battling boredom and the mundane. Whatever the service conditions, military career experiences can be physically and psychologically demanding and, along with pride in service, can bring negative impacts on long-term physical and mental health.

Whether service includes deployment to peacekeeping, combat or domestic responsibilities, the eventual return to civilian life after military service is inevitable and can be a source of considerable role and identity disorientation, loss and stress (Greenberg, 2014). Whether leaving the military is expected and planned, or due to medical or other types of release that may be involuntary, this challenging adaptation to life after a military career can exacerbate service-related or non-service related physical



and psychological difficulties, further impacting long-term health and well-being. These negative outcomes, however, are hard to predict as military to civilian life transition (MCT) is a highly individualized, multidimensional experience, and there is not a complete understanding of the factors that influence MCT trajectories.

2. Background

Over the last 15 years of conflict in Afghanistan, public awareness and concern has grown regarding the health and well-being of today's Veterans. Media reports of family and marital breakdown, employment challenges, physical and mental health issues, homelessness, financial instability, substance use and suicide have highlighted the need for new knowledge and support for Veterans. Unfortunately, this focus on those who are struggling, and on negative transition outcomes, can also lead the public to the false impression that *most* former military members have some kind of physical, emotional or mental health problem as a result of their service. This public misperception can create a further burden on Veterans as they try and make their way in the civilian world (Ashcroft, 2014; Thompson & Lockhart, 2015).

More than 140,000 people have left the CAF and transitioned to civilian life since 2001 (Dallaire & Wells, 2014). According to the 2011 and 2013 *Life after Service Studies*, the majority (62%) of CAF Veterans surveyed who had released from service reported an easy adjustment to civilian life. A minority, but significant number, 27% of Regular Force Veterans and 24% of Reserve Class C Veterans (Reserves who had deployed), reported a difficult adjustment to civilian life (Van Til et al., 2014). There is a critical need for an accurate understanding of the facts around Veterans' MCT and the factors that influence transition outcomes. This is particularly important for service planning at this juncture, as demand for Veterans supports and benefits is expected to increase in the coming years (Dallaire & Wells, 2014).

Taking the Afghanistan cohort as an example, of the 41,600 deployed to this conflict area by the end of 2015, some 20% have released from military service, 28% of whom are receiving some form of Veterans Affairs Canada (VAC) benefits (13% related to the Afghanistan deployment and 15% not related to this deployment). There has been an unexpected high rate of mental health issues in this cohort and increased participation in VAC services, but not due to a large number going through transition to civilian life (MCT) as most (80%) are still serving. If this early pattern of usage persists across the cohort, it is possible that VAC service use will rise in the coming years as the remaining 80% release from service (Van Til, 2015).

There is now a very large MCT research literature worldwide in government reports, reports of expert panels, and scientific journals and books. Exploratory narrative literature reviews have been published in recent years by VAC (Sweet and Thompson, 2009) and the Department of National Defence (Hachey & Sudom, 2013; Watkins, 2011). The Canadian Standing Senate Subcommittee on Veterans Affairs heard testimony from stakeholders to inform their report on the transition to civilian life, paying particular attention to initiatives intended to promote the meaningful employment of releasing CAF members (Dallaire & Wells, 2014). The U.S. Institute of Medicine conducted a comprehensive literature review on



readjustment needs of U.S. military members and their families following deployments to Iraq and Afghanistan (IOM, 2013). In the UK, substantial projects have been completed including the Kings Centre for Military and Veteran Health Research evidence summary on UK military Veterans (Fear, Wood, & Wessely, 2009), the Forces in Mind Trust, Transition Mapping Study (FiMT, 2013), and the UK Ministry of Defence, Veterans' Transition Review (Ashcroft, 2014). In Australia, the Centre for Military and Veteran Research completed a literature review and study, Readjustment to 'Normal', looking at post-deployment adjustment of military members and their families with insights into the MCT process (CMVH, 2010). There has been no recent review that synthesizes this new international work with consideration of the Canadian context.

In addition, an emerging consensus among international experts suggests that the circumstances of the transition "peri-release" period (from 6 months prior to approximately 2 years after release) may play a particularly important role in long-term transition "success" in terms of post-service functioning, community engagement or participation, and well-being (Thompson & Lockhart, 2015). There is, however, little work that focuses specifically on the peri-release period of transition. There is a need, therefore, to return to the research evidence to complete an updated literature review and analysis looking to what insights may be found concerning the peri-release MCT period, and to begin to inform new research in this area.

Further, despite a rapidly expanding literature concerning Veterans' health and well-being, there is no clear consensus on a comprehensive framework for understanding MCT. Research tends to be focused within disciplinary or special interest silos, and there is a need to focus the full spectrum of recent research evidence in order to understand how to influence transition trajectories and to provide optimal care and support for those who are struggling that matches the complexity of their needs.

In anticipation of these issues, in 2015 Veterans Affairs Canada (VAC) launched a five-year program of research to close the knowledge gaps in understanding and supporting Canadian Armed Forces (CAF) members/Veterans undergoing the transition out of their military service and back into civilian life. The program, called *Road to Civilian Life* (R2CL), focuses on the mental health and well-being of transitioning CAF members during the peri-release MCT period.

3. Objectives

The overall goal of the R2CL program is to enhance the mental health and well-being of CAF Veterans during MCT to facilitate an optimal transition to civilian life. The purpose of this Literature Review and Analysis is to catalogue published expert opinion and scientific evidence on the mental health and well-being of military Veterans, with particular consideration of the peri-release period of MCT, and the Canadian context. This report attempts to assess the scope and complexity of the literature, identify gaps and limitations in the knowledge base, and summarize conceptual frameworks for Mental health and well-being in MCT, in order to provide a reference point for further research in the area through the R2CL program.



4. Research Questions

The research questions that guided this literature review and analysis, summarizing published expert opinion and scientific evidence, are as follows:

1. Identify types of mental health trajectories lived by CAF members/Veterans in the peri-release MCT period;
2. Identify determinants of the mental health and well-being of CAF members/Veterans during the peri-release MCT period that might include the following domains:
 - Psychological adaptation
 - Mental health and physical health
 - Ability/disability with respect to participation in life roles at work, school or in the community
 - Employment
 - Income and financial well-being
 - Family
 - Social factors
 - Gender
 - Culture
 - Administrative dimension
 - Institutional dimension
 - Others that arise
3. Summarize evidence for interventions intended to mitigate the effects of stressors encountered during peri-release MCT and optimize the mental health and well-being of CAF Veterans.
4. Identify methodologies used to conduct research on the mental health and well-being of CAF members/Veterans in the peri-release MCT period.
5. Identify knowledge gaps in the mental health and well-being of CAF Veterans during the peri-release MCT period.
6. Identify the impact of MCT experiences on later life and well-being.
7. Summarize conceptual frameworks for mental health and well-being in MCT.
8. Systematically assess the evidence and use narrative methodology to synthesize the evidence, organize the literature into themes and answer the research questions.
9. Describe and use a method to assess and communicate strength of evidence and certainty of conclusions.



5. Methodology

The research team oversaw extensive searches of the peer-reviewed medical and scientific literature, including published articles, other peer-reviewed reports, government reports, Senate committee reports, and dissertations. The strategy for the searches was to establish a “base-set” of documents related to Veterans’ transition from military service, or that might be informative of factors influencing MCT, and particularly the peri-release period. The search methods for relevant documents followed the Preferred Reporting Items for Systematic Reviews and Meta-Analysis Statement (PRISMA) and four-part information flow system including, Identification, Screening, Eligibility, and Inclusion phases (Moher, Liberati, Tetzlaff, & Altman, 2009).

5.1. Identification Phase

The quality of a systematic review depends heavily on the scope and quality of included studies. For this reason, it is not unusual for reviewers to modify search protocols during the conduct of the review as an iterative process – reporting out on each modification (Moher et al., 2009).

The search strategy used in this review progressed in four steps to ensure maximum capture of relevant research and other forms of documents. Steps included: 1, a systematic computerized database search; 2, comparison of the search results with five previous literature review bibliographies as a cross-check for inclusiveness and overlap; 3, inclusion of government publications and research articles identified by VAC staff researchers; and 4, dedicated searches for the output of stakeholder identified experts in the field of military health, and/or transition. Results were limited to the English language and articles published from 2000 to the present. All result sets were de-duplicated to eliminate occurrence of the same reference two or more times in the master base-set, and all results were exported to an EndNote library.

Step 1. Computerized Database Search

In the first step, a search of ten digital library catalogues was carried out in December 2015 through the Library of the College of Physicians and Surgeons of BC. Databases included, Medline, PsychInfo, EMBASE, CINAHL, Social Work Abstracts, Sociological Abstracts, Social Service Abstracts, America History and Life, Historical Abstracts, and History of Science, Technology and Medicine.

The following is a complete listing of all terms used in all databases. Many of the terms and keywords listed below were only used in some of the databases, as available. For instance, the Subject Heading "Draftees" was only available in the PsycInfo database. A second example is that "postcombat" was only used as a keyword in the historical databases. In the historical literature, this term usually refers to "after the soldiers came home", whereas in the medical literature, this usually refers to "after the soldiers returned to base".

**Subject Headings used:**

Military Personnel, Air Force Personnel, Army Personnel, Commissioned Officers, Enlisted Military Personnel, Marine Personnel, Military Medical Personnel, Military Psychologists, Navy Personnel, Volunteer Military Personnel, Draftees, Noncommissioned Officers, Air Force, Army, Navy, Military Service, Women Military Personnel, African American Military Personnel, Military Reserve Forces, Veterans, Veterans Health, Military Veterans, Vietnam Veterans, Disabled Veterans, Civilian Life, Military Demobilization, Everyday Life, Continuity of Patient Care, Life Change Events, Life Changes, Continuum of Patient Care, Clinical Handover, Life Event, Transitional Programs, Health Transition, Retirement, Life Style Changes, Role Change, Hand Off (Patient Safety), Life Stage Transitions, Transition/Transitions/Transitional, Life Events, Social Adjustment, "Adaptation, Psychological", Psychosocial Readjustment, Emotional Adjustment, Occupational Adjustment, Culture Shock, Assimilation (Sociology), Adjustment (Psychology), Adaptability (Psychology), Social Integration, Community Reintegration, Reintegration of Veterans.

One term contained a comma so it was enclosed in quotes for clarity.

Special Interest indexing:

The CINAHL database has an additional search option of searching by interest groups. Military/Uniformed Services was included as a Special Interest in this search.

Keywords:

soldier*, servicem*, service-m*, reservist*, service personnel, civilian, home, post-deployment, postdeployment, post-military, postmilitary, decommission*, demob*, postcombat, post-combat, Veteran*, transition*, reentry, re-entry, reenter*, re-enter*, return*, reintegrat*, readjust*, adjust*, adaptation, third location decompression

Please note: * refers to any ending of the word. For instance, servicem* would include servicemember, servicemembers, serviceman, and servicemen.

Excluded keywords:

For the Veterans aspect of each search, articles containing the following keywords were removed:

elder* OR geriatr* OR gerontol* OR older adult* OR older person OR older people OR oldest old OR late* life OR aging OR ageing OR older Veteran*

These were excluded because there were a great many articles about older Veterans transitioning to and from nursing homes, which were not relevant.

Databases:

Using the subject heading and keywords, ten digital databases were searched, identifying 617 records for screening (Table 1).



Table 1. Databases searched, number of records (total and after duplicates removed).

Database	# of Records	# of Records
Medline Abstracts	136	136
PsychInfo Abstracts	123	101
EMBASE Abstracts	127	60
CINAHL Abstracts	101	44
Social Work Abstracts	10	10
Sociological Abstracts	116	105
Social Service Abstracts	48	27
America History and Life	86	84
Historical Abstracts	47	44
History of Science, Technology and Medicine	7	6
Total	801	617

Step 2. Comparison with Previous Reviews

There are a number of challenges to conducting a systematic review of the MCT literature. There are multiple terminologies in use across nations, service type and disciplines. There is also a lack of a clear theoretical framework that articulates the scope of factors pertinent to MCT. This makes it difficult to ascertain whether the search results are adequately inclusive and representative of current thinking in the field. For this reason, search results from step 1 were compared with the recorded search bibliographies of five previous literature reviews as a check for inclusiveness and convergence.

The VAC 2009 literature review (Sweet & Thompson 2009), the VAC Backgrounder for the Road to Civilian Life (R2CL) Program of Research (Thompson & Lockhart, 2015), and two reviews completed by the Department of National Defence (Hachey & Sudom, 2013; Watkins, 2011) were used as comparators to ensure that published peer-reviewed research, and particularly research examining the Canadian military experience were included. A fifth comparison was made with the search results in the



bibliography of the document, Health and Social Outcomes and Health Service Experiences of UK Military Veterans (Fear et al., 2009), which reviewed the national and international literature, focusing mainly on material published since 2003. Comparison with these five previous literature reviews resulted in identification and inclusion of 99 distinct additional references.

Step 3. Government Publications and Research Articles Identified by VAC Research Directorate

The Canadian Veterans Affairs Research Directorate is comprised of a small group of research scientists who conduct an ambitious research program to inform policy and improve care for Veterans. As an expert team at the forefront of this area of research on Veterans health and well-being, staff researchers, epidemiologists and the medical advisor were asked to provide references for peer-reviewed documents they identified as most relevant in the area, as well as government technical reports, special government or government appointed committees' reports, and results from expert panels. References provided augmented the base-set for review by an additional 102 documents.

Step 4. Searches for Work of Identified Experts in the Field of Military Health and/or MCT

In addition to the previous overall searches, the review team members conducted numerous smaller searches on topics related to the task, and for the work of researchers who were identified by stakeholders as experts in the area of MCT and Veterans' health. Inclusion of identified "expert" researcher publications resulted in identification of an additional 83 documents for inclusion in the base-set for review.

Results of the Combined Searches – The Initial Base-Set

The combined four-step search process resulted in a final base-set of 901 potentially useful studies. All searches were entered into a central EndNote database, and titles and abstracts were made available to the research teams for review.

5.2. Screening Phase

After identification of the base-set of documents for consideration, abstracts of all 901 documents were reviewed by the two primary investigators against inclusion/exclusion criteria.

5.2.1. Inclusion/Exclusion Criteria

There is no simple answer concerning which studies should be included or excluded in a review and why. The specific parameters for the literature search need to be set to insure that all the relevant studies may be retrieved, but narrowly enough to focus the effort and make the project feasible (Green, Johnson, & Adams, 2006). Inclusion criteria set too broadly result in papers outside the domain of the purpose of the study and unmanageable numbers for synthesis. Exclusion criteria set too narrowly may



inadvertently hide the full complexity of the phenomenon and limit understanding and useful application to future policy, practice and research. The task, in negotiating these challenges, is to state these choices explicitly in the interest of transparency, so that the work can be critically interpreted, reproduced or expanded by interested researchers.

For inclusion, studies and reports were required to focus on Veterans' experiences and factors influencing transition outcome domains, including physical and/or mental health, social adjustment and participation, and general well-being. Articles outlining or evaluating "within-career" transition after deployment that were informative of factors involved in re-entry into civilian life or routines (for example, the reintegration of reservists back into civilian life post-deployment) were also considered.

Other inclusion criteria included:

- a) Qualitative and quantitative studies
- b) Single studies and reviews of multiple studies
- c) Peer-reviewed journal papers and books
- d) Research reports and expert opinion consensus statements authored by government researchers and non-governmental organizations
- e) First priority: studies of Canadian military members and Veterans.
- f) Second priority: Studies in other nations

Exclusion criteria included:

- a) Publications prior to 2000
- b) Material not in English
- c) Publications focused exclusively on pathology (PTSD, TBI, etc.) without reference to other aspects of the MCT experience. This literature is summarized more completely elsewhere.

5.2.2. Preliminary Cull Results

Initial document cull retained 417 references pertinent to MCT. Interrater reliability was tested on the first 100 documents and resulted in a 98% percent rate of agreement on decisions to cull. Instances of interrater disagreement were resolved by consensus. Examples of articles rejected were those describing military to civilian transitions deemed out of scope for this review (for example, Union soldiers coming home, re-integration of child soldiers, and transition of "rebel" soldiers).

Articles pertaining to health status, diagnosis or treatment of Veterans later in life, outside of the MCT period were also rejected for this review. These health concerns might be attributable to service or to



transition effects, however they often focused in older Veterans transitioning to and from nursing homes or hospitals, which were not in-scope for this review.

5.3. Eligibility Phase

All 417 remaining abstracts after the preliminary cull were sorted by the two primary investigators into four broad categories according to research focus during the initial screening. Criteria for each category were as follows:

Grouping	Criteria
1	Canadian Peri-Release MCT: papers that contain at least some data or information on Canadian peri-release MCT, even if that was not the focus of the paper.
2	Other Nations Peri-Release MCT: papers that contain at least some data or information on other nations peri-release MCT, even if that was not the focus of the paper.
3	Canadian MCT Generally: papers focusing on Canadian Veterans or on still-serving personnel which included information on transitions involving re-integration into some aspect of civilian life or routine. These were reserved for closer examination.
4	Other Nations MCT: papers focusing on other nations Veterans or on still-serving personnel which included information on transitions that involve re-integration into some aspect of civilian life or routine. These were reserved for closer examination.

Interrater reliability was tested on 100 documents and resulted in an 85 percent rate of agreement for categorization. Most inter-rater variance was caused by differences in whether raters looked to articles to explicitly articulate a peri-release time period focus, or whether that time period could be ascertained from the context and conduct of the research. Differences also emerged around categorization of post-deployment transition, with some research specifically focused on within-career adjustment to “civilian” aspects of life, roles and routines and other papers not differentiating post-deployment from peri-release MCT. Instances of interrater disagreement were resolved by consensus.

5.4. Included Documents

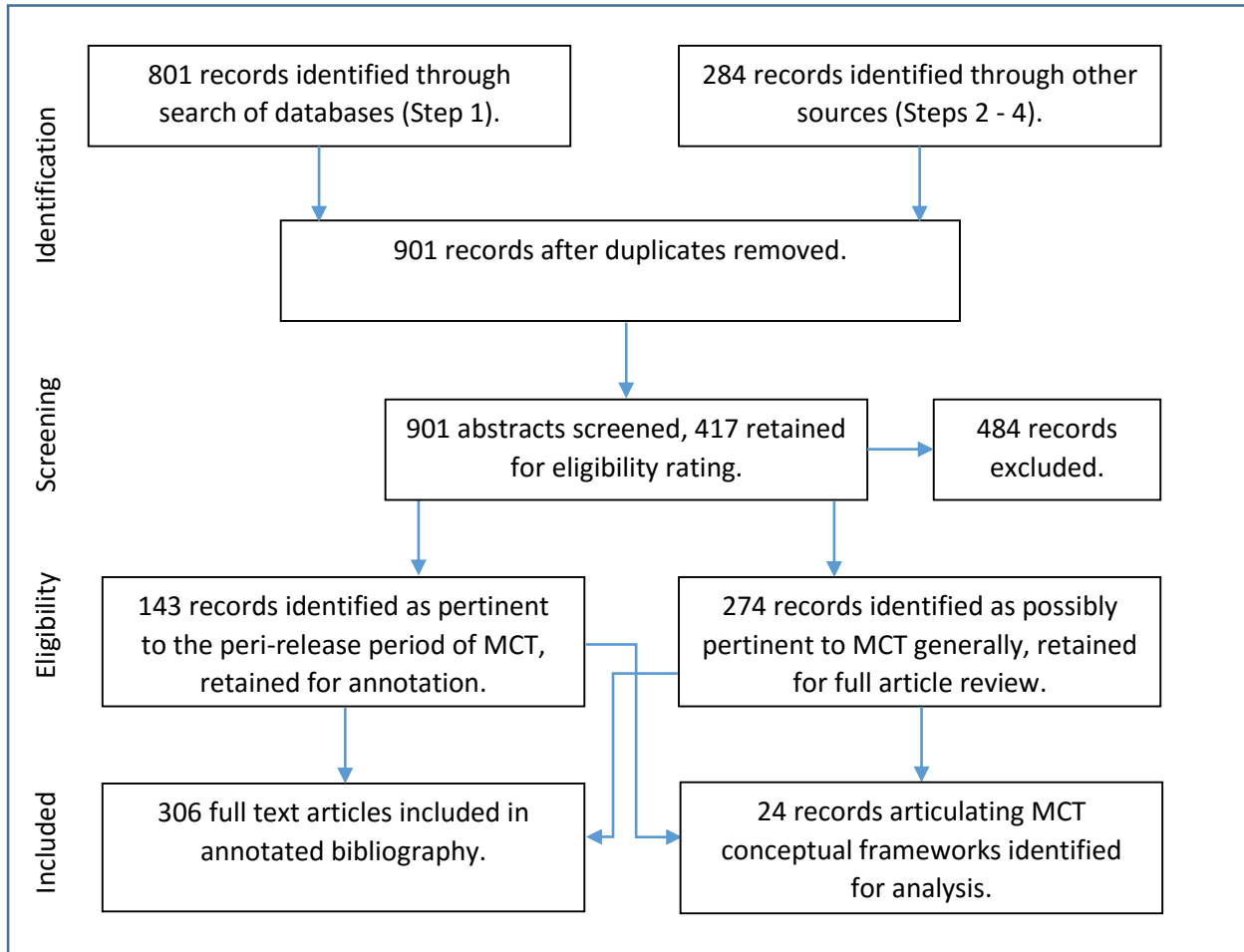
Categorization resulted in 143 papers being identified as pertinent to the MCT peri-release period (groups 1 and 2) and an additional 274 documents pertinent to MCT generally (groups 3 and 4). Seventeen papers were included in Group 1, Canadian peri-release MCT, and 71 papers were included in group 3, Canadian General MCT (A complete list of Canadian documents is included in Appendix A; A complete list of documents from other countries is included in Appendix B).

Finally, all documents included in groups one to four (417) that referenced proposed conceptual frameworks in their abstracts were identified for model analysis. This resulted in 24 items being marked



for further analysis for this specific research question. Figure 1 shows the flow of information through all stages of the review process.

Figure 1. PRISMA four phase information flow.





6. Introduction to the Findings

Results of the literature search are organized into eight sections (6.1 – 6.4 and 7.1 – 7.4) over two chapters (6 & 7). In the first section (6.1), a brief catalogue of terms in the research literature is provided – a common language is lacking in the MCT research. The second section (6.2) summarizes key concepts identified in the literature. Section three (6.3) explores existing MCT theories and provides an annotated bibliography of selected examples. The fourth section (6.4) describes a sample of recent literature reviews pertinent to the MCT peri-release period. An annotated bibliography, categorized into four thematic areas (7.1 – 7.4), is included separately in chapter seven.

6.1. Terms in the Transition Research

Different terminologies are in use across nations, service type and disciplines. The lack of consistency in defining key terms, such as ‘Veteran’, from nation to nation or from study to study, make comparisons of findings difficult. It is unclear whether populations can be assumed to be homogeneous or whether the transition in question is being defined in the same way. This contributes to an incoherent picture of the MCT experience.

6.1.1. Terms for Those Who Have Served

Veteran: Different nations define who is a Veteran in different ways. For example, in the UK, and Canada, all those who have served for at least one day are referred to as Veterans. To complicate the matter, however, those who have served may not see themselves as Veterans and may reserve the term for those who have deployed to a warzone. For example, Fear et al., (2009) observe that Veteran is used two ways. First, for all those who have left the Armed Forces, regardless of whether they were deployed, and second, for all those who served in a particular campaign or conflict (e.g. World War II Veterans, Vietnam Veterans), regardless of whether they are still serving or have left the service. It is possible to find literature focused on ‘Veterans’ who are still serving but who have been deployed to conflict areas, while other studies would exclude still serving members in their definition of Veterans.

Ex-Services personnel: Again, the meaning of the term can differ from country to country. In some countries this is used interchangeably with the term ‘Veteran’, as an inclusive description of anyone who has spent one day or more in the Armed Forces – although in this case, they have clearly left “active” service. Differences in who is included as a Veteran make comparison of study results problematic and results may be significantly different.

Ex-military: Ex-military is used in similar ways to ex-service with similar concerns for the research.

Service Leavers. Those leaving to rejoin civilian life – For example, in Ashcroft’s (2014) Veterans’ Transition Review, those still serving are referred to as Service personnel, those in the process of transition are called Service Leavers, and the term Veteran is used to describe those who left the Forces some time ago.



Early Service Leaver (ESL): A term used in the UK referring to those who have been discharged compulsorily or voluntarily with less than four years' service, and who get only the minimum 'resettlement' or transition support.

6.1.2. Terms Referring to the Process of Leaving the Military

Transition: 'Transition' is used to describe the period of reintegration into civilian life from the Armed Forces. It is also regularly used to denote the process of moving back to regular duties in garrison after deployment. Transition can also denote specific military tasks, such as equipment recovery. Transition can refer to a *time* of change or an event-triggered *process* of change. For example, Bridges (1991) seminal work on transition in the business environment differentiated "change" which referred to the chosen or unchosen shift in circumstances, from "transition", as a psychological adjustment process that might extend well beyond the time context of the change.

Military to Civilian Transition (MCT): Denotes the specific process and timing of contemplating, planning, processing, getting out and adjusting to the end of military service and resumption of civilian life and roles.

Resettlement: UK – Resettlement describes the formal processes and procedures by which transition is managed, and the formal support provided to Service leavers during transition. It starts with the activation of the Resettlement process and continues until the end of Resettlement provision (up to two years after discharge date).

Re-establishment: Canada – Usually refers to how personnel are doing after transition to civilian life in terms of income, health, well-being, disability, and other determinants of health. One of the primary legislative acts governing Veterans' benefits in Canada uses the term, *Canadian Forces Members and Veterans Re-establishment and Compensation Act, SC 2005*.

Reconstitution: USA – The phase of return from deployment when service personnel continue the process of reintegrating into their families, communities, and jobs.

Reintegration: A term that is used frequently in the disability or rehabilitation literature but which also appears in discussions about reintegrating into civilian life after service, and particularly after deployment.

Post-Deployment: In the US this may refer to a specific phase of return from deployment when troops arrive back at their home station or demobilization site, to return gear and undergo post-deployment training or decompression. This may precede the "reconstitution" phase when they reintegrate into family and community. In many studies however, this is simply used to refer to the general time after one has deployed.

Retirement: Historically, this was often used to refer to MCT regardless of the age or status of the person releasing from the military. It is now well recognized that most military personnel will go on to post-service civilian employment and the term is now used more commonly, but not exclusively, to refer



to those who have had long careers and who are transitioning to roles after service that do not include employment.

Peri-Release Period (PRP) – There is no consensus on what period of the transition this includes. For example, the Canadian Return to Civilian Life program defines PRP as extending from approximately six months pre-release to two years post-release. The Forces in Mind Trust study (UK) does not use the term peri-release but looks to understand a similar period beginning with the point in service at which Service personnel start their resettlement process and then continuing for three years from discharge.

Other terms in use: Discharge or Release, Medical Release, Medical Discharge, Disability separation, Separation.

6.2. Key Concepts in MCT Research

A number of key theoretical constructs emerge as repeating themes in the MCT research literature. The following provides a brief description of Well-Being, Institutionalization, Reverse Culture Shock, Identity, Personal Narratives, and Gender/Military Masculinity.

6.2.1. *Well-being*

Berglass and Harrell (2012, p. 11) note that the most commonly cited definition of “health”, from the World Health Organization (WHO), does not accommodate the service-related circumstances of many Veterans. They provide a modified definition of wellness, writing: “Our definition of Veteran wellness places equal emphasis on the interrelated and multidimensional domains of psychological and physical well-being and on aspects of life that extend beyond fitness for duty, such as personal relationships, satisfaction of material needs and a sense of daily purpose. Unlike prominent civilian interpretations that emphasize the absence of illness or infirmity as a prerequisite for being well, we propose that the new paradigm for Veteran wellness must emphasize the possibility of wellness despite physical and mental injuries caused by war (p. 6). Keyes’ (2002) offers another important concept of health and well-being, the two continua model of “complete mental health”. The model identifies mental illness and mental health as separate but correlated axes – one representing the presence or absence of a diagnosable mental illness; the other, the presence or absence of mental health.

6.2.2. *Institutionalization*

The concept of “institutionalization” was originally applied to patients in in-patient psychiatric facilities who had come to passively accept their loss of freedom with concomitant losses in desire or capacity for self-determination and self-care. Extended to the MCT context, the military structure is presumed to create a high degree of dependency, particularly among junior ranks, as a result of living and working within a protected environment in which basic needs such as food, accommodation, clothing, welfare and administrative support are provided. The term is used explicitly in a small number of studies,



however the notion of diminished development of key life skills for independent living within the civilian world is a common implicit theme in the literature. The idea and the term have useful aspects in terms of insights into the kind of challenges Veterans face on leaving the military, but also have unhelpful and pejorative undertones in common usage that depict Veterans as unable to self-direct and self-determine, contributing to barriers to employability after MCT. (for further discussion see Higate, 2001, and Bergman, Burdett & Greenberg, 2014).

6.2.3. Reverse Culture Shock

Research has highlighted how, after prolonged immersion in a new culture, people often experience unexpected problems re-entering and adjusting to their home environment—one that they expect will be familiar. Although few people anticipate any difficulties on return, after prolonged absence and adjustment to a new culture (time in the military), both the individual's frame of reference and the environment they left (civilian life) has changed. There is also a mismatch between how the returnee and those left behind perceive each other. Joining the military entails an immersion into a distinct culture environment with attendant culture shock for the recruit. Then, the eventual return to civilian life in the MCT process is a disorienting return to the parent culture – a reverse culture shock. The adjustment challenges are accompanied by an expected initial reduction in well-being followed by recovery (For further discussion see Bergman, Burdett & Greenberg, 2014, and Westwood, M. J., Black, T. G., & McLean, H., 2002).

6.2.4. Identity

The Forces in Mind Trust, Transition Mapping Study (2013), notes that “at the heart of a successful transition is a transition of identity; an emotional shift from being part of the Armed Forces to having a future as an individual in the civilian world”(p.10). Identity is the way that a person defines themselves within their cultural and historical context, in relation to where they have come from (origins), where they fit (community) and their personal values. Transition to civilian life can bring unexpected disruption of identity as Veterans attempt to navigate their way through a now unfamiliar civilian world (Pranger, Murphy, and Thompson, 2009). Griffith (2011), reviews the literature with regard to how identity can mediate the individual's experience of stressors and subsequent adaptation, and can influence health-related norms and behaviours, social support, coping resources, and clinical outcomes. Other studies show that anticipated events often generate “imagined selves” prior to the events which serve to define the future context, provide behavioural motivations, and ‘an evaluative and interpretative context for the now self’, suggesting a mechanism for the importance of pre-planning for MCT (Griffith, 2011).

6.2.5. Personal Narratives

Narrative theorist, Polkinghorne writes, “We are in the middle of our stories and cannot be sure how they will end”; as a result, “we are constantly having to revise the plot as new events are added to our



lives” (1988 p. 150). These personal narratives are constructed in part through our relationships with others and are thus open to rewriting and the influence of new social environments. The shift from one social and cultural milieu to another that occurs in MCT, challenges the individual to “revise the plot” of their own life to make a coherent narrative of identity and experience. Freeman (2011) asserts that individuals can experience a sense of “narrative foreclosure” when they are no longer able to find a coherent and meaningful storyline for their own lives. For military populations who promote ideals of honour, agency, and selfless sacrifice, the loss of military identity can interfere with their ability to perceive and live (and continue to narrate) their life meaningfully and productively until a new identity and narrative can be established (Shields, 2016). In her study, Karner (in Fox and Pease, 2012) found that much of the subjective distress of the Vietnam Veterans she worked with was attributable to their inability to find a way to write a “good man” narrative of themselves and their service experiences.

6.2.6. Gender/Military Masculinity

Gender and biological sex are central components of most peoples’ identities and are frequently confused (Brown, 2008). Sex is a term that describes the biological makeup of the body while gender is a series of schemata and roles that are socially constructed and are subject to change over time and from one situation or place to another. While some functions, particularly reproductive, are determined by biology, every culture also prescribes behaviour norms to males and females that extend into every area of work, family life and social convention. As such, gender can be understood as a social organizing principle, a human invention like language, which organizes and re-organizes life in culturally patterned ways (Barrett, 1996). Within the context of military training, aspects of traditional masculine culture, such as stoicism and corporeal control, are emphasized and exaggerated in order to prepare members for combat and to inculcate values of selfless sacrifice for the group (Fox & Pease, 2012). Mejia (2005), discussing the positive survival functions of masculine gender norms, describes the masculine gender precept around the need to confront particular aspects of human biology and suppress them – to override and disregard biological signals to run in fear or to cry out in grief or pain. Other key features of military masculinity that researchers have emphasized include domination over one’s body and the external world, a neglect of physical needs and health, limited emotional expression, allegiance to, and self-sacrifice for ones’ buddies, and a strong “warrior” identity that is aggressive, risk taking, and precludes expression of “weakness” (Brooks, 1991).

6.3. Conceptual Models of Military to Civilian Transition

Major events or experiences can act as turning points in a person’s life trajectory. During these critical times, complex individual, contextual and mental and physical capacity factors converge to determine the impact of events on functioning and well-being, both in the moment and long-term. The peri-release MCT period marks such a turning point in the lives of military personnel and their families. Improving MCT outcomes, involves influencing transition trajectories by supporting individual coping



and resilience while identifying and addressing or moderating contextual barriers, and promoting contextual facilitators in the physical, social and attitudinal environment.

Knowing which, and how, determinants bear on outcome domains of health and well-being is important for understanding how to predict and influence MCT trajectories, however there is no single widely accepted conceptual framework that comprehensively captures all relevant dimensions. Of note, there is also a significant overlap between the MCT research and the post-deployment adjustment literature, which also involves some level of transition back to civilian roles and relationships. Some post-deployment literature explicitly studies Veterans adjusting to civilian life after leaving the service. The following are a sample of frameworks that have been proposed in the research literature since 2000, showing a range of themes in the military to civilian transition research.

Higate, P. R. (2001). Theorizing Continuity: From Military to Civilian Life. *Armed Forces & Society*, 27(3), 443-460.

Higate (2001) explored the tensions between tenacious military identity and post discharge “resettlement” within the civilian environment. Referencing Jolly’s (1996) work, he paraphrases her question, *why do a number of ex-service people remain captives of their past and see themselves mainly in terms of their ex-military status?* Jolly proposed a framework for MCT based on three stages of change: confrontation, where the person acknowledges and confronts the change that may have been imposed on them rather than by their own choice; disengagement, typically marked by confusion and which can be aided by reflection until prepared to move in a new direction; and resocialization, the process of assuming a new identity. Jolly’s sample of 62 ex-service personnel could be divided into two groups, those who fostered new identities through civilian occupation, and others who were unable to “shrug off the legacy of their previous status, forever seeing themselves as ex-service people”. Higate discusses the theoretical foundation of Jolly’s work and the manner in which “unsuccessful” transition has been theorized as a by-product of institutionalization. The theory holds that dependency, fostered by the extensive care and support given to those in the military, creates areas of underdevelopment for independent civilian life. The author makes the point, however, that we are all reliant on social structures of one kind or another and that the concept does not account for the significant diversity of transition outcomes among ex-service personnel. Instead, he proposes that adaptability to environment is impacted by non-conscious dimensions of gendered identity that cross-cut apparently contrasting experience in civilian life for service leavers, whether labelled as success or failure. Contrasting excerpts from interviews with homeless British Veterans and those who had transitioned into paid employment, the author highlights gendered masculine military themes such as self-reliance, toughness and pride, and the manner in which these can shape transition trajectories depending on circumstance and context.



Giger. (2006). *Emerging Psychological Model of Military Retirement*. (Ph.D. Dissertation), Saybrook Graduate School and Research Center, San Francisco, California.

Giger (2006) reviewed the literature on transition into retirement to inform his qualitative study of retirement from military to civilian career and post service life. Interviewing 3 recently retired US Veterans, a three phase model is proposed: preparation, transition and the life beyond retirement. All participants were anxious and experienced self-doubt and apprehension during the *preparation phase*. The turmoil and experience of “fear-based” emotions associated with transition was particularly disturbing to participants “who were used to being in control of their lives”. The *transition phase* brought new emotional challenges mixed with a desire to break away from some aspect of military life, but also doubts about their choices to retire. Participants reported transition periods varying from 6 months to 4 years. Entering a “*new life*” phase was successful for all participants and marked by varying degrees of ongoing attachment to military identity and lifestyle, but also marked by a common theme of acceptance – an acceptance of the situation as it is and resolution to take steps necessary to adapt practically and emotionally.

Simmonds Goulbourne, J. D. (2009). *Preparedness for civilian roles and retirement: Successful anticipatory socialization through the Jamaican military’s Human Resource and Organization Development programs*. (Ph.D. Dissertation), Fielding Graduate University.

Simmonds Goulbourne (2009) considered Jamaican military member’s preparedness for civilian roles and retirement in her doctoral dissertation. Using questionnaires, document retrieval, and qualitative interviews with 34 ex-military employees of the Jamaica Defence Force, the author focused on the place of anticipatory socialization in successful adjustment to retirement. Retirement is considered a 21st Century life cycle phenomenon that represents movement into another era of one's life. This phenomenon is often treated as an anticipated event, yet often has concomitant preventable psychosocial stressors. Anticipatory socialization is the socio-psychological process of preparation for role transitioning aimed at minimizing the associated stress by learning about, anticipating and “rehearsing” for future positions, occupations and social relationships. Retirement preparedness programs are often considered ineffective because of their lateness and narrow focus. The study identified and provided empirical evidence of three distinct levels of anticipatory socialization that are necessary for psychosocial preparedness for, and adjustment to retirement. The pre-organization level (before recruitment), effects adjustment to military orientation and acculturation, while the intra-organizational level impacts organizational career development changes. At the final level of termination, anticipatory socialization shapes the psychosocial preparedness for, and adjustment to the post-organizational (post-service) period. Analysis showed that anticipatory socialization supported role transition for military personnel through acculturation (military socialization), intra-organizational (during career), personal, and professional development and psychosocial adjustment after service.



Aloi, J. A. (2010). *A social constructionist perspective on combat Veterans' post-war adjustment*. (D.M.H. Dissertation), Drew University, Madison, New Jersey.

Aloi (2010) completed in-depth interviews with ten US Veterans as part of a doctoral dissertation to examine post-war readjustment to civilian life, noting that there is no single model that describes the challenging emotional experiences involved in retiring from military service. Return home was described as “an abrupt transition to an old, yet new, familiar yet strange, world that seemed alien” (p.159). A major component of transition struggle revolved around managing and resolving the “clash of meanings” between Veterans and society at large. A congruency model, identifying combat Veterans as a unique subculture, was designed to explain the important role played by Veteran peers in the readjustment process. Participants were observed to actively embrace identities as Veterans and support a Veteran subculture where they felt more comfortable seeking commonality with other Veterans. Maintaining the Veteran identity served to enable the participants to find congruence, allowing them to move forward in their efforts to create personal narratives.

Adler, A. B., Zamorski, M., & Britt, T. W. (2011). The psychology of transition: Adapting to home after deployment. In A. B. Adler, P. D. Bliese, C. A. Castro (Eds.), *Deployment psychology: Evidence-based strategies to promote mental health in the military*. (pp. 153-174). Washington, DC, US: American Psychological Association.

In this book chapter, the authors provide an historical review of research on the transition process, highlighting the various transition issues that have faced service members in prior military conflicts. For example, they note that Faulkner and McGaw (1977) proposed three major phases for World War II and Vietnam War Veterans: “moving from the war, moving back to civilian life, and moving toward consolidating social involvement”. *Moving from the war* involved Veterans recognizing that they had to disengage from the military experiences and intense friendships. They were also aware of having lost time in the civilian world, having lost or changed part of themselves, and having lost friends in the war. *Moving back into civilian life* involved adjusting their perspective, and handling the shift in expectations about homecoming when others did not really want to hear what they had experienced. The Veterans had to relearn how to control aggressive impulses that were acceptable in a war zone, to manage their annoyance, and to reconnect with the reality of home. *Moving toward consolidating their social involvement* meant shifting the responsibility of reintegration from society back to the individual. Building on the foundation of historical and contemporary research, Adler et al., propose a model of transition with physical, emotional/cognitive and social dimensions. Using narrative theory, they observe that “service members are faced with the task of creating a coherent narrative to their lives, and understanding the role that the deployment may have in shaping their identity”. These challenges are integral to the process of transition, and not necessarily markers of pathology.



Demers, A. (2011). When Veterans return: The role of community in reintegration. *Journal of Loss and Trauma*, 16(2), 160-179.

Demers (2011) conducted focus groups with 45 US male Afghanistan and Iraq Veterans to examine their military to civilian transition experience. She suggested that the disorientation that Veterans experienced upon their return home was most likely explained by interactions influenced by a wide civilian-military cultural gap. She identified three themes in homecoming: “*time travelers*”, which reflected the sense of disconnection and unfamiliarity with civilian society, “*no one understands us*”, acknowledging that they were no longer the same individuals who went off to war. and “*crisis of identity*.” Veterans’ narratives suggested that they were thrust into a separation phase of identity development—liminality—caught between who they knew themselves to be in the military and who they are now that they are in the civilian world. They were “waiting to become someone else [again],” and had to create hybrid identities that incorporate military and civilian cultural knowledge, values, and practices. Most of the Veterans acknowledged a tension during this liminal phase, between wanting to reconnect with civilians and simultaneously wanting to retreat. There was a tension in this process between their yearning to be with people and their feelings of being misunderstood. They were also at risk during this phase of isolating themselves, waiting and hoping to become comfortable in their own skins again.

Goldich, R. L. (2011). *American Military Culture from Colony to Empire*. Daedalus, 140, 58-74.

Goldich (2011) suggests that there have been significant changes in the structure of American military culture over the past fifty years that have widened the inevitable gap between civilian and military culture to an unprecedented degree. Since the end of the Cold War, the Army has become a force that deploys and fights on a regular basis. The true citizen-soldier - who serves for only a few years and remains, at heart, a civilian - is no longer a reality, even for reservists and part-timers. The author argues that in the midst of a civilian society that is increasingly pacifistic, easygoing, and well adjusted, the Army (career and non-career soldiers alike) remains “flinty, harshly results-oriented, and emotionally extreme”. The gap has become a chasm that challenges those in the military to maintain respect for, understand, or re-integrate into civilian culture and lifestyles.

Kato, L. N. (2011). *The psychological adjustment of Veterans returning from Afghanistan and Iraq*. (Ph.D. Dissertation), Fielding Graduate University.

Kato (2011) conducted semi-structured interviews with 19 US Veterans returning to civilian life after deployment to Afghanistan and Iraq in order to provide an in-depth description of the themes related to the normal adjustment process they experienced. These Veterans faced the difficult task of reintegrating into their families, work, schools, and communities after exposure to multiple war-zone stressors. Seven major themes emerged from this research: (a) *Bridging the gap between military and civilian life*, (b) *Rebuilding a support system outside of the military*, (c) *Readapting to the “culture” of civilian life*, (d) *Battling the stereotypes*, (e) *Taming the flight-or-fight response*, (f)



Attitudes about mental illness carry over to civilian life, and (g) Finding meaning in a new life perspective and purpose. Cognitive theories, such as Schlossberg's adult transition theory, Lazarus' theory of psychological stress and coping, as well as posttraumatic resilience, stress, and growth theories provided a framework for understanding the adjustment process experienced by Veterans.

Teeter, G. T. (2011). *Returning to civilian life: Veterans and the loss of the military status hierarchy*. (Psy.D. Dissertation), Alliant International University, San Francisco Bay.

This study examined the role of the military status hierarchy in the lives of current and former US military members against the backdrop of increasing rates of military suicides. Participants included five current and five former male military members aged 21 to 32. Each participant was interviewed individually using a semi-structured interview format. Thematic analysis suggested that, among other factors, the status hierarchy (i.e., rank system) plays an important role in military members' experiences and that the corresponding lack of structure in civilian society is experienced as a loss upon departure from the military. Implications for addressing issues of status and hierarchy in civilian populations are also addressed.

Sigmon, J. P. (2012). *The deployed self in a moral order: Exploring the moral career of the readjusting Iraq war Veteran*. (Ph.D. Dissertation), University of California, Los Angeles.

This study examined how US Iraq War Veteran readjustment is a socially and morally mediated process, involving cultural and structural mechanisms that produce distinct, ordered phases of subjective experience. Based on data from thirty-five interviews, one particular and salient pattern of readjustment emerged that highlighted the impact of social support and support perceptions in shaping the postwar experience. Conceptualizing Veteran readjustment as a moral career, the status transition to "Iraq War Veteran" was shown to bring normative understandings about the proper treatment of Veterans by society. Veterans become situated within a shared moral order premised on the maxim of support for service: A reciprocally based social obligation, generated through deployed service, which symbolically implicates others in the Veteran's quest for postwar well-being. Consequently, Iraq War Veterans come to interpret and evaluate their personal postwar predicaments in terms that render their postwar realities as normatively intelligible, explicable, and significant due to the perceived absence or presence of social support. Instances of inadequate social support register as moral transgressions that incentivize a phase of postwar activity centered on social withdrawal. Discoveries of supportive social relationships affirm a social commitment to Veteran well-being, which inspires readjustment turning points, and encourages a phase of postwar activity based on participation in collective endeavors that serve to maintain the Veteran moral order.



Verey, A., & Smith, P. K. (2012). Post-combat adjustment: Understanding transition. *Journal of Aggression, Conflict and Peace Research*, 4(4), 226-236.

Verey & Smith (2012) conducted semi-structured interviews with 15 UK military personnel in order to shed light on how events in combat impacted their subsequent transition back to the UK. Six major themes were found: *the importance of being part of a group*—this provided collective identity, as well as providing a context for legalised violent behaviour; *shared experience*—personnel prefer to seek support from individuals with similar experiences; *help-seeking*—personnel prefer to seek help from friends as opposed to professionals; *professionalism and emotional processing*—the "macho" approaches in the military may prevent real help-seeking and emotional disclosure; *relationships and family*—there were adjustments to be made in regard to personal relationships; *civilian society*—participants found civilian society to be lacking in real challenge and some engaged in risk-taking behaviour.

Vest, B. M. (2012). *"I am a citizen soldier": Negotiating civilian and military in the post-9/11 National Guard*. (Ph.D. Dissertation), State University of New York at Buffalo.

This study is based on 14 months of anthropological ethnographic field research with US Army National Guard (ARNG) soldiers, their families, and military service providers in the United States. The author developed an ethnography that focused specifically on the balancing of dual civilian and military obligations in the context of frequent reserve deployments in the post-9/11 period and examined how these dual, and at times competing obligations influenced individual identity conceptions and the cultural construction of the citizen-soldier role. The author notes that dual belonging as a citizen-soldier is particularly interesting because of the many opposite premises upon which civilian and military culture are based, and because military participation has traditionally been viewed as an all-encompassing experience. Results suggested that the experience of deployment plays a key role in how soldiers manage their dual identities. Soldiers who have never deployed tend to compartmentalize their civilian and military experiences by using physical markers to signify their transition from one role to the next. In contrast, deployment Veterans display an increased internalization of the soldier identity and therefore experience a greater difficulty in reconciling civilian and military cultural modes of being, relying more on narrativity to organize their belonging. This discussion provides an entry point into theoretical discussions surrounding the place of individual agency in the negotiation of belonging.

Brunger, H., Serrato, J., & Ogden, J. (2013). "No man's land": the transition to civilian life. *Journal of Aggression, Conflict and Peace Research*, 5(2), 86-100.

In this qualitative study of 11 UK ex-servicemen, the authors identified three broad themes in the transition experiences of Veterans relating to: *characteristics of military life*; *loss experienced on return to civilian life*; and *attempts to bridge the gap between the two lives*. These themes were transcended by the shift in identity from soldier to civilian that occurs in MCT. Their study uncovered similarities and differences in reasons for joining the military, military conditioning and



MCT experiences. All participants described help-seeking as a weakness in military life which created a barrier to accessing resources in MCT. Participants admitted they were not good at seeking help. Substance use was a common coping strategy in the early phase of MCT, as was seeking continuity with previous military lifestyles. Those who had been out the longest noted that their mentalities had adjusted over time following a long and emotional period; some felt they would always be a soldier.

Demers, A. L. (2013). From death to life: Female Veterans, identity negotiation, and reintegration into society. *Journal of Humanistic Psychology, 53*(4), 489-515.

Demers replicated her 2011 study with 17 female Veterans, finding similar themes as identified with the previous 45 US male Afghanistan and Iraq Veterans (reviewed previously). The author found that female Veterans dealt with an additional complication of coping with a “war on two fronts”, fighting to fit in with and be accepted by the men during service, and then struggling with what it means to be female in a society where civilians are perplexed by their Veteran status and do not know how to treat them.

Hatch, S. L., Harvey, S. B., Dandeker, C., Burdett, H., Greenberg, N., Fear, N. T., & Wessely, S. (2013). Life in and after the Armed Forces: social networks and mental health in the UK military. *Sociology of Health & Illness, 35*(7), 1045-1064.

This study focuses on the influence of structural aspects of social integration (social networks and social participation outside work) on mental health (common mental disorders (CMD), that is, depression and anxiety symptoms, post-traumatic stress disorder (PTSD) symptoms and alcohol misuse). This study examines differences in levels of social integration and associations between social integration and mental health among service leavers (n = 1753) and personnel still in service (n = 6511), from a representative cohort study of the Armed Forces in the UK. The authors note that life transitions such as leaving service involve a significant redefinition in an individual’s role or status. The military as an institution demands a higher level of social integration than other organisations as part of its culture and purpose, and excludes those who do not integrate at the training stage. Leaving the military voluntarily or involuntarily after a finite number of years breaks the ties with the military family either partially or completely. “This loss of social embeddedness and group cohesion is often difficult to bear and is said to impede the successful transition and re-integration into civilian life”. This study found that participation in fewer social activities and smaller social networks was associated with depression, anxiety and PTSD in service-leavers, who as a group had less social participation and more social isolation than serving personnel.



Wands, L. (2013). "No one gets through it OK": the health challenge of coming home from war. *Advances in Nursing Science*, 36(3), 186-199.

This mixed-method study describes reintegration challenges faced by a sample of US student Veterans as well as some of the strategies they used in response to those challenges. Three themes emerged to describe complicating health issues that participants encountered when coming home from the war. The themes are as follows: flipping the switch, figuring out how to belong, and living the stress of a new normal. *Flipping the switch* describes the challenge of moving from the strict regimentation and vigilance of military life to the everydayness of civilian life – a shift sometimes complicated by the busy process of military release. The second complicating health issue for Veterans returning home from war is *figuring out how to belong*, resuming former relationships in light of changes that had occurred for them and for friends and family at home. The third complicating health issue of the challenge of coming home from war is *living the stress of a "new normal"*. As participants pulled further away from their military experience and began to pursue personal goals, including attending school and becoming acquainted with their new selves, they needed to negotiate the tension between gains and losses in the process of transitioning.

Bergman, B. P., Burdett, H. J., & Greenberg, N. (2014). Service Life and Beyond – Institution or Culture? *The RUSI Journal*, 159(5), 60-68.

The authors argue that becoming a member of the armed forces is better represented by a model of culture shock, than institutionalization, with reverse culture shock being experienced upon leaving. The authors reference John Gullahorn and Joanne Gullahorn's "W" model as a useful way of mapping and understanding the process of entering the armed forces on recruitment and ultimately returning to civilian life on transition to Veteran status. Recruit training and the early years spent as a trained soldier encompass the first stages of culture shock as the individual adapts to military service, eventually reaching 'a steady state' when the individual begins to adjust to his or her new cultural setting (completing the first side of the 'w'). Many will leave and return to civilian life at this stage, having completed their period of engagement, entering the reverse culture shock pattern of readaptation to civilian life (the second side of the 'w'). Those who stay on will generally progress to the more mature cultural adaptation where there is a clear sense of 'self' in harmony with the new culture, or even a mature biculturalism, where the individual knows and is able to navigate between two different cultures without compromising their cultural identity. An unsuccessful transition, at any stage, may progress to alienation and rejection. The authors suggest that the more mature the level of adaptation, the easier the process of readjustment is likely to be.

Castro, C. A., & Kintzle, S. (2014). Suicides in the military: the post-modern combat Veteran and the Hemingway effect. *Current Psychiatry Reports*, 16(8), 1-9.

The authors outlined a theory of MCT to describe the progression that service members go through as they transition out of the military. They suggest that military transition entails moving from the military culture to the civilian culture, producing changes in relationships, assumptions, work



context, and personal and social identity. The theory proposes three interacting and overlapping phases describing individual, interpersonal, community, and military organizational factors that impact the military transition process. The first phase, *approaching the military transition*, outlines the personal, cultural, and transitional factors that create the base of the transition trajectory. The second phase, *managing the transition*, refers to individual, community, organizational, and transition factors impacting the individual progression from service member to civilian. The final phase, *assessing the transition*, describes outcomes associated with transition. The key outcomes include work, family, health, general well-being, and community. MCT theory illustrates how certain factors may converge to create susceptibility to negative outcomes.

Koenig, C. J., Maguen, S., Monroy, J. D., Mayott, L., & Seal, K. H. (2014). Facilitating culture-centered communication between health care providers and Veterans transitioning from military deployment to civilian life. *Patient Education and Counseling*, 95(3), 414-420.

To describe returning Veterans' transition experience from military to civilian life, the authors completed qualitative, in-depth, semi-structured interviews with 17 male and 14 female US Iraq and Afghanistan Veterans and analyzed responses using a Grounded Practical Theory approach. Veterans described disorientation when returning to civilian life after deployment. Veterans' experiences resulted from an underlying tension between military and civilian identities consistent with reverse culture shock. Participants described challenges and strategies for managing readjustment stress across three domains: *intrapersonal, professional/educational, and interpersonal*. Culture-centered communication may help Veterans integrate positive aspects of military and civilian identities, which may promote full reintegration into civilian life. Health care providers may promote culture-centered interactions by asking Veterans to reflect about their readjustment experiences. By actively eliciting challenges and helping Veterans to identify possible solutions, health care providers may help Veterans integrate military and civilian identities through an increased therapeutic alliance and social support throughout the readjustment process.

Ahern, J., Worthen, M., Masters, J., Lippman, S. A., Ozer, E. J., & Moos, R. (2015). The Challenges of Afghanistan and Iraq Veterans' Transition from Military to Civilian Life and Approaches to Reconnection. *PLoS One*, 10(7), 1 - 13.

This qualitative study investigated US Afghanistan and Iraq Veterans' experience of MCT. Using an inductive thematic analysis approach to in-depth interviews with 24 Veterans, three overarching themes were developed. *Military as family* explored how many Veterans experienced the military environment as a “family” that took care of them and provided structure. *Normal is alien* encompassed many Veterans' experiences of disconnection from people at home, lack of support from institutions, lack of structure, and loss of purpose upon return to civilian life. *Searching for a new normal* included strategies and supports Veterans found to reconnect in the face of these challenges. The authors also observed that a vulnerable population of Veterans—those mistreated by the military system, women Veterans, and Veterans recovering from substance abuse problems – were less able to access peer support. The authors suggest that Homecoming Theory—developed



after World War II—serves as a valuable framework for understanding the challenges in the transition from military service. The theory posits that a traveler such as a military service member is separated from home by space and time. The service member and family members and friends at home have unique experiences during separation. Both the service member and the people and environments at home change during separation, and thus each will be in some ways unknown and unfamiliar to the other upon return. The differences between expectations and reality for the returning Veteran and family and friends at home can result in a shock on both sides; navigating homecoming involves re-establishing connections despite these changes.

Burkhart, L., & Hogan, N. (2015). Being a female Veteran: A grounded theory of Coping with transitions. *Social Work in Mental Health*, 13(2), 108-127.

Burkhart et al. conducted a qualitative study of 20 female Veterans who served post-Gulf War to generate a theoretical understanding of the challenges and coping strategies of women who entered, served in, and transitioned out of the military. For these Veterans, coping with transitions emerged as the basic psychosocial process comprised of seven key areas: *Choosing the Military, Adapting to the Military, Being in the Military, Being a Female in the Military, Departing the Military, Experiencing Stressors of Being a Civilian, and Making Meaning of Being a Veteran-Civilian*. The results of this study provide a theoretical description of the process female Veterans experience when transitioning from a civilian identity, through military life stressors and adaptations, toward gaining a dual identity of being a Veteran-civilian.

Elliott, B. (2015). Military nurses' experiences returning from war. *Journal of Advanced Nursing*, 71(5), 1066-1075.

The authors conducted a thematic analysis of data from in-depth semi-structured interviews with ten US military nurses and identified five themes in their post-deployment experiences. *Learning to manage changes in the environment* involved increased sensitivity to loud noises and visual stimuli. Difficulty adjusting to changes in living arrangements, making everyday choices, being around crowds and not trusting their surroundings were reported. *Facing the reality of multiple losses* referred to descriptions of coming home as an exciting time but also as a time of uncertainty. After a few weeks, reality set in and they began to realize things about themselves had changed, things about their families and support systems had changed and that life in general would never be like it once was. *Feeling like it's all so trivial now*, pointed to feelings of anger, frustration, stress and resentment towards people on returning home from deployment. They recognized early in their return that their perception of life and those things that were once acceptable or important to them before deployment, now seemed very insignificant and unimportant. *Figuring out where I 'fit' in all the chaos*; many of the nurses talked about having a structured daily routine while deployed, apart from fluctuations in patient volume. On returning home this routine came to a 'screeching halt' and they found themselves in a state of chaos. Participants quickly realized the roles and responsibilities they left behind were challenging to take back again. Some did not want to 'rock the boat' and interfere with new routines established by their families during their absence. Fitting



back in to family routines, returning to a stateside job, or simply figuring out what to do with the rest of one's life were all overwhelming. Some nurses described feeling like an imposter in their own homes because they did not know the routines anymore. The final theme identified was *working through the guilt to move forward*. Nurses changed how they viewed patient complaints, which were more difficult to validate after experiencing some of the horrors of war or having cared for soldiers who should have been screaming in pain but did not. Professionally, the decreased emotional capacity for caring for patients was also a major source of guilt for these nurses.

Rose, S. (2015). *Applying Durkheim's Theory of Suicide: A Study of Altruism and Anomie Among Canadian Veterans of Afghanistan*. (Ph.D. Dissertation), Queens University, Kingston, Ontario, Canada.

This research employs semi-structured qualitative in-depth interviews with 35 Canadian male Veterans who deployed to Afghanistan. A thematic analysis was conducted to understand the major social barriers individuals face as they transition into civilian occupations and family life. This research contributes to recent academic discussions in three main areas: Veterans' transition issues in the Canadian context, contemporary theories of suicidal ideation, and sociological understandings of morality. It contributes to these areas through a qualitative understanding of the transition from the military to civilian life, illustrating how the social transition itself is a major issue for many individuals, beyond physical injuries or psychological traumas incurred on operational duty. The author demonstrates how 'transitional injury' is the result of relatively anomic social conditions in civilian life, compared to life in the military and particularly life on deployment. The intense accountability derived from life or death situations in combat can never fully be replaced, but several participants were able to come back 'home' psychologically when a sense of moral purpose (sociologically speaking) was regained through communal integration and regulation post deployment.

6.4. Literature Reviews

Exploratory literature reviews have been published in recent years by Veterans Affairs Canada (Sweet and Thompson, 2009) and the Canadian Director General Military Personnel Research & Analysis (Watkins, 2011). In the UK, the Kings Centre for Military and Veteran Health Research published an evidence summary on UK military Veterans (Fear, Wood, & Wessely, 2009). In Australia, the Centre for Military and Veteran Research completed a literature review and study, Readjustment to 'Normal', looking at post-deployment adjustment of military members and their families with insights into the MCT process (CMVH, 2010). The U.S. Institute of Medicine conducted a comprehensive literature review on readjustment needs of U.S. military members and their families following deployments to Iraq and Afghanistan (IOM, 2013). In the following section, each of these literature reviews are presented and briefly described. This sample of reviews is representative but not exhaustive.



6.4.1. Canada

Veteran Affairs Canada (2009)

Sweet, J., & Thompson, J. (2009). *Literature Review of Military to Civilian Transition – Results of Initial Searches*. Research Directorate, Veterans Affairs Canada. Charlottetown, PE. Canada.

The authors reported on exploratory searches undertaken by the VAC Research Directorate in collaboration with librarians at Dalhousie University and the University of Prince Edward Island using PubMed, CINAHL, PsycINFO, EMBASE, Sociological Abstracts and WorldCat. Several hundred citations were found with the majority peripheral to the immediate MCT period. The review included international literature. The great majority of published studies were done in the United States. Less than 100 relevant papers were identified. The review notes that the MCT literature dates back to at least the 1940s, was sparse until the 1970s in the wake of the Vietnam War, and then increased considerably since about 1990. They observe that researchers have consistently written of the challenge of predicting who would experience a difficult transition, the importance of planning for release, the relative advantages of officer ranks, and the stressful nature of MCT. Consistent themes included the heterogeneity of MCT experiences, civilian employment placement, finances, the importance of adjusting from military to civilian identities and roles, health status and the importance of families. The literature in the 1940s-70s tended to focus on civilian employment issues and recognized the emotional stresses of MCT. Later literature broadened to include mental health, but civilian employment has continued to be a dominant theme.

Director General Military Personnel Research & Analysis (2011)

Watkins, K. (2011). *Literature Review on Mental Health and Career Challenges after Transition from Military to Civilian Life*. Department of National Defence: 82.

The author completed a literature review on the transition from military to civilian life to determine which factors are associated with mental health and career difficulties after transition. Many Veterans report benefitting from their military experiences in a variety of ways. For those former military personnel who did have mental health problems, however, these problems were associated with combat, personality traits such as decreased hardiness, low social support, poor family functioning and physical health problems, such as obesity and hypertension. Obstacles to securing civilian employment identified included lack of civilian education/training and lack of skill transferability. Transition assistance programs of the Canadian Armed Forces and Veterans Affairs Canada were also discussed.



6.4.2. United Kingdom

Kings Centre for Military and Veteran Health (2009)

Fear, N. T., Wood, D., & Wessely, S. (2009). *Health and Social Outcomes and Health Service Experiences of UK Military Veterans: A summary of the evidence*. The King's Centre for Military Health Research

This report summarizes available evidence in the national and international literature on the health and social outcomes, and the health service experiences, of former members of the UK Armed Forces. The review focused mainly, but not exclusively, on material published since 2003. The authors presented the following main findings. Taken as a whole, the UK ex-service population has comparable health to the general population, however, the current generation of UK military personnel (serving and ex-serving) have higher rates of heavy drinking than the general population. This difference may attenuate with age. The most common mental health problems for ex-Service personnel are alcohol problems, depression and anxiety disorders. In terms of the prevalence of mental disorders, ex-Service personnel are similar to their still-serving counterparts and broadly similar to the general population. The overall rate of suicide is no higher in UK ex-Service personnel than it is in the UK general population; ex-Service men aged 24 or younger are, however, at an increased risk relative to their general population counterparts. Military personnel with mental health problems are more likely to leave over a given period than those without such problems and are at increased risk for adverse outcomes in post service life such as increased risk of social exclusion and ongoing ill health. Early Service leavers are more likely to have adverse outcomes (e.g. suicide, mental health problems) and risk-taking behaviours (e.g. heavy alcohol consumption, suicidal thoughts) than longer serving Veterans. Different theatres of deployment can be associated with unique impacts.

6.4.3. Australia

Centre for Military and Veteran Research (2010)

CMVH. (2010). *Re-adjustment to Normal Centre for Military and Veteran Health, Herston, QLD, Australia*.

The authors note that there is little research on the normative course of reintegration or on the evaluation of programs such as resilience training and decompression programs, many of which are new. Among military members, the literature suggests that junior enlisted personnel are particularly vulnerable during and beyond the deployment cycle. Other groups identified as having specific vulnerabilities are female serving members, reservists, and military families, particularly children and care-givers. There is a dearth of Australian research in general, and what there is needs updating to cover recent deployments and changing social trends. The authors note that given the breadth of the issues surrounding 'Adjustment', there is a need for rigorous prioritising of areas for further work.



6.4.4. United States of America

U.S. Institute of Medicine (2013)

IOM. (2013). *Returning Home from Iraq and Afghanistan: Assessment of Readjustment Needs of Veterans, Service Members, and Their Families*. Washington, DC: National Academies Press.

The US IOM appointed a Committee of 29 experts to conduct a comprehensive assessment of the physical, psychological, social and economic effects of deployment, and identify gaps in care for members, former members, families and communities. They reviewed scientific studies in peer-reviewed literature, government reports, Congressional testimony, other IOM reports, information supplied by DOD (Department of Defense) and VA (Veterans Administration), and presentations by DOD and VA researchers. The Committee found that readjustment following deployment encompasses a complex set of health, economic and social issues. The report noted that many Veterans adjust well post-deployment, but others experience a wide range of complex health outcomes that present life-long challenges and hinder readjustment. Despite the existence of numerous programs for returning personnel, Veterans, and family members, there is little evidence regarding their effectiveness, and system-wide challenges exist that create barriers to treatment access. Military families often endure the adverse consequences of deployments, for example, health effects, family violence, and economic burdens. Unemployment and underemployment are acute problems for military Veterans.



7. Annotated Bibliography

The 306 articles considered in-scope for this review covered a wide variety of designs and methodologies ranging from qualitative single case studies to epidemiological investigations. Study foci ranged from inquiry into, and management of capacity impacting physical and mental conditions, to consideration of personal cognitive/emotional factors such as resilience, and others that examined environmental or contextual influences on transition. The purpose of this bibliography is to provide an inventory of the current evidence that emerges relating specifically to military to civilian “transition”. The results catalogued here, therefore, reflect those thematic areas that emerge when searches specify “transition” as a key aspect of the inclusion criteria. Documents must include some aspect of the MCT as part of the factors or context considered in the research. Literature searches of sub categories, such as identity or mental health, without the “transition” search term specifier, would result in more extensive bibliographies in each area.

There does not appear to be any agreed upon taxonomy for classifying this diverse MCT research. The World Health Organization’s International Classification of Health and Functioning (ICF), acknowledges the complex interrelationship between physical, mental and social health, and provides an ecological, biopsychosocial framework that considers every person within their context: relative functioning or ability to participate in life results from a dynamic interaction between a person’s health condition (physical and/or mental), their social and physical environment, and personal factors (WHO, 2013). This framework was adopted here to organize the literature in terms of facilitators and barriers to functioning, health and well-being.

The following annotated bibliography is organized into four main categories, the first three reflecting the ICF framework. They include: 1, Research concerning the Social or Environmental Context and Determinants (with subcategories such as employment, education, family, and institutional factors or military service type); 2, Research concerning Personal Emotional/Cognitive factors (with subcategories such as gender, identity and preparation); and 3, Research relating to Physical and Mental Conditions or Capacity (with subcategories such as Mental Health, Physical Injuries and Illness, and Disability or Capacity Factors.). A fourth section is provided for documents relating to suicide, reflecting the pressing need to understand this MCT outcome as occurring as the result of a dynamic interplay between physical, social and personal factors.

For Veterans and their family members, these dimensions may overlap or affect one another – what happens in one area can affect all the others. The studies themselves also resist simple categorization as they frequently overlap some or many areas. For example, a study looking at the impact of social support on coping with physical injury overlaps physical and social context categories. For the sake of clarity and simplicity, studies are only listed once and are organized here by their main focus as distinct domains in the transition process. Within each of the included subcategories, *Canadian* and *Other Country* studies and reports are divided into separate sub-sections where there are more than two documents in each.



Engle (2015) recommends that annotations are written as descriptive commentaries that include: 1. The study objective; 2. Methodology; 3. The population studied; 4. Findings; 5. Relevance; and 6. Quality. For each document considered relevant to MCT that are included in the following bibliography, full reference and an annotation are given. Because of the heterogeneity of documents and methodologies, comments on quality are not made in the current review.

The bibliography is organized according to the following themes that emerged from the literature in each of the main categories:

7.1. Research concerning the Social or Environmental Context and Determinants

- 7.1.1. Retirement
- 7.1.2. Finances
- 7.1.3. Employment,
- 7.1.4. Education
- 7.1.5. Families
- 7.1.6. Social Support/Community Reintegration
- 7.1.7. Deployment/Post-Deployment
- 7.1.8. Health Service Determinants/ Improving Access, Support and Culturally-Appropriate Care
- 7.1.9. Population Research and Special Reports on MCT Determinants
- 7.1.10. Homelessness

7.2. Research concerning Personal Emotional/Cognitive Factors

- 7.2.1. Gender
- 7.2.2. Female Veterans
- 7.2.3. Identity
- 7.2.4. Meaning Making/Narrativity/Posttraumatic Growth
- 7.2.5. Resilience
- 7.2.6. Risk Taking and Health Behaviours
- 7.2.7. Preparation
- 7.2.8. Anger/Antisocial or Violent Behaviour
- 7.2.8. Patient Satisfaction/Quality of Life

7.3. Research relating to Physical and Mental Conditions, State or Capacity

- 7.3.1. Mental Health
- 7.3.2. Physical Health, Illness and Injury
- 7.3.3. Disability and Rehabilitation
- 7.3.4. Sleep
- 7.3.5. Health and Well-Being
- 7.3.6. Ageing and the Life Course

7.4. Suicide



7.1. Research concerning the Social or Environmental Context and Determinants

7.1.1. Retirement

Dowd, J. J. (2001). *From Officers to Gentlemen: Army Generals and the Passage to Retirement, Restructuring Work and the Life Course* (pp. 233-257). Toronto, ON, Canada: University of Toronto Press.

This chapter is drawn from a multidisciplinary collection of essays, in which forty-eight social scientists from seven countries examine changes in the organization of work and their impact on people at various stages of the life course. The chapter suggests the following: That the US Army continues to foster -- particularly among its officers -- an ideal of career stability and development. Even after retirement from the armed forces, Army officers are likely to maintain stable career patterns, while their ties to the military continue. That most continue to self-identify as military men or women. That the Army's successful utilization of career stability and the development of employee attitudes model the characteristics that are necessary to sustain all employees, both military and civilian, through transitional periods. That Army officers reaching retirement are overwhelmingly dedicated to continuous learning and self-improvement - values instilled and nurtured throughout their military service.

Graves, R. T. (2006). A comparative study of the life satisfaction of early retirement military officers. *Dissertation Abstracts International Section A*, 66, 3221.

This dissertation compared the life satisfaction of early retirement military officers with several comparison groups on the basis of Retirement Descriptive Index (RDI) scale scores. Analysis of RDI scale scores, using inferential statistical procedures revealed that early retirement military officers experienced slightly lower measures of life satisfaction in general than all comparison groups, and specifically experienced lower levels of satisfaction with their financial situations. Qualitative data was included to complement the statistical analysis. Recommendations for research and practice were made regarding early retirement military officers.

Shultz, K. D.; Taylor, M.A.; Morrison, R.F., (2003). Work Related Attitudes of Naval Officers Before and After Retirement. *International Journal of Aging and Human Development* 57(3): 259-275.

Prospective expectations for retirement and retrospective accounts of past work experiences are typically used in cross-sectional empirical studies of retirement. Unfortunately, little is known about the accuracy of such accounts. Therefore, in their longitudinal study, the authors built on the work of Beehr and Nielson (1995) by examining the consistency of these accounts over time using data from two questionnaires (Career Development Questionnaire; Retirement from Naval Life Questionnaire) completed by 672 military retirees over a four- to five-year period. Mixed evidence for the consistency of these attitudes across time was found. Specifically, the results of this study were much weaker than Beehr and Nielson's results, thus suggesting that longer time intervals between measurements may erode the accuracy of prospective estimates and retrospective accounts. Results are discussed in terms of the uniqueness of the military retirement and how civilian retirement and military retirement are becoming similar.



Spiegel, P. E. (2003). The Influence of Preretirement Planning and Transferability of Skills on Naval Officers' Retirement Satisfaction and Adjustment. *Military Psychology* 15(4): 285-307.

This study, by way of a questionnaire (Officer Career Questionnaire) and a survey (Retirement from Navy Life Survey) sought to determine if preretirement planning and having knowledge, skills, and abilities (KSAs) that are readily transferable to civilian work affected the retirement satisfaction and adjustment of retired naval officers. Data (N=672) from a large scale, longitudinal study of naval officers' career development was used. Results from the analysis of the questionnaire and the survey indicated that both preretirement planning and transferability of KSAs influence the retirement satisfaction and adjustment of naval officers. The authors discuss how these findings add to our understanding of both military retirement and civilian late career transitions.

7.1.2. Finances

Fitzgerald, K. G. (2006). The Effect of Military Service on Wealth Accumulation. *Research on Aging* 28(1): 56 - 83.

This study examines the association between serving active military duty and wealth accumulation. Using data from the first wave of the Health and Retirement Study, a sample of 5,800 men was analyzed to determine the relationship between the length of time spent on active military duty and net worth. Multiple regressions suggest that factors commonly associated with wealth accumulation significantly affect net worth; the total number of years served was significant in that additional years of service decreased net worth. Results were insignificant for respondents who served more than 20 years but suggest that extended military service may positively affect net worth. Overall, the results show that there is an economic disincentive to serve in the military, which may affect the ability of Veterans to accumulate wealth and future military recruitment.

MacLean, A. (2008). The Privileges of Rank: The Peacetime Draft and Later-life Attainment. *Armed Forces & Society* 34(4): 682-713.

This article examines the effects of peacetime Cold War military service on the life course according to four competing theories. Subsequently it suggests a framework for understanding how variation in three dimensions affects the likelihood that Veterans' outcomes will correspond with any of the four theories. The article argues that the extent to which the effect of military service on Veterans' lives corresponds with one or another of the preceding theories depends on historical shifts in three dimensions: conscription, conflict, and benefits. Data from a longitudinal study were used to determine that military service during the peacetime draft era of the late 1950's had a neutral effect on the socioeconomic attainment of enlisted Veterans. However, it had a positive effect on Veterans who served as officers, which partly stemmed from status reproduction and selection.

MacLean MB, Van Til L, Thompson JM, Poirier A, Sweet J, Adams J, Sudom K, Campbell C, Murphy B, Dionne C & Pedlar D. (2011). *Income Study: Regular Force Veteran Report*. Veterans Affairs Canada, Research Directorate and Department of National Defence, Director General Military Personnel Research and Analysis. January 4, 2011: 70p.

As part of the Life After Service Studies (LASS) program of research, this report examines relative income and family income using Statistics Canada's low income measure (LIM); and describes



income trends and income differences between sub-populations within a larger population of Veterans. Statistics Canada linked together DND records for 36,638 Regular Force Veterans to general family tax records. Results revealed that total average Veteran income was \$62,000 in the year prior to release and rose in the release year and then declined in the year after release. Subsequently total average income rose and eventually exceeded the pre-release level. Compared to the year prior to release, income declined on average by 10% during the first three years post-release. Declines differed considerably between groups. Females experienced a 30% decline, the medically released personnel a 29% decline and Veterans who served from 10 to 19 years a 21% decline while subordinate officers experienced an increase of 27%. The groups with the highest declines in income post-release were more likely to be current VAC clients.

7.1.3. Employment Canadian Documents

Dallaire, R. A. and D. M. Wells (2014). *The Transition to Civilian Life of Veterans*. Veterans Affairs, Subcommittee on Veterans Affairs: 110.

This paper summarizes the findings and recommendations of the members of The Subcommittee on Veterans' Affairs regarding initiatives taken by the public and private sectors to promote the meaningful employment of releasing CAF members and Veterans during and after their transition to civilian life. The Subcommittee began the study in October 2011. It held 17 meetings on the topic and heard testimony from 44 different witnesses, including representatives of the CAF, various federal government departments and agencies, DND, VAC, and a number of community and private sector organizations.

Thompson JM, Corbière M, VanTil M, Pranger T, Shields N, Wong M, Basque C, Van Til L. (2011). *BECES-V: Modification of the BECES tool (Barriers to Employment and Coping Efficacy Scales) for Veterans with Mental Health Problems Reintegrating in the Workplace*. Veterans Affairs Canada, Charlottetown, Prince Edward Island, and CAPRIT (Action Centre for Prevention and Rehabilitation of Work Disability), School of Rehabilitation, Université de Sherbrooke, Longueuil, Quebec. VAC Research Directorate Technical Report. 20 June 2011;10 p.

The goal of this project was to adapt a psychometric tool for evaluating barriers to work and self-efficacy that can be used to assist military Veterans who have mental health problems and are transitioning from military service to civilian life. A multidisciplinary team was assembled to modify for Veterans the BECES (Barriers to Employment and Coping Efficacy Scales), a tool for assisting civilians with severe mental health disorders to reintegrate in the workplace. Modifications were based on the findings of a literature review and a qualitative study, and clinical experiences working with serving and former military personnel. The team also considered items used in a civilian tool called ROCE- CMD (Return to work Obstacles and Coping Efficacy – Common Mental Disorders) in order to broaden applicability from severe mental disorders to a range of mental health problems. This work produced an initial version of the modified BECES tool called BECES- V (Barriers to Employment and Coping Efficacy Scales – Veterans).



Watkins, K. (2011). *Literature Review on Mental Health and Career Challenges after Transition from Military to Civilian Life*. Department of National Defence, Director General Military Personnel Research & Analysis.

This is a literature review on the transition from military to civilian life to determine which factors are associated with mental health and career difficulties after transition, and to examine the methods employed by the CF, the Department of National Defence (DND), and Veterans Affairs Canada (VAC) to treat or, optimally, prevent these problems. Combat exposure, personality traits such as hardiness, and social support were shown to be associated with mental health problems. Difficulties with mental health were often related to poor family functioning, as well as physical health problems, such as obesity and hypertension. Lack of civilian education and training and skill transferability were identified as obstacles in securing civilian employment. Transition assistance programs of the CF and VAC are discussed.

Van Til, L., Fikretoglu, D., Pranger, T., Patten, S., Wang, J., Wong, M., Zamorski, M., Loisel, P., Corbiere, M., Shields, N., Thompson, J., Pedlar, D. (2013). Work Reintegration for Veterans with Mental Disorders: A Systematic Literature Review to Inform Research. *Physical Therapy*, 93(9), 1163-1174. The objectives of this study were to describe the scope of the existing literature on mental disorders and unemployment and to identify factors potentially associated with reintegration of workers with mental disorders into the workforce. The following databases were searched from their respective inception dates: MEDLINE, EMBASE, Cumulative Index Nursing Allied Health (CINAHL), and PsycINFO. A systematic and comprehensive search of the relevant published literature up to July 2009 was conducted that identified a total of 5,195 articles. From that list, 81 in-scope studies were identified. An update to July 2012 identified 1,267 new articles, resulting in an additional 16 in-scope articles. Three major categories emerged from the in-scope articles: return to work, supported employment, and reintegration. The literature on return to work and supported employment is well summarized by existing reviews. The reintegration literature included 32 in-scope articles; only 10 of these were conducted in populations of Veterans. Conclusions drawn are that there is limited knowledge about how to integrate people with mental disorders into a new workplace after a prolonged absence (>1 year). Even more limited knowledge was found for Veterans.

Employment

Other Countries

Abraham, K. M., et al. (2014). Receipt of employment services among Veterans Health Administration users with psychiatric diagnoses. *Journal of Rehabilitation Research and Development*, 51(3), 401-414.

This study examined the population-based reach of Veterans Health Administration (VHA) employment services to VHA patients with psychiatric diagnoses. In a random sample of all patients who received VHA services in 1 yr., 4.2% of VHA patients with a psychiatric diagnosis received employment services. VHA patients with schizophrenia and bipolar disorder were more likely to receive any employment services and to receive supported employment than were patients with depression, PTSD, or other anxiety disorders. VHA patients with depression and PTSD were more



likely to receive transitional work and vocational assistance than patients with schizophrenia.

Baruch, Y., & Quick, J. C. (2007). Understanding second careers: Lessons from a study of U.S. navy admirals. *Human Resource Management, 46*(4), 471-491.

This survey examined the career transitions of 334 senior ranking Naval officers who transitioned into second careers as senior executives at large dynamic private businesses. The study was based on a model of transition developed through a review of the literature, and examined critical success factors in managing career transitions, in particular: (1) the place of individual proactivity in career strategizing, (2) the role of the organization in managing this transition, (3) the role of both family and networking, and, particularly, (4) the role of the individual career approach. The retired admirals in this study largely enjoyed a smooth transition into civilian careers. Their traditional career was associated primarily with external success, the contemporary protean career with internal success. The role of the organization proved instrumental for a successful transition.

Carter-Boyd, B. L. (2013). Transitioning from the military to federal civil service employment: Preferential hiring and its unintended consequences on the mid-life career transition and workplace adaptation of Veterans. *School of Business and Technology. Capella University. Ph.D.:* 210.
The purpose of this dissertation was to explore the employment challenges that military Veterans experienced when attitudes and perceptions about Veterans' preference were encountered from non-Veterans working in federal government organizations. Qualitative data was collected and descriptive phenomenological analysis was used. Findings indicated that neither past nor present interventions have eliminated concerns for how Veterans are treated in their pursuit of employment with the federal government.

Gowan, M. A., Craft, S. L., & Zimmermann, R. A. (2000). Response to work transitions by United States Army personnel: effects of self-esteem, self-efficacy, and career resilience. *Psychological Reports, 86*(3 Pt 1), 911-921.

This paper examined association of self-esteem, self-efficacy, and career resilience with the responses of US Army personnel making the transition to civilian jobs. Specifically, the study addresses whether personality traits are related to the appraisal of the transition from Army to civilian life and to how individuals plan to manage the transition to yield employment success. Self-esteem, self-efficacy, and career resilience were the personality variables examined. Only self-esteem and career resilience were related to harm appraisals of the transition.

Herasingh, C. A. (2015). The military to civilian transition and its influence on vocational identity. *Dissertation Abstracts International, 76*, , Walden University. Ph.D.: 185.

This dissertation uses phenomenological study to examine the transition from military to civilian life and the influence of this transition on the vocational identity of U.S. Army combat Veterans who served in Gulf War Era II. Semistructured interviews were conducted with 5 U.S. Army combat Veterans who attend community college in the western United States. Data were analyzed using the 6-step interpretative phenomenological analysis method. The findings of this study reflect transition difficulties related to isolation, strained relationships with friends and family members, a lack of direction, and unemployment, all of which contribute to vocational identity and the development of social and professional networks in the civilian world.



Kester, D. L. (2014). *Career decisions among reintegrating military Veterans: Implications for postsecondary and adult education*. Education. Capella University. Ph.D.: 132.

This case study was designed to address the issue of career decision-making among first-term Veterans, defined as those who have served only one enlistment, amidst transition back to civilian life and postsecondary education. Questions were designed to reveal the decision-making process of Veterans in the context of a major military drawdown from over a decade of war in the Middle East and an ominous economic climate. A case study approach was used using qualitative interviews of first-term Veterans in transition from active duty. Twelve participants were asked about their awareness of self-knowledge and occupational knowledge necessary to make a congruent career decision. Interviews were performed on site in the Veteran's center of a large postsecondary institution. A qualitative software program was used to code the data and identify themes. Results indicated that the military's mandatory 5-day transition program was found to be ineffective in preparing these Veterans for civilian life and certainly had little effect on dissolving a firmly held military identity. Postsecondary and adult education (PSAE) was criticized for not being proactive enough, as Veterans did not seek out much needed assistance. Furthermore, it was discovered that the culture shock of transition might have precluded meaningful career planning by Veterans until they were able to adjust to civilian life. Support from the military, PSAE, family and friends can have a mitigating effect on the stress of this transition.

Marshall, V. W. (2001). *Restructuring Work and the Life Course*. *Restructuring Work and the Life Course*. Toronto, ON, Canada, University of Toronto Press.

In this multidisciplinary collection of essays, forty-eight social scientists from seven countries examine changes in the organization of work and their impact on people at various stages of the life course. One chapter focuses on the transition from being an army general to retirement.

McDermott, J. (2007). *Old soldiers never die: they adapt their military skills and become successful civilians: what factors contribute to the successful transition of army Veterans to civilian life and work?* (D.Soc.Sc. Dissertation), University of Leicester, MI. (U237412)

This doctoral dissertation identified a number of factors that explain why those leaving the armed forces after 22 years or more of army service make successful transitions to civilian life. The study suggests that the existing literature is primarily concerned with those who, having served for relatively short periods of time, leave and suffer a range of social and health problems including mental illness, homelessness, unemployment and alcoholism. 51 Veterans participated through written mini biographies, and interviews. The main findings show that successful army Veterans accepted that their army service was ending and prepared early for civilian life and work, that most adapted their military skills and attitudes to suit the civilian environment and accepted that many civilians do not work and think in the same, positive way as former soldiers and gradually modified their own approach to work.



McNutt, J. M. (2005). Work adjustment of returning Army reservists: The effect of deployment and organizational support. *Behavioural Sciences, Occupational Psychology*. , Alliant International University. Ph.D.: 123.

The focus of this dissertation was to assess the relationship between the three main variables under investigation: work adjustment (outcome variable), experience of deployment (predictor variable), and experience of organizational support (predictor variable). Furthermore, specific organizational support practices (e.g., job reassurance, differential pay, reorientation training, etc.) were examined to determine which practices were most meaningful to reservists. This research was an explorative, cross-sectional correlation study of U.S. Army Reservist personnel who returned to their civilian jobs after being deployed for more than 180 days. A 71-item survey consisting of three scales (Experience of Deployment, Organizational Support, and Work Adjustment) was developed and tested with 164 participants who were selected through non-probability sampling. The results confirmed four of the five hypotheses, with the statistical significance set at the critical alpha value of .05. Results supported that the greater the level of perceived organizational support from civilian employer: (1) the greater the degree of work adjustment, (2) the more positive the deployment experience, and (3) the greater the satisfaction with working at the company. In addition, the level of work adjustment was positively correlated with intent to stay with the company. No relationship was found between work adjustment and experience of deployment. The findings suggest that organizations play an important role in the adjustment experience of reservists returning to work.

Melancon, A. L. (2010). *Reintegration of combat Veterans into the civilian workforce*. Social Sciences. Empire State College. M.A.: 65.

This thesis/report is based on a practicum at a not for profit organization to better understand the reintegration issues for Operation Enduring Freedom and Operation Iraqi Freedom combat Veterans. In addition to reviewing employment statistics, resource and benefits access is researched and analyzed to identify possible holes in the service member to Veteran transition post combat. The report concludes with recommendations for a better military transition program to eliminate barriers for Veterans who have earned and deserve a smooth transition back to their civilian lives regardless of any temporary or long term limitations acquired during combat.

Nelson, C. B., et al. (2015). Factors Associated with Civilian Employment, Work Satisfaction, and Performance Among National Guard Members. *Psychiatric Services* 66(12): 1318-1325.

This study investigated factors associated with employment-related outcomes (employment status, self-reported work performance, and self-reported work satisfaction) among National Guard members returning from Operation Enduring Freedom, Operation Iraqi Freedom, or Operation New Dawn deployments. The sample consisted of 1,151 National Guard service members who had returned from overseas deployments approximately six months earlier. Bivariate and multivariable analyses were performed to examine associations between predictors and employment-related outcome variables. Higher-risk alcohol use was associated with reduced odds of being employed as well as with lower ratings of work satisfaction, whereas psychiatric symptom load was associated with lower self-reported work performance and work satisfaction ratings. Perceived social resources were associated with higher self-reported work performance and work satisfaction,



whereas better physical functioning was associated with better self-reported work performance. This study is relevant to policy makers and clinicians who may need to consider and assess alcohol use among unemployed National Guard members. There may also be a need to consider the psychiatric symptom load and physical functioning among employed service members who perceive poor work performance and have low work satisfaction.

Petersen, S. A. (2012). *Work after war: National Guard Soldiers' experience of the post-deployment return to civilian employment*. Psychology. Chestnut Hill College. Psy.D.: 119.

This qualitative, phenomenological study examined the experience of U.S. Army National Guard soldiers returning to civilian employment following a military deployment to Iraq or Afghanistan. Nine military reservists, who had been deployed for a minimum of 6 months to Iraq or Afghanistan in support of Operations Iraqi Freedom or Enduring Freedom, were interviewed regarding their experience of returning to civilian employment upon repatriation. Participants were asked to describe their work values and needs in the context of their current civilian employment. Phenomenological data analysis indicated nine themes that described the experience of returning to civilian employment after repatriation. The results of this study suggest several recommendations for future research and for clinicians currently working with repatriating military reservists. Clinical implications include the need for greater dissemination of information about the repatriation process beyond simply warnings regarding the potential for psychopathology, the role of expectations versus experiences during the repatriation process, and the benefits of processing deployment experiences with knowledgeable others.

Redmond, S. A., et al. (2015). A brief introduction to the military workplace culture. *Work* 50(1): 9-20.

The purpose of this article is to introduce general concepts regarding the structure and culture of the United States Military and discuss how this creates challenges for reintegrating into the civilian world. Topics covered include an overview of the Department of Defense (DoD) and Department of Veterans Affairs (VA), socialization to military culture, the unique features of the military as a workplace, the cultural experiences of military personnel reintegrating back into the community, and the challenges faced by military members and their spouses. The information is intended to expand military cultural competency so that civilian employers can enhance their ability to create supportive workplaces for Veterans and military spouses during times of transition and reintegration.

Schmaltz, P. (2013). *Combat to Corporate: A Qualitative Phenomenological Study on Injured Veterans Transitioning to the Civilian Workforce*. *Management in Organizational Leadership*. University of Phoenix. D.M.IST.: 247.

This qualitative transcendental research study examines the phenomenon of those wounded who leave military service and join civilian employment from the perspective of those who have traversed the path from military to civilian, all while dealing with mental, emotional, physical and career rehabilitation. The sample consists of 25 Veterans of the Operation Iraqi Freedom / Operation Enduring Freedom combat areas who were injured and left the military and attained civilian careers. This exploration includes the expectations the Veterans had of joining the civilian



workforce and how those expectations and other determiners affected the transition in their estimations. The study reveals the factors influencing the Veterans as they accepted their first civilian job, what their mindsets and attitudes were, and the situations they encountered in dealing with civilian employment when they initially left the military. This research is an analysis of their lived experiences, and provides recommendations for future research to military, business and government leadership.

Schult, T. (2014). *The effects of job-related strains and stressors on mental health symptoms in national guard Veterans returning from Iraq*. Environmental Health. University of Minnesota. Ph.D.: 145. The aim of this dissertation research was to examine, in a cohort of NG military Veterans returning to civilian work after deployment to Iraq, job-related issues and their role in the development of post-deployment mental health symptoms. Prospective, longitudinal data from 522 participants in the Readiness and Resilience in National Guard Soldiers study were used. Pre-deployment (one month prior to deployment) and post-deployment (2-3 months after return and again one and two years later) data was collected. Dependent variables, post-traumatic stress disorder (PTSD) as assessed with the PTSD Checklist - Military Version (PCL-M), and depression, as assessed with the Beck Depression Inventory-II (BDI-II) were integrated into the models. Linear regression models were employed to examine the effects of job concerns, job stress, and job support on post-deployment symptoms of PTSD and depression. It was determined that NGR Veterans face unique challenges post-deployment as their military service is relatively part-time and they retain commitments to civilian jobs despite involvement in protracted or multiple deployments. It was shown that employment-related strains and stressors are associated with the development of post-deployment mental health symptoms; job stress and poor coworker support contribute to symptoms of depression in NG Veterans over two years after returning from Iraq. In addition, job stress may also contribute to an increase in symptoms of PTSD in some NG Veterans not already experiencing symptoms in the early post-deployment time period. Overall, this research provides insights that have important implications for research and practice in this special population of Veterans.

Szelwach, C. R., et al. (2011). Transitioning to the Civilian Workforce: Issues Impacting the Reentry of Rural Women Veterans. *Journal of Rural Social Sciences* 26(3): 83-112. This exploratory study builds on the 2001 report by the Women's Research and Education Institute (WREI), which outlined the effects of military service on women Veterans' civilian employment prospects. In addition, it explores the specific challenges through a review of current literature, assessment of Bureau of Labor Statistics datasets, and the conduct and analysis of qualitative interviews. Addressing the needs of women Veterans returning to rural environments for employment requires a three-pronged approach that includes measuring the effectiveness of current programs utilizing metrics specific to rural women Veterans, revising programs to fit the needs of rural areas, and forming new partnerships to engage and educate rural employers on the value that women Veterans bring to the workplace.



7.1.4. Education

Abramson, T., Nissly, J., & Campbell, S. (2015). Outside the wire: A community-based partnership model for prevention and early identification of psychosocial challenges for student Veterans. In J. E. Coll, E. L. Weiss, J. E. Coll, & E. L. Weiss (Eds.), *Supporting Veterans in higher education: A primer for administrators, faculty, and academic advisors*. (pp. 239-259). Chicago, IL, US: Lyceum Books.

This book chapter provides a discussion of transitional challenges often faced by Veterans. Difficulties can include a shifting sense of identity; feeling isolated, marital discord and family risks (as both protective and risk factors); employment, military service, and academic performance; and financial hardship. Stressors and early intervention efforts are explored, along with a model to assist in making informed decisions. Community-based partnerships are also described to inform the reader on potential sources for building community capacity to meet the psychosocial needs of student Veterans.

Ackerman, R. D., & Mitchell, R. L. G. (2009). Transitions: Combat Veterans as College Students. *New directions for student services* (126), 5-14.

This qualitative research was designed to investigate how combat Veterans who become college students make the transition to campus life, in order to identify how administrators can acknowledge and support them. Twenty-five students who served in the Iraq or Afghanistan wars were interviewed. The findings suggest that combat Veterans are a student population with special needs and require support from both policymakers and program providers.

Black, T., et al. (2007). From the Front Line to the Front of the Class: Counseling Students Who Are Military Veterans. *Special populations in college counseling: A handbook for mental health professionals*. J. A. Lippincott, R. B. Lippincott, J. A. Lippincott and R. B. Lippincott. Alexandria, VA, US, American Counseling Association: 3 - 20.

This is a book chapter intended to bring awareness to the cross-cultural issues that Veterans who become students in higher education may face. The purpose is to add support for transition from the military into higher education institutions and into the rest of their civilian lives. Counseling students who are military Veterans requires a cross-cultural sensitivity on the part of counselors in higher education.

Buechner, B. D. (2015). Contextual mentoring of student Veterans: A communication perspective. *Human and Organizational Development*, Fielding Graduate University. Ph.D.: 303.

This dissertation is a qualitative phenomenological study examining narratives of successful student Veterans for ways that mentors played a role in their transition from military service to academia. Narrative data were examined using a composite metatheoretical model drawing on domains of human experience and the coordinated management of meaning theory of social construction in communication. An unexpected but significant finding was the presence and role of traumatic experiences fitting the description of “moral injury” or “psychic wounding” as linked to the episodes of being mentored while making meaning of these experiences.



Curran, G. M., et al. (2013). A mixed method analysis of binge drinking among student Veterans in rural community colleges [Conference Abstract]. *Alcoholism: Clinical and Experimental Research*, 37, 136A.

This mixed method study investigates the prevalence of substance use and mental health problems, and help-seeking behaviors, among samples of Veterans and non-Veterans from 11 rural community colleges in Arkansas. Preliminary data analyses indicate a need for increased recognition of alcohol misuse and other mental health problems and intervention in this population.

Curran, G. M., et al. (2014). Binge drinking among student Veterans and civilians in rural community colleges [Conference Abstract]. *Alcoholism: Clinical and Experimental Research* 38, 142A.

This mixed methods study investigates the prevalence of substance use and mental health problems, and help-seeking behaviors, among samples of Veterans and non-Veterans from 11 rural community colleges in Arkansas. The goal is to develop novel linkage-to-care interventions based on the Veterans' perspectives. Preliminary analyses indicate a need for increased recognition of alcohol misuse and intervention in the student Veteran population.

Finney, K. and S. L. Wilcox (2015). A proposed needs assessment for student Veterans. *Supporting Veterans in higher education: A primer for administrators, faculty, and academic advisors*. J. E. Coll, E. L. Weiss, J. E. Coll and E. L. Weiss. Chicago, IL, US, Lyceum Books: 337-350.

This book chapter presents a model that can help guide development of a student Veteran transition center. The Veteran Transition Program Model (VTPM) is geared toward student Veterans and consists of four pillars: (a) mental wellness, (b) physical wellness, (c) mentorship, and (d) support operations. Authors outline the VTPM, and then present potential ways to assess needs of student Veterans and offer practical operational-related remarks for successful outcomes for both the student and the institution.

Gwin, D. M., Selber, K., Chavkin, N. F., & Williams, A. (2012). Supporting the Next Surge: Helping Veterans Transition to Higher Education. *Professional Development: The International Journal of Continuing Social Work Education*, 15(1).

This article examines the literature on student Veterans' educational challenges and Veteran-friendly campuses, describes the efforts of one university to assess the needs of student Veterans, and provides recommendations for program development

Holland, J. M., Malott, J., & Currier, J. M. (2014). Meaning made of stress among Veterans transitioning to college: examining unique associations with suicide risk and life-threatening behavior. *Suicide & Life-Threatening Behavior*, 44(2), 218-231 14p.

This study examines the unique associations between two facets of meaning made of stress and suicide risk and life-threatening behavior among military Veterans who have transitioned to college. Controlling for demographic factors, religiousness, combat-related physical injury, combat exposure, depressive symptoms, and posttraumatic stress symptoms, findings suggest that comprehensibility (having "made sense" of a stressor) is uniquely associated with lower suicide risk and a lower likelihood of driving under the influence of drugs or alcohol and engaging in self-mutilating behaviors.



Ingala, A. M. (2012). The impact of military deployment on college adjustment. *Dissertation Abstracts International*, 72, 7083.

This dissertation examined six research questions related to the impact of military deployment on Veteran adjustment to college. Survey results from student Veterans/military at two- and four-year institutions were examined through multiple regression. Results demonstrate the importance of perceived social support in dealing with life transitions and trauma. Social support buffers the effects of posttraumatic stress disorder as well. The results of the current study give institutions of higher education insight into dealing with student Veterans by indicating how critical perceived support is for successful transition.

Jones, K. C. (2013). Understanding Student Veterans in Transition. *Qualitative Report*, 18

This research report details a phenomenological study documenting identity development in student Veterans making the transition from active military service to higher education. An analysis of in-depth interviews illustrates how student Veterans construct and achieve more complex senses of self that incorporate their experiences as service member, Veteran, and civilian student into a coherent identity.

Kenworthy, M. K. (2012). The road ahead: Striking the right combination of academic and mental health services and VA benefits for increasing the academic attainment of student Veterans, The University of Texas at Arlington.

This thesis builds on current research in an attempt to more fully understand barriers to post-secondary education from the perspective of one student Veteran with both a learning disability and combat related PTSD by describing efforts to access accommodations for these conditions and their effectiveness at helping help him persist in education with a higher GPA while he simultaneously participates in a supported education intervention.

Ly-Turnbull, T. M. (2011). *Unconventional classmates: Veterans' transitions from war to college*.

Education, Social Sciences. Southern Connecticut State University. M.S.: 58.

This thesis addresses two research questions: "Under what circumstances do U.S. Veterans decide to pursue higher education upon their departure from active military duty? And how do they experience this transition from military to civilian student life?" Using didactic interviews with 12 participants and grounded theory for analysis it was determined that these Veterans never left behind their military ideals and values; rather, they incorporated them into their experiences as students. As supported in previous literature, Veterans entered college due to the availability of educational funding and the emotional support of their families. Contrary to previous literature, building communities with civilians and fellow Veterans helped in the transitions from war to college.

Messina, V. (2015). *In and out of uniform: The transition of Iraq and Afghanistan war Veterans into higher education*. Psychology., City University of New York. Ph.D.: 131.

This dissertation explores the transition of student Veterans of the Iraq and Afghanistan wars from the culture, discourses, and practices of military life into those of academic life in public higher



education as experienced by 12 student Veterans recruited from the nation's largest urban public university. The primary focus is on student Veterans' consideration of transition as an activity-meaning system, a research approach in which the unit of analysis is the interaction of cross-context relationships and perspectives among stakeholder actors having varying interests, these stakeholders being both persons and institutions. Considering student Veteran transition as an activity-meaning system places focus on the dialogue of the institutional perspectives of the military, Veterans advocacy organizations, public institutions of higher education, and of student Veterans themselves with their own unique perspectives, across contexts disparate enough as to constitute separate cultures. The study analyzes military websites and training materials; the websites of public institutions of higher education as they address student Veterans; and the websites and publications of Veterans' advocacy groups for values expressions. In relation to these values expressions, the interviews of the twelve student Veteran participants are examined as to whether they uptake, resist, or transform these institutional values in their cross-context narratives about their experiences of military and academic life. Results indicate institutional stakeholder tensions with some widely divergent values expressed among them. Values in military and advocacy materials are expressed explicitly while those of higher education are generally implicit. This document includes discussion of the implications for psychological and educational research and practice of findings that student Veterans may continue to be guided by military values while participating in academic life and may be challenged in understanding and adapting to academia, a culture whose values are often less transparently expressed than those of the military.

Ness, B. M., et al. (2014). College and combat trauma: an insider's perspective of the post-secondary education experience shared by service members managing neurobehavioral symptoms. *NeuroRehabilitation* 35(1): 147-158.

This exploratory study was conducted to examine the academic experiences of service members through in-depth qualitative analysis. A survey was conducted at a public university to measure self-reported academic achievement and neurobehavioral symptoms experienced by 48 service members. Follow-up interviews were solicited from a sub-sample of 5 participants to gain an in-depth understanding of their transition, social, and academic experiences. The results revealed both the day-to-day challenges participants faced while adjusting to post-secondary life and how neurobehavioral symptoms associated with combat trauma interacted with their learning experiences. The findings indicated participants did not perceive neurobehavioral symptoms as particularly deleterious to their learning thereby highlighting the potentially integral role of coping strategies and motivation in post-secondary success. This study underscores the importance of understanding not only the adverse impact of neurobehavioral symptoms but the factors that promote resilience among military service members in post-secondary education.



Selber, K. (2015). A model for serving this generation of student Veterans in universities: Blending supportive services and educational missions. *Supporting Veterans in higher education: A primer for administrators, faculty, and academic advisors*. J. E. Coll, E. L. Weiss, J. E. Coll and E. L. Weiss. Chicago, IL, US, Lyceum Books: 133-159.

This book chapter discusses the needs of student Veterans as they transition into and through universities and the challenges in developing supportive services to serve this generation of student Veterans.

Selber, K. and N. F. Chavkin (2012). Preparing to Serve Those Who Served Us Helping Social Work Field Educators Prepare Veterans for Internships. *Field Educator* 2(1).

This article explains how there are increased numbers of Veterans transitioning from combat to classroom. With projected troop draw-downs in theatre, and reductions in forces across services due to budget limitations, universities can expect the influx of Veterans to continue. Because this population of new students is supported by financial aid, universities may be welcoming these new students and engaging in active recruitment.

Smith-Osborne, A. (2009). Mental health risk and social ecological variables associated with educational attainment for gulf war Veterans: implications for Veterans returning to civilian life. *American Journal of Community Psychology*, 44(3): 327-337.

This study examines how post-secondary educational attainment among young Veterans of the first gulf war affects their mental health status. A sample of 2075 Gulf War –era Veterans was extracted from the 2001 National Survey of Veterans public use data set for analysis, namely to investigate ecological domains. Viewing resiliency, life span and life course, and social geography theories through the lens of social ecology, it was hypothesized that selected contextual factors in the personal, interpersonal, and organizational domains could mediate or moderate the relationship between education and Veterans' mental health. Informational social networks showed an association with obtaining mental illness treatment. Informational social networks showed an association with obtaining mental illness treatment. Recent treatment for post-traumatic stress disorder (PTSD) showed an association with use of Veterans' educational benefits. Residing with a small nuclear family in conjunction with having higher levels of health and educational benefits and a higher family income was associated with higher educational attainment.

Tomar, N. and V. Stoffel (2014). Examining the lived experience and factors influencing education of two student Veterans using photovoice methodology. *American Journal of Occupational Therapy* 68(4): 430-438.

The purpose of this qualitative study was to use a photovoice methodology to understand the lived experience of 2 student Veterans and identify factors influencing their higher education. This included an analysis of their photographs, accompanying narratives, and discussion session transcripts using descriptive coding and thematic analysis. Findings from this study revealed factors influencing student Veterans' education and can be used to develop occupation-based interventions to assist Veterans who engage in higher education.



Weber, D. J. (2012). *Academic success and well-being following OEF/OIF deployment*. Counseling Psychology. Arizona State University. Ph.D.: 155.

The purpose of this study, using self-report measures, was to examine the psychosocial functioning of 323 military/Veteran students enrolled at Arizona State University (ASU) who served at least one combat deployment as part of Operation Enduring Freedom (OEF) or Operation Iraqi Freedom (OIF) i.e. OEF/OIF. An online survey was used to collect participants' responses to demographic items. In addition, nine instruments assessing combat experiences, psychosocial functioning, perceived social support, cultural congruity, and academic persistence decisions were administered. The study investigated whether enlisting for educational benefits and utilizing campus programs/services were associated with more positive academic persistence decisions. Participants were also asked to rate ASU's programming for military/Veteran students as well as suggest campus programs/services to promote their academic success. More PTSD symptoms, depression, anxiety, and anger/aggression were found to be associated with less cultural congruity and lower perceived social support. Cultural congruity and social support were significant predictors of academic persistence decisions. Participants who reported utilizing more campus programs/services also tended to endorse more positive persistence decisions. Implications for university mental health providers are presented.

Young, S. L. (2012). *Transitioning from combat to college: The impact of risk and resilience factors on student Veterans*. Social Work. Fordham University. Ph.D.: 138.

This dissertation examines the impact of three risk factors (pre-deployment risk factors, deployment length, and combat exposure) and two resilience factors (post-deployment social support and dispositional resiliency) for PTSD, depression, student stress, adjustment to college, and military to civilian adjustment. It is based on a cross-sectional study, namely an internet survey of 77 students analyzed by a series of hierarchical regressions conducted to explain the mental health outcomes and adjustment to college. Combat exposure and post-deployment social support were significant predictors of PTSD. Dispositional resiliency was a significant predictor of depression. Both dispositional resiliency and post-deployment social support were significant predictor of student stress. However, only post-deployment social support was a significant predictor of adjustment to college. Perceived health was found to be a significant predictor for adjustment from military to civilian life. This study suggests that further research is needed to understand the role of resilience factors among student Veterans.



7.1.5. Families Canadian Documents

Basham, K. (2008). Weaving a Tapestry of Resilience and Challenges, Commentary: Clinical Assessment of Canadian Military Couples. *Clinical Social Work Journal*, 37(4), 340-345.

This is a commentary on a study entitled “Clinical Assessment of Canadian Military Marriages” by Elena Sherwood, which intended to: (1) discuss the impact of is ‘isolation’ and ‘mandate’ on Canadian military marriages and (2) illustrate the value of using several theoretical models (i.e. strengths view, systems theory and attachment theory) to assess the overall functioning and adaptation of these couples. This study reminds social workers that they need to pay attention to the unique cultural issues that influence military couples and urges them to recognize the necessity to inform themselves about the most effective ways to empathize with these families' challenges. It is a call to clinical social workers, to offer relationally based, culturally responsive and theoretically grounded therapeutic services given the pressing needs that face returning troops.

Pedlar, D. J., & Thompson, J. M. (2011). Research in life courses of Canadian Military Veterans and Their Families. *Shaping the Future, Military and Veteran Health Research* (pp. 15-31). Kingston, Ontario: Canadian Defence Academy Press.

The objective of this study is to identify research challenges for Veterans’ health research in Canada, on the premise that since World War II, Canadian Veterans’ health research capacity has greatly diminished and research focus shifted from care of the recently ill and injured to care of the aging and elderly. Five challenges identified are as follows: 1. Veterans’ health research must consider all Canadian Veterans, not just those receiving VAC benefits. 2. Determining effects of military service on the life courses of Veterans and their families. 3. Identify optimum approaches to the care of Veterans and their families. 4. Manage explosion of expert opinion and research findings. 5. Strengthen capacity in Canadian Veterans’ health research. The study concludes that a coordinated national vision and partnerships with federal, provincial and university researchers are needed to inform policy, programs and services to meet the needs of today’s military Veterans and their families.

Zamorski, M., & Wiens-Kinkaid, M. E. (2013). Cross-sectional prevalence survey of intimate partner violence perpetration and victimization in Canadian military personnel. *BMC Public Health*, 13(1), 1019-1035.

Self-reported Intimate partner violence (IPV) perpetration, victimization, and their correlates were assessed on a cross-sectional survey of a stratified random sample of 2157 currently-serving Canadian Regular Forces personnel. The four primary outcomes were perpetration or victimization of any physical and/or sexual or emotional and/or financial IPV over the lifespan of the current relationship. Among the 81% of the population in a current relationship, perpetration of any physical and/or sexual IPV was reported in 9%; victimization was reported in 15%. Any emotional and/or financial abuse was reported by 19% (perpetration) and 22% (victimization). IPV affects an important minority of military families; less severe cases predominate. Mental disorders, high-risk drinking, relationship dissatisfaction, and remote deployment were independently associated with



abuse outcomes. The primary limitations of this analysis are its use of self-report data from military personnel (not their intimate partners) and the cross-sectional nature of the survey. Prevention efforts in the CAF need to target the full spectrum of IPV.

Families

Other Countries

Canfield, J. (2014). Traumatic stress and affect management in military families. *Social Work in Mental Health, 12*(5), 544-559.

This study presents a case vignette that highlights some of the salient interpersonal challenges that can develop in a military family when a Veteran returns home with posttraumatic stress that is left untreated. It is observed that the war-time deployment of a service member creates significant stress for the family system that supports that person's transition into combat, combat duty, and readjustment into civilian and family life upon return. The stressors associated with the deployment cycle are significant and can lead to depression, anxiety, and behavioral concerns for all family members including the children and partners. A family's adaptation to these stressors can also impact the functioning of the service member during the phases of mobilization, deployment, sustainment, and reintegration. Recommendations for interventions will be considered through the application of psycho-educational approaches for managing traumatic stress in families.

Cox, J., & Albright, D. L. (2014). The Road to Recovery: Addressing the Challenges and Resilience of Military Couples in the Scope of Veteran's Mental Health. *Social Work in Mental Health, 12*(5/6), 560-574.

This literature review seeks to highlight the effects of mental illness on military couples through the explanatory framework of the relational turbulence model. Couple resilience and implications for mental health practitioners are also discussed.

Cozza, S. J., Guimond, J. M., McKibben, J. B., Chun, R. S., Arata-Maiers, T. L., Schneider, B., Maiers, A., Fullerton, C.S., Ursano, R. J. (2010). Combat-injured service members and their families: the relationship of child distress and spouse-perceived family distress and disruption. *Journal of Traumatic Stress, 23*(1), 112-115. This preliminary study of the families of combat –injured military personnel examined the relationship of child distress post-injury to pre-injury deployment-related family distress, injury severity, and family disruption post-injury. Semi-structured interviews generated reports from 41 spouses of combat-injured service members who had been hospitalized at two military tertiary care treatment centers. Two multivariate exact logistic regression analyses were used to determine the relationships of family disruption post-injury and injury severity to child distress controlling for deployment-related family distress. Interaction effects among the two predictor variables were also evaluated. Families with high pre-injury deployment-related family distress and high family disruption post-injury were more likely to report high child distress post-injury. Spouse-reported injury severity was unrelated to child distress. Findings suggest that early identification and intervention with combat-injured families experiencing distress and disruption may be warranted to support family and child health, regardless of injury severity.



Davy, C. P., Lorimer, M., McFarlane, A., Hodson, S., Cromptvoets, S., Lawrence-Wood, E., & Neuhaus, S. J. (2015). The Well-Being of Australian Service Mothers. *Women & Health, 55*(7), 737-753.

This study analyzed data from 921 Australian women who participated in the Middle East Area of Operations Census, to compare the psychological and physical symptoms reported by service mothers with service women who had no dependent children at the time of deploying to Afghanistan and/or Iraq. Servicewomen with dependent children have for the first time in history been deployed into conflict zones in support of Australian Defence Force operations, and the implications of deployment on the health of these service mothers are not fully understood. Findings demonstrate that serving mothers were not at any significantly higher risk of psychological distress, post-traumatic stress symptoms, alcohol misuse, or reporting of somatic symptoms, than women who had no dependent children. A number of possible explanations for these findings are discussed, including the healthy soldier/mother effect, support from partners and extended family members, and collegial networks.

Dayton, C. J., Walsh, T. B., Muzik, M., Erwin, M., & Rosenblum, K. L. (2014). Strong, safe, and secure: negotiating early fathering and military service across the deployment cycle. *Infant Mental Health Journal, 35*(5), 509-520.

This study is qualitative research with the central aim of informing a richer understanding of the experiences of military fathers. Interviews were conducted with 14 military fathers of young children who had experienced separation from their families during deployment. Narratives were coded using principles of grounded theory, and common parenting themes were extracted. Fathers shared their hopes that their young children would develop qualities of strength, confidence, and self-sufficiency but struggled to support the development of these qualities due to problems dealing with the negative emotions and difficult behaviors of their children. Reliance on their parenting partner was commonly cited as an effective strategy, and implications for intervention programs include the provision of parenting and self-care skills and inclusion of the father's parenting partner in the intervention.

DeCarvalho, L. T., & Whealin, J. M. (2012). *Healing stress in military families: Eight steps to wellness*. Hoboken, NJ, US: John Wiley & Sons Inc.

This book offers practical help for military families coping with the myriad repercussions of their loved one's duties, from their deployment to their return home. It provides evidence-based advice for clinicians helping military families with adjustment problems by facilitating communication, reconnection, and growth; "Making It Real" exercises for clinicians to employ with families in sessions; "Talking Points" that explore how to guide the family in their healing process; and homework handouts and between-session "Taking Action" exercises for families that reinforce and build on skills and information introduced in sessions.

Gewirtz, A. H., Pinna, K. L., Hanson, S. K., & Brockberg, D. (2014). Promoting parenting to support reintegrating military families: after deployment, adaptive parenting tools. *Psychological Services, 11*(1), 31-40.

This article reports on the modification of an empirically supported parenting intervention for families in which a parent has deployed to war, based on the rationale that, despite evidence that parenting has significant influence on children's functioning, and that parenting may be impaired during stressful family transitions, there is a dearth of empirically supported psychological interventions tailored for military families reintegrating after deployment. The intervention, entitled "After Deployment, Adaptive Parenting Tools (ADAPT)" is described, and early feasibility and acceptability data from a randomized controlled



effectiveness trial are reported. Among the first 42 families assigned to the intervention group, participation rates were high, and equal among mothers and fathers. Satisfaction was high across all 14 sessions. Implications for psychological services to military families dealing with the deployment process are discussed.

Giles, S. (2005). Army dependents: childhood illness and health provision. *Community Practitioner*, 78(6), 213-217. This small qualitative study explored attitudes of a group of Army wives to childhood illness and their expectations of health provision. Two focus groups were organized using health visitor groups attached to the author's general practice office. Transcripts were examined to produce a framework for semi-structured interviews with nine mothers, who were selected by purposive sampling. Mothers were asked about symptoms, coping, social problems, decisions to take action, health provision and support. Data were analyzed and sorted, using the principles of grounded theory, into four main themes: attitude to child's illness, coping, Army culture and accessibility to health services. Findings indicate that many Army wives appear to suffer from high levels of stress; that the coping ability of the mother was affected by the constant turbulence and isolation of Army life; that while mothers displayed a knowledge of common illnesses, they had fears of the unknown and of life threatening illnesses, and sometimes managed childhood illness at home owing to lack of transport. It is suggested that Army dependents require more support from their GP practice than the average civilian family, offering opportunity for nurses and health visitors to provide alternative and proactive services.

Gorbaty. (2009). *Family Reintegration of Reserve Service Members Following a Wartime Deployment: A Qualitative Exploration of Wives Experiences*. (Psy.D. Dissertation), Massachusetts School of Professional Psychology.

The purpose of this doctoral dissertation was to illuminate the experiences of wives of reserve service members through the wartime deployment cycle, in particular following reunification. Semi-structured interviews with eight wives of Army Reserve and Army National Guard service members generated qualitative data around their spousal experiences. All of the women in the present study reported experiencing inadequate understanding from the civilian community and isolation from the military community. Findings suggest that more formal supports are needed for these spouses. Participants indicated challenges faced by their spouses upon return to civilian life, particularly if faced with PTSD, and specifically around adopting parenting roles, financial stability, and civilian employment.

Hazle, M., Wilcox, S. L., Hassan, A. M. (2012). "Helping Veterans and Their Families Fight On!" *Advances in Social Work*, 13(1), 229-242.

In this paper, strategies are presented to help win the "Reintegration War" and ease the transition into civilian life for service members, Veterans, and their families.

Hinojosa, R., Hinojosa, M. S., Nelson, K., & Nelson, D. (2010). Veteran family reintegration, primary care needs, and the benefit of the patient-centered medical home model. *Journal of the American Board of Family Medicine*, 23(6), 770-774.

This discussion paper addresses the critical role primary caregivers, in particular family physicians, can have as the first line of defense in ensuring Veterans well-being as they integrate back to civilian life. The paper discusses the critical need for awareness of the unique challenges faced by this population, and suggests a patient-centered medical home orientation can help the family physician provide Veterans and their



families the care they need. Specific recommendations for family physicians include screening their patient population; providing timely care; treating the whole family; and integrating care from multiple disciplines and specialties, providing Veterans and families with "one-stop shopping" care.

Knobloch, L. K. and J. A. Theiss (2012). Experiences of U.S. military couples during the post-deployment transition: Applying the relational turbulence model. *Journal of Social and Personal Relationships* 29(4): 423-450.

This study employed the relational turbulence model to identify the issues facing military couples during the post-deployment transition. Individuals who had been reunited with their romantic partner during the past six months (N = 259; 137 service members, 122 partners) completed an online questionnaire. Content analytic results indicated that people encounter diverse changes to their relationship, issues of relational uncertainty, and interference in their daily routines. Women, at-home partners, and reservist couples appear especially likely to encounter upheaval. The relational turbulence model may have utility for illuminating the experiences of military couples upon reintegration.

Lester, P., Paley, B., Saltzman, W., & Klosinski, L. E. (2013). Military service, war, and families: considerations for child development, prevention and intervention, and public health policy-Part 2. *Clinical Child and Family Psychology Review*, 16(4), 345-347.

This article is a review of existing care systems intended to help clarify current limitations in institutional and community capacities to meet the long-term needs of military families across the active duty and Veteran continuum of care, and sharpen focus on the relevance of innovative approaches to intervention development, research, implementation, and dissemination.

Lundquist, J., & Xu, Z. (2014). Reinstitutionalizing families: Life course policy and marriage in the military. *Journal of Marriage And Family*, 76(5), 1063-1081.

This article uses narrative data from life history interviews with military affiliates to bring together life course literatures on turning points, the welfare state, and linked lives to show how the military has reinstitutionalized families in these ways.

McFarlane, A. C. (2009). Military deployment: the impact on children and family adjustment and the need for care. *Current Opinion in Psychiatry* 22(4): 369-373.

This review develops themes from recent publications, focusing on factors associated with deployment and the military that impact upon families and children. Over a million children and their families have now experienced the stress of the deployment of a family member during the recent wars in Iraq and Afghanistan. Whereas there is an extensive clinical literature about the developmental challenges facing children and issues of family adjustment, there is a lack of systematic research. There is also a range of interventions and services implemented to support Veterans and their families after deployment. Intervention programs are described, but there is a poverty of their evaluation. A substantial advantage of focusing on family adjustment is that it can facilitate access to mental healthcare for Veterans while assisting families' positive adaptation.



Paley, B., et al. (2013). Family systems and ecological perspectives on the impact of deployment on military families. *Clinical Child and Family Psychology Review* 16(3): 245-265.

In this article, the authors utilize family systems and ecological perspectives to advance the understanding of how military families negotiate repeated deployment experiences and how such experiences impact the well-being and adjustment of families at the individual, dyadic, and whole family level.

Rowe, M., et al. (2013). Exploring the Impact of Deployment to Iraq on Relationships. *Military Behavioral Health* 1(1): 13-21.

This study analyzed a self-report questionnaire via logistic regression to explore associations between negative relationship change and predeployment, deployment, postdeployment, and health factors in 5,133 personnel who had deployed to Iraq between 2003 and 2006. There was no significant association between deployment to Iraq and negative or positive relationship change, after adjusting for sociodemographic factors. Risk factors for negative relationship change are identified. These include younger age, childlessness, increased length of deployment, problems adjusting on return from deployment, family violence, and problems resuming sexual relationships. Other risk factors included post-traumatic stress disorder (PTSD), other common mental health problems, and alcohol misuse. It seems that deployment of UK military personnel to Iraq is not associated with relationship breakdown. However, a group of personnel at risk of suffering relationship breakdown who may benefit from intervention is identified.

Sayers, S. L. F., V.A.; Foss, J., and Oslin, D.W. (2009). Family problems among recently returned military Veterans referred for a mental health evaluation. *Journal of Clinical Psychiatry* 70(2): 163-170.

The purpose of this cross-sectional survey is to test whether psychiatric symptoms are associated with family reintegration problems in recently returned military Veterans who received care at Philadelphia Veterans Affairs Medical Center. The survey included 199 military Veterans who served in Iraq or Afghanistan after 2001 and were referred for behavioral health evaluation from primary care. Measures included the Mini-International Neuropsychiatric Interview for psychiatric diagnoses, the 9-item Patient Health Questionnaire for depression diagnosis and severity, and screening measures of alcohol abuse and illicit substance use. A measure of military family readjustment problems and a screening measure of domestic abuse were developed for this study. Three fourths of the married/cohabiting Veterans reported some type of family problem in the previous week. Veterans with current or recently separated partners reported conflict and fear between them and those partners. Depression and posttraumatic stress disorder symptoms were both associated with higher rates of family reintegration problems. Mental health problems may complicate Veterans' readjustment and reintegration into family life. The findings suggest an opportunity to improve the treatment of psychiatric disorders by addressing family problems.

Sizemore, J. and S. Marshall (2013). Military Veterans and families. *Modern community mental health: An interdisciplinary approach*. K. R. Yeager, D. L. Cutler, D. Svendsen et al. New York, NY, US, Oxford University Press: 405-414.

This chapter focuses on the transition from military to civilian life. It is written by two readjustment counseling therapists, working for the Department of Veterans Affairs, who use a case example to



describe some of the features of the transition experience, not only for the Veteran, but for the Veteran's family as well. Military culture is described, as are the steps of care the therapist can take with the Veteran/Veteran's family to make the time of transition as free of difficulties as possible. The chapter could be of value to professionals who are working with Veterans and their families through their time of transition.

Snyder, D. K. and C. M. Monson (2012). *Couple-based interventions for military and Veteran families: A practitioner's guide*. New York, NY, US, Guilford Press.

This book presents a range of couple-based therapeutic approaches specifically tailored to military and Veteran families. Practical, "how-to-do-it" discussions of intervention are illustrated with rich clinical material and grounded in a solid empirical evidence base. The volume begins by providing essential knowledge about the culture of military families and the normative transitions and adjustments they face. Building on these foundations, chapters describe effective strategies for treating specific clinical challenges. Practitioners get up-to-date information and hands-on tools for helping couples deal with parenting concerns, infidelity, physical aggression, posttraumatic stress, depression, substance abuse, traumatic brain injury, and complicated grief. Detailed case examples bring the process of assessment and treatment to life. Every chapter vividly shows how mental health issues affect not just the individual service member, but the whole family—and how to marshal intimate partners' resources for coping and change. Edited and written by leading experts, this work will be of value to mental health professionals in military, Veteran, and civilian practice settings.

Solomon, Z., et al. (2011). Marital Adjustment, Parental Functioning, and Emotional Sharing in War Veterans. *Journal of Family Issues* 32(1): 127-147.

The current study aimed to examine the implications of posttraumatic stress disorder symptoms and emotional sharing in marital adjustment and parental functioning among Israeli Veterans of the 1982 Lebanon War. The sample consisted of combat stress reaction (CSR) Veterans (n = 264) and non-CSR Veterans (n = 209). Self-report questionnaires were used to assess PTSD, marital relationships, emotional sharing and parental functioning. Results show that traumatized Veterans reported lower levels of marital adjustment and more problems in parental functioning. Furthermore, higher levels of posttraumatic symptoms, especially avoidance symptoms, were related to a decrease in marital adjustment and parental functioning. Most important, emotional sharing was found to moderate the relation between posttraumatic stress disorder severity and parental functioning. Possible explanations, limitations of the current study, and recommendations for future research are presented.

Straits-Tröster, K., et al. (2011). Living in transition: Young Veterans' health and the postdeployment shift to family life. *Treating young Veterans: Promoting resilience through practice and advocacy*. D. C. Kelly, S. Howe-Barksdale, D. Gitelson et al. New York, NY, US, Springer Publishing Co: 153-172.

This book chapter is based on a qualitative study that examined health concerns, family and civilian transition issues, satisfaction with and barriers to VA health care, and support among OEF/OIF Veterans and their spouses. Medical record review and routine clinical assessment of Veterans seeking treatment are important first steps toward characterizing the needs and guiding development of quality health care, patient-centered support services, and relevant research for



this cohort of Veterans. Semi-structured interviews were used in six focus groups with 10 -12 participants in each group to identify key health and mental health problems experienced by Iraq and/or Afghanistan reservist Veterans.

Theiss, J. A. and L. K. Knobloch (2013). A relational turbulence model of military service members' relational communication during reintegration. *Journal of Communication* 63(6): 1109-1129. This study employed the relational turbulence model to examine features of relational communication and dimensions of relational inferences during the postdeployment transition for military service members. Two hundred and twenty military personnel who had recently returned home from deployment were surveyed about their romantic relationship. Results of a structural equation model indicated that relational uncertainty and interference from partners predicted openness and aggressiveness, which in turn predicted appraisals of affiliation and dominance in the relationship. The results imply that the transition from deployment to reunion corresponds with upheaval in how service members communicate with a romantic partner and make judgments about their relationship.

Worthen, M., et al. (2012). Iraq and Afghanistan Veterans' experiences living with their parents after separation from the military." *Contemporary Family Therapy: An International Journal*, 34(3): 362-375.

The purpose of this study was to investigate Veterans' experiences living with their parents using qualitative, in-depth interviews. The study included Iraq and Afghanistan Veterans in California recruited through Veteran service providers, representatives of the Veteran community and Veteran clubs. Interviews focused on the experiences, of the 24 Veteran participants, after separation and their reintegration experiences within specific social domains, including family, friends, and work or school. Findings are analyzed in light of family systems theory, identifying ways in which adult Veteran children continue a process of differentiation while living with their parents and maintaining emotional connectedness. Suggestions are made regarding the ways that clinicians can better support Veterans and their parents through the reintegration period with a recommendation that programming for military families explicitly include parents of service members in addition to conjugal families.

7.1.6. Social Support/Community Reintegration

Canadian Documents

Beau, M. L., Darte, K., & Cargnello, J. (2007). *Peer Support Needs Analysis: Injured Soldiers and their Families*. Department of National Defence - OSSIS Needs Analysis, 23 April 2007: 24 p.

This study documents a needs report conducted by OSSIS psychologists, to assess the social support needs of Canadian soldiers physically injured in Afghanistan. Focus groups and unstructured interviews were conducted to obtain soldiers' stories of recovery and repatriation, including life threatening injuries, long hospitalizations, multiple surgical interventions, and long rehabilitations. The results indicate that providing peer support to injured soldiers and their families is essential. It



was also identified that a lack of coordination amongst multiple service providing agencies, created complications to their accessing services.

Nelson, C., Cyr, K. S., Corbett, B., Hurley, E., Gifford, S., Elhai, J. D., & Donald Richardson, J. (2011). Predictors of posttraumatic stress disorder, depression, and suicidal ideation among Canadian Forces personnel in a National Canadian Military Health Survey. *Journal of Psychiatric Research*, 45(11), 1483-1488.

The aim of this study was to determine the relationship between social support, religiosity, and number of lifetime traumatic events experienced on past-12-month posttraumatic stress disorder (PTSD), depression, and suicidal ideation (SI) in a nationally representative sample of Canadian Forces personnel. This was assessed using structural equation modeling on data from the Canadian Community Health Survey Cycle 1.2 - Canadian Forces Supplement. Among the results found are: that there is a significant role for both pre-deployment and post-deployment social support; that there is a dose response reaction relating to number of traumatic events experienced and likelihood of adverse mental health outcomes in military personnel; that past-year diagnosis of PTSD or Major Depressive disorder (MDD) is a significant predictor of SI. The study concludes that these findings support the theory that multiple traumatic experiences increase risk of mental disorders, while perceived social support decreases this risk.

Hachey, K. K., & Sudom, K. (2013). *Canadian Forces Personnel Adjusting to Civilian Life: Resources Promoting Successful Adjustment*. Department of National Defence, Director General Military Personnel Research & Analysis.

The Survey on Transition to Civilian Life (STCL) was administered to a sample of CAF Regular Force members released from 1998 to 2007. The aim of the current study was examining the roles of mastery and social environment (i.e., community belonging and satisfaction with support) in the transition to civilian life, as well as how these variables correlate with health and life stress. Results revealed that life stress, health, satisfaction with support, mastery, and community belonging strong predictors of adjustment to civilian life. Small moderating effects were also present. The current study revealed resources that can potentially aid in the transition to civilian life.

Social Support/Community Reintegration

Other Countries

Anderson, J., Mason, C., Freeman, N., & Weintraub, A. (2012). Military transition back to the community: Regaining a sense of belongingness. *Brain Injury*, 26(4-5), 309-310.

This is a program description of Intensive Care Coordination (case management) combined in partnership with the Department of Defense (DOD), Veterans Administration (VA), and Veterans Service Organizations, that supports the transition back to the civilian community for soldiers with traumatic brain injury (TBI), with the goal of decreasing the likelihood of depression, financial problems and loss of connection to family and friends. The program involves Intensive Care Coordination for up to two years to help active duty soldiers and Veterans achieve their optimum independence, productivity and successful re-integration into civilian life. Care Coordination includes intake assessment, development of care plan goals, and annual care



plan review. The program supports the entire family unit and focuses on three transitional phases: Crisis Stabilization, Rehabilitation and Transition. The program was reported to reduce the negative effects of Reverse Culture Shock by linking returning military to community resources that enhance a positive transition back to civilian living; decreases suicidal ideation, homelessness, substance abuse, social isolation and dependence upon State/Federal Funding by getting soldiers and their families the resources specific to their needs in a timely manner.

- Frappell-Cooke, W., Gulina, M., Green, K., Hacker Hughes, J., & Greenberg, N. (2010). Does trauma risk management reduce psychological distress in deployed troops? *Occupational Medicine*, 60(8), 645-650. This study surveyed Royal Marines and Army personnel prior to, during and upon return from an operational deployment to Afghanistan in order to evaluate the effects of Trauma Risk Management (TRiM), a peer-support system that operates through practitioners embedded within operational units. Participants completed measures of general mental health (GHQ12) and traumatic stress [PCL(C)]. Personnel within units with experience of TRiM reported lower levels of psychological distress than personnel in the unit who were using TRiM for the first time. Both groups reported higher psychological distress scores before and during deployment, compared with post-deployment. However, personnel who reported having more access to social support during deployment reported less psychological distress.
- Hawkins, B. L. (2014). The influence of contextual factors on community reintegration among injured service members. *Archives of Physical Medicine and Rehabilitation*, 95(10), e5. This conference presentation describes a mixed methods design intending to identify and explain the influence of contextual factors on the community reintegration of injured service members. Community-dwelling service members injured in the Global War on Terrorism were studied. A thematic analysis of qualitative data supported the presence of social support and personal factors as the primary means for community reintegration. Contextual factors were highly influential of community reintegration for injured service members. This study supports the need to address self-efficacy, social support, and other contextual barriers and facilitators in rehabilitation and post-rehabilitation programs to better address community reintegration.
- Harari, D., Bakermans-Kranenburg, M. J., de Kloet, C. S., Geuze, E., Vermetten, E., Westenberg, H. G., & van, I. M. H. (2009). Attachment representations in Dutch Veterans with and without deployment-related PTSD. *Attachment & Human Development*, 11(6), 515-536. This study replicated and extended a recent study that found no underrepresentation of secure attachment representations in Veterans with PTSD by using a control group design to test for a protective effect of secure attachment representations in the development of posttraumatic stress disorder (PTSD). Additionally, this study examined the association of the Adult Attachment Interview (AAI) classification of unresolved loss or trauma and PTSD symptomatology. The Adult Attachment Interview and the Clinician Administered PTSD Scale (CAPS) were administered to 31 Veterans with PTSD and 29 trauma-exposed Veterans without PTSD of similar age and country of deployment. Patient and control groups did not differ in the prevalence of secure attachment representations, neither did unresolved and not unresolved subjects differ in prevalence of secure attachment representations. Unresolved state of mind with respect to deployment related trauma was found to correlate strongly with total CAPS score. This study shows no protective effect of secure attachment representations in the development of PTSD. AAI unresolved state of mind with respect to deployment related trauma and PTSD correlate strongly, due to the common core



phenomenon of lack of integration.

Hinojosa, R., & Hinojosa, M. S. (2012). Using military friendships to optimize postdeployment reintegration for male Operation Iraqi Freedom/Operation Enduring Freedom Veterans. *Journal of Rehabilitation Research & Development*, 48(10), 1145-1158.

Drawing on interviews, conducted from 2008 to 2009, with male Operation Iraqi Freedom/Operation Enduring Freedom Veterans, this paper argues that the members of a military unit, especially during armed conflict, should be considered a resource to help the "family" reintegration process rather than impede it. Data was drawn from a larger study, in which interviews were conducted with 20 Reserve component and Army National Guard men deployed as part of OIF/OEF missions about their reintegration experiences. These interview transcripts were thematically analyzed using a grounded theory approach. This research has implications for current reintegration policy and how best to assist Veterans transitioning into civilian society.

Milstein, G., et al. (2015). Coming home: Self-guided dialogues to facilitate soldiers' readjustment. *Psychiatric Services* 66(3): 329-330.

This paper discusses self-guided dialogues to facilitate soldiers' readjustment. In response to an increase in suicide rates the author, a chaplain and a Veteran developed an interactive dialogue program to facilitate talking about one's military experiences—first with fellow service members or fellow Veterans, then with friends and family. The utility of the program has been confirmed with high ratings of participant satisfaction. The program serves as a model as to how a person can begin to describe deployment by first telling simple, even humorous stories, while building gradually toward sharing more difficult experiences—according to one's own comfort threshold—in order to reconnect with family and community.

Resnik, L. J. (2007). Using International Classification of Functioning, Disability and Health to understand challenges in community reintegration of injured Veterans. *The Journal of Rehabilitation Research and Development* 44(7): 991-1006.

This pilot study used the framework of the World Health Organization's International Classification of Functioning, Disability and Health (ICF) to understand the challenges faced by Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) Veterans as they reintegrate into the community. Semi-structured interviews included 14 injured Veterans, 12 caregivers, and 14 clinicians. Challenges were identified in the following ICF domains: learning and applying knowledge; general tasks and demands; communication; mobility; self-care; domestic life; interpersonal interactions, major life areas; and community, social, and civic life. There were many similarities between the challenges faced by Veterans with and without poly-traumatic injuries, although Veterans with poly-traumatic injuries faced challenges of greater magnitude. The findings of this study are useful in understanding the needs of OEF/OIF Veterans.

Resnick, S. G. (2009). Development of CRIS: Measure of community reintegration of injured service members. *Journal of Rehabilitation Research and Development* 46(4): 469.

The purposes of this study were to (1) develop the Community Reintegration for Service Members (CRIS) measure and (2) test the validity and reliability of the measure. The World Health



Organization's International Classification of Functioning, Disability and Health participation domain guided item-bank development. Items were refined through cognitive interviews and clinician consultation. Pilot studies with 126 Veterans examined unidimensionality, internal consistency, reliability, and construct validity. Three unidimensional CRIS scales were developed. Working subjects had better CRIS scores than unemployed subjects. Subjects with posttraumatic stress disorder, substance abuse, or mental health problems had worse scores than subjects without these conditions. CRIS has strong reliability, conceptual integrity, and construct validity.

Resnik, L., et al. (2011). Measurement of community reintegration in sample of severely wounded service members. *The Journal of Rehabilitation Research and Development* 48(2): 89-101. The purpose of this study was to test the Community Reintegration of Service (CRIS) with seriously injured combat Veterans. Sixty-eight patients completed three CRIS subscales, the 36- Item Short Form Health Survey for Veterans (SF-36V), the Quality of Life Scale (QOLS), and two Craig Handicap Assessment and Reporting Technique subscales at visit 1 and the 3-month follow-up. Results suggest that the CRIS is a psychometrically sound choice for community reintegration measurement in severely wounded service members.

Sayer, N. (2010). Reintegration Problems and Treatment Interests Among Iraq and Afghanistan Combat Veterans Receiving VA Medical Care. *Psychiatric Services* 61(6): 589-597. The objectives of this survey were to describe the prevalence and types of community reintegration problems among Iraq and Afghanistan combat Veterans who receive U.S. Department of Veterans Affairs (VA) medical care, identify interests in interventions or information to promote readjustment to community life, and explore associations between probable posttraumatic stress disorder (PTSD) and reintegration problems and treatment interests. A national, stratified sample of Iraq-Afghanistan combat Veterans receiving VA medical care responded to a mailed survey focused on community reintegration. Of 1,226 Veterans surveyed, 754 responded. An estimated 25% to 56% of combat Veterans who use VA services reported "some" to "extreme" difficulty in social functioning, productivity, community involvement, and self-care domains. At least one-third reported divorce, dangerous driving, increased substance use, and increased anger control problems since deployment. Almost all expressed interest in services to help readjust to civilian life. The most commonly preferred ways to receive reintegration services or information were at a VA facility, through the mail, and over the Internet. Those who screened positive for PTSD, and probable PTSD were associated with reporting more readjustment difficulties and expressing interest in more types of services, including traditional mental health services.

Sayer, N. A., et al. (2011). Military to civilian questionnaire: a measure of post-deployment community reintegration difficulty among Veterans using Department of Veterans Affairs medical care. *Journal of Traumatic Stress* 24(6): 660-670. The primary objective of this study was to describe the development, reliability, and construct validity of scores on the Military to Civilian Questionnaire (M2C-Q), a 16-item self-report measure of postdeployment community reintegration difficulty. Of a national, stratified sample of 1,226 Iraq and Afghanistan Veterans who used U.S. Department of Veterans Affairs (VA) medical care that was surveyed, 745 completed the M2C-Q and validated mental health screening measures. All analyses



were based on weighted estimates. Factor analyses indicated a single total score was the best-fitting model. Total scores were associated with measures theoretically related to reintegration difficulties including perception of overall difficulty readjusting back into civilian life, probable PTSD, probable problem drug or alcohol use, and overall mental health. Subgroup analyses revealed a similar pattern of findings in those who screened negative for PTSD. Nonwhite and unemployed Veterans reported greater community reintegration difficulty.

Sigmon, J. P. (2012). *The deployed self in a moral order: Exploring the moral career of the readjusting Iraq war Veteran*. (Ph.D. Dissertation), University of California, Los Angeles,

This doctoral dissertation in the field of sociology demonstrates how Iraq War Veteran readjustment is a socially and morally mediated process, involving cultural and structural mechanisms that produce distinct, ordered phases of subjective experience. This finding, based on data from thirty-five interviews, is exemplified by the analysis of one particular and salient pattern of readjustment – which highlights the impact of social support and support perceptions in shaping the postwar experience. Conceptualizing Veteran readjustment as a moral career, the status transition to "Iraq War Veteran" is shown to bring with it strong normative understandings concerning the proper treatment of Veterans by members of society, as Veterans become situated within a shared moral order premised on the maxim of support for service: A reciprocally based social obligation, generated through deployed service, which symbolically implicates others in the Veteran's quest for postwar well-being. This transition has the overall effect of morally orienting the self, as Iraq War Veterans come to interpret and evaluate their personal postwar realities in moral terms, and in terms of perceived absence or presence of social support.

Wilson, R. M., et al. (2009). Military Veterans sharing first-person stories of war and homecoming: A pathway to social engagement, personal healing, and public understanding of Veterans' issues. *Smith College Studies in Social Work* 79(3): 392-432.

The purpose of this paper is to examine storytelling as a "pathway to healing" exploring the benefits, challenges and cautions associated with publicly sharing personal experiences related to war and coming home from war. In addition to examining selections from literature on Veterans and Post Traumatic Stress Disorder (PTSD) that pertain to storytelling, perspectives on storytelling from mental health professionals who have worked with VEP and the 100 Faces project are included. In this collaborative article, strengthened by the clinical wisdom of various consulting clinicians, various questions are explored through the lenses of two programs that provide Veterans opportunities to share their war stories publicly, namely the Veterans Education Project (VEP) and the "100 Faces of War Experience" project (100 Faces).



7.1.7. Deployment/Post-Deployment Canadian Documents

Blais, A.R., Thompson, M.M., Febraro, A., Pickering, D., & McCreary, D. (2003). *The development of a multidimensional measure of post-deployment reintegration: Initial psychometric analyses & descriptive results*. Defence R&D Canada – Toronto, December 2003.

The research described in this report is the first to develop a theoretically based, multidimensional measure of post-deployment reintegration that reflects the experience of Canadian Forces (CF) soldiers. The measure, based on a review of the literature and discussions with CF personnel who have deployed, was constructed to reflect positive & negative aspects of four theoretical dimensions of reintegration: personal, family, occupational, and cultural reintegration. The reintegration measure was tested in a survey involving 374 CF Veterans of operations in Afghanistan. Exploratory factor analyses revealed both positive and negative aspects of the four dimensions of post-deployment reintegration. Results are presented showing what was associated with the most positive and the most negative scores and indicating the association between demographic group differences and marital status, dependants, occupational group, and number of previous deployments.

Blais, A.R., Thompson, M., & McCreary, D. R. (2006). *The post-deployment reintegration scale: Associations with organizational commitment, job-related affect, and career intentions*. Defence R&D Canada, Toronto, November 2006.

This study describes the third phase of the development of the 36-item Post-Deployment Reintegration Scale (PDRS), a multidimensional measure of post-deployment reintegration attitudes relevant to CF military personnel. The main purpose was to investigate the relationship between the reintegration attitudes assessed by the PDRS and organizational outcomes, such as organizational commitment, job-related affect and intentions to leave the military, thereby complementing our previous work showing the relationship between reintegration attitudes and individual outcomes, such as coping and symptomatology. The secondary purpose of the current study was to provide further support for the psychometric properties of the PDRS, in particular, its factor structure and psychometric properties.

Blais, A.-R., Sullivan-Kwantes, W., & McCreary, D. R. (2006). *Post-deployment reintegration experiences of AF personnel: Implications for scale development*. Toronto Defence R&D Canada September 2006.

This study is an initial attempt to determine the aspects of post-deployment reintegration within the Canadian Air Force environment, using the 36-item Post-Deployment Reintegration Scale (PDRS), a multidimensional measure of post-deployment reintegration of Army members' experience as a starting point. Several similarities and differences between the two environments were identified and the basis of an Air Force post-deployment reintegration measurement tool was established. The study concludes that this initial PDRS-A does not generalize in its entirety to an AF environment, yet a large number of items do seem to fit both environments.



Blais, A.R. (2009). The Development and Validation of the Army Post-Deployment Reintegration Scale. *Military Psychology, 21*(3), 365-386.

This article describes the three-stage development of the Army Post-Deployment Reintegration Scale (APRS), a multidimensional measure of post-deployment reintegration attitudes that is intended to represent the continuum of positive and negative experiences of military personnel in personal, family, and work domains. Study 1 found support for a multidimensional model of post-deployment reintegration attitudes. Study 2 refined the dimensionality of the model to the positive and negative aspects of personal, family, and work reintegration and reduced the length of the scale to 36 items and provided preliminary evidence of its factorial validity and internal consistency reliabilities. Finally, in Study 3, the subscales were correlated in predicted ways with personal- and organizational-level outcomes (e.g., posttraumatic stress disorder [PTSD], organizational commitment).

Fikretoglu, D. (2006). Validation Deployment Risk Resilience Inventory French Canadian Veterans. *Canadian Journal of Psychiatry, 51*(12): 755-763.

This study was intended to validate the French-Canadian version of a measure of deployment risk and resilience factors and to examine the relation between deployment risk and resilience factors and postdeployment functioning. Canadian Veterans at an outpatient clinic completed a mail-in survey that included a measure on deployment risk and resilience factors, the Deployment Risk and Resilience Inventory (DRRI) and measures on psychological and physical health. Low- as well as high-magnitude deployment risk factors were associated with functioning.

Deployment/Post-Deployment

Other Countries

Adler, A. B., Britt, T. W., Castro, C. A., McGurk, D., & Bliese, P. D. (2011). Effect of transition home from combat on risk-taking and health-related behaviors. *Journal of Traumatic Stress, 24*(4), 381-389. The present study examined the link between positive and negative aspects of the transition home and risk-taking behaviors. Participants in the sample were active-duty U.S. soldiers in a brigade combat team who had returned 4 months earlier from a year-long combat deployment. Exploratory and confirmatory factor analyses of a new 16-item transition scale were conducted. In Study 1, the number of combat events was positively related to Anger/Alienation. In Study 2, after controlling for PTSD symptoms, Anger/Alienation assessed at 4 months post-deployment predicted more risk-taking behaviors 4 months later. Results demonstrate the importance of broadening the conceptualization of adjustment in combat Veterans.

Beder, J., Coe, R., & Sommer, D. (2011). Women and men who have served in Afghanistan/Iraq: coming home. *Social Work in Health Care, 50*(7), 515-526.

The research presented in this article reports the findings on interviews with over 800 service members who had returned from either Afghanistan or Iraq, the majority of whom were recruited from various units at Fort Bragg, North Carolina. Participants were asked open-ended questions, to ascertain what they considered helpful by way of interventions and support and any concerns about accessing help from a mental health provider. The study also administered the Post



Deployment Readjustment Scale (PDRS), a multidimensional measure of post deployment reintegration experiences/attitudes; which was used to refine the areas that respondents identified as positive or negative in their reintegration experience. Findings suggest that there is a more complex reintegration experience for those who have experienced direct combat, been wounded, and acknowledge PTSD, and that for the service member who has had multiple deployments, the impact in the reintegration experience can be profound with the most serious impact on their personal reintegration and the reintegration with their family.

Bull, S., Thandi, G., Keeling, M., Chesnokov, M., Greenberg, N., Jones, N., Rona, R., Hatch, S. L. (2015). Medical and Welfare Officers beliefs about post-deployment screening for mental health disorders in the UK Armed Forces: a qualitative study. *BMC Public Health*, 15(1), 338-336.

This study aimed to examine currently serving United Kingdom (UK) military Medical and Welfare Officers views on the potential introduction of post-deployment screening for mental health disorders. Semi-structured interviews were conducted with 21 Medical and Welfare Officers. Interview transcripts were analyzed using data-driven thematic analysis. Four themes were identified: positive views of screening; reliability of responses; impact on workload; and suggestions for implementation. Interviewees viewed the introduction of screening post-deployment as likely to increase awareness of mental health problems whilst also reporting that service personnel were likely to conceal their true mental health status by providing misleading responses to any screening tool. Although participants were concerned about potential impact on their personal workload, they indicated a desire to positively engage with the screening program if research showed it was an effective tool to improve mental health care..

Centre for Military and Veterans Health (CMVH). (2010). *Re-adjustment to Normal* Centre for Military and Veteran Health, Herston, QLD, Australia.

This review discusses issues which the literature suggests are relevant to how well serving members and their families cope with military life, both in relation to the deployment cycle and more generally. It also reports programs and measures that are in place to mitigate the impacts of military careers, and suggestions made by the literature on what measures may help members and families.

Fear, N. T. (2010). What are the consequences of deployment to Iraq and Afghanistan on the mental health of the UK armed forces? A cohort study. *The Lancet*, 375(9728), 1783-1797.

This study examined the consequences of deployment to Iraq and Afghanistan on the mental health of UK armed forces from 2003 to 2009, the effect of multiple deployments, and time since return from deployment. The prevalence of probable mental disorders in participants of the authors' previous study (2003–05) was reassessed. To ensure that the final sample continued to be representative of the UK armed forces, two new randomly chosen samples were studied: those with recent deployment to Afghanistan, and those who had joined the UK armed forces since April, 2003. 9990 participants completed the study questionnaire (8278 regulars, 1712 reservists). The prevalence of probable post-traumatic stress disorder was 4.0%; for symptoms of common mental disorders, 19.7%, for alcohol misuse, 13.0%. Deployment to Iraq or Afghanistan was significantly associated with alcohol misuse for regulars and with probable post-traumatic stress disorder for reservists. Regular personnel in combat roles were more likely than were those in support roles to report probable post-traumatic stress disorder. There was no association with number of deployments for any outcome.



Fink, D. S., Gallaway, M. S., & Millikan, A. M. (2014). An examination of successful soldier postdeployment transition from combat to garrison life. *Journal of Traumatic Stress, 27*(1), 98-102. The current study aimed to examine the individual and combined effects of organizational and social support on the success of soldiers' postdeployment reintegration. U.S. soldiers were surveyed measuring perceptions of transition home, occupational and social support, stigma and barriers associated with accessing behavioral health care, and previous behavioral health care. Logistic regression analyses indicated that soldiers reporting a positive transition were associated with leadership perceptions, unit cohesion, personal support, perceived levels of stigma, barriers to accessing care, and previously accessing behavioral health care. Findings suggest redeploying soldiers may benefit from programs aimed at improving self-efficacy and coping through fostering occupational and social support, with special concern taken to reduce stigma and barriers to care across the Army.

French, B. E. (2013). The reintegration myth: An interpretive phenomenological inquiry into the reentry experiences of air force reservists returning from Afghanistan. *Dissertation Abstracts International Section A, 73*,
This dissertation documents the 18-month reentry trajectory of nine (including the author) United States Air Force Reservists returning home from a six-month deployment to Afghanistan in 2009 and 2010. The author used interpretive phenomenology to explore existing theories relevant to reentry and conduct a deep exploration of reentry over time.

Harvey, S., Hatch, S., Jones, M., Hull, L., Jones, N., Greenberg, N., Dandeker, C., Fear, N. T. & Wessely, S. (2011). Coming Home: Social Functioning and the Mental Health of UK Reservists on Return From Deployment to Iraq or Afghanistan. *Annals Of Epidemiology, 21*(9), 666-672 7p.
This article examines the relationship between adverse postdeployment experiences and subsequent mental ill health in Reservists. UK military personnel who had deployed to either Iraq or Afghanistan were asked about their postdeployment experiences of social integration, perceived support from the military, and civilian employment, and completed a series of validated measures of mental health. Reservists were more likely to feel unsupported by the military and to have difficulties with social functioning in the postdeployment period. Perceived lack of support from the military was associated with increased reporting of probable posttraumatic stress disorder (PTSD) and alcohol misuse. Low levels of non-military postdeployment social support and participation were associated with increased reporting of common mental disorder, probable PTSD, and alcohol misuse.

Harvey, S., Hatch, S., Jones, M., Hull, L., Jones, N., Greenberg, N., Dandeker, C., Fear, N. T. & Wessely, S. (2012). The long-term consequences of military deployment: a 5-year cohort study of United Kingdom reservists deployed to Iraq in 2003. *American Journal of Epidemiology, 176*(12), 1177-1184.
This paper is a cohort study of UK Reservists deployed to Iraq, and non-deployed Reservists. Measures of mental health and social functioning were collected at 16 months and 4.8 years after return from possible deployment. Deployment was associated with increased common mental disorder, post-traumatic stress disorder (PTSD), and poor general health at f/u 1. By f/u 2, those



who had deployed were no longer at increased risk for common mental disorder or poor general health and had good levels of social functioning. However, those who deployed continued to have over twice the odds of PTSD and were more likely to report actual or serious consideration of separation from their partner. Results suggest that mental health and social problems following deployment are transient, but that Reservists who deployed in the Iraq War remain at increased risk of PTSD and relationship problems 5 years after their tour of duty.

Hoge, C., Auchterlonie, J., & Milliken, C. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *JAMA: Journal of The American Medical Association*, 295(9), 1023-1032 10p.

The primary objectives of this descriptive study are to determine the relationship between deployment to Iraq and Afghanistan and mental health care utilization during the first year after return and to evaluate lessons learned from the post-deployment mental health screening effort, particularly the correlation between screening results and actual use of mental health services. Results suggest that the high rate of using mental health services among Operation Iraqi Freedom Veterans after deployment highlights challenges in ensuring that there are adequate resources to meet the mental health needs of returning Veterans.

Hopkins-Chadwick, D. L. (2012). Strategies to support nurse work reintegration after deployment constructed from analysis of army nurses' redeployment experiences. *US Army Medical Department Journal*, 59-63.

This study presents results from a phenomenological inquiry into the question: "what is it about deployment that makes a nurse want to stay or leave the Army Nurse Corps upon return?" Three focus groups were conducted with four participants each, and five themes were identified in the analysis of the discussions: 1. Recognize us and our families with a "welcome home". 2. Make an honest effort to give us assignments that move us forward in our career. 3. Treat us like we are staying in the military. 4. You make nursing work harder than it has to be at home. 5. Evaluate post-deployment health, suggest Army OneSource, collocate if possible. A table of tasks with explanations is provided to assist coworkers and supervisors in facilitating the transition back to noncombat nurse work.

Jones, N., Jones, M., Fear, N. T., Fertout, M., Wessely, S., & Greenberg, N. (2013). Can mental health and readjustment be improved in UK military personnel by a brief period of structured postdeployment rest (third location decompression)? *Occupational & Environmental Medicine*, 70(7), 439-445 7p.

This study assessed whether third location decompression (TLD) impacted upon both mental health and post-deployment readjustment. Data collected during a large cohort study was examined to identify personnel who either engaged in TLD or returned home directly following deployment. Propensity scores were generated and used to calculate inverse probability of treatment weights in adjusted regression analyses to compare mental health outcomes and post-deployment readjustment problems. Results show no evidence to suggest that TLD promotes better post-deployment readjustment; however, a positive impact upon alcohol use and mental health with an interaction with degree of combat exposure was present. This study suggests that TLD is a useful post-deployment transitional activity that may help to improve PTSD symptoms and alcohol use in UK AF personnel.



Kelley, A. M., Athy, J. R., Cho, T. H., Erickson, B., King, M., & Cruz, P. (2012). Risk propensity and health risk behaviors in U.S. Army soldiers with and without psychological disturbances across the deployment cycle. *Journal of Psychiatric Research*, 46(5), 582-589.

This survey studied members of a combat arms brigade one month prior to a deployment to Iraq and approximately one month after their return. Participants anonymously completed surveys characterizing attitudes about risk, risk propensity, invincibility, engagement in health risk behaviors, and personality. Using standardized screening instruments participants were categorized with respect to PTSD and probable TBI. Results suggest that Soldiers engage in more high-behaviors post-deployment. These changes were exaggerated in those who screened positive for PTSD.

Miller, P. E. and B. Warner (2013). Postdeployment experiences of military mental health providers. *Military Medicine* 178(12): 1316-1321.

The purpose of this study is to examine how military mental health providers (MMHP) experience reintegration to their families and jobs after being deployed, and how do MMHP assess and cope with their own postdeployment issues. In this study, 27 mental health professionals including social workers, psychiatrist, and psychologist were interviewed to examine their deployment and postdeployment experiences. Interviews were recorded, transcribed and analyzed under two domains, namely Personal Care and Development and Relationships. MMHP recognized some level of dysfunction in their lives, at home, at work, or at both, upon their return from deployment. The ability for MMHP to manage their own reintegration issues has significance for their own personal well-being as well as their ability to provide specialized care for others. Attention needs to be given to how MMHP are supported postdeployment and possibly tailor a transitional process for postdeployment reintegration based on the unique nature of their work.

IOM (2010). "Returning Home from Iraq and Afghanistan Preliminary Assessment of Readjustment." 192. National Academy of Medicine, USA

The project is a two-part study. In this first phase, the committee has focused on the readjustment issues that have been commonly reported during the last several years in the scientific literature, in government and non-governmental reports, and in the popular press to gain a broad understanding of those issues. As part of its preliminary assessment, the committee has heard from active duty service members, Veterans, and family members as it made several visits around the country. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge.

IOM (2013). "Returning Home from Iraq and Afghanistan: Assessment of Readjustment Needs of Veterans, Service Members, and Their Families." . National Academy of Medicine, USA

The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The study consisted of two phases. The Phase 1 task was to conduct a *preliminary* assessment. The Phase 2 task was to provide a *comprehensive* assessment of the physical, psychological, social, and economic effects of deployment on and identification of gaps in care for members and former members, their families, and their communities.



Reger, M. A., et al. (2009). Association between number of deployments to Iraq and mental health screening outcomes in US Army soldiers. *Journal of Clinical Psychiatry* 70(9): 1266-1272.

The goal of this study was to compare the postdeployment mental health screening results of US Army soldiers with 1 or 2 deployments to Iraq. Routine mental health screening data collected over a nineteen month period in the Soldier Wellness Assessment Program were compared between soldiers evaluated after their first or second deployment to Iraq (n=1322). Standardized measures were used to screen for posttraumatic stress disorder (PTSD), panic, other anxiety, major depression, other depression, and hazardous alcohol consumption 90 to 180 days after the soldiers returned from Iraq. There was a significant association between number of deployments and mental health screening results such that soldiers with 2 deployments showed greater odds of screening positive for PTSD. There was no association between the number of deployments and other mental health screening results. These results provide preliminary evidence that multiple deployments to Iraq may be a risk factor for PTSD. However, these cross-sectional data require replication in a longitudinal study.

Wilcox, S. L., et al. (2015). "A scope of the problem: Post-deployment reintegration challenges in a National Guard Unit." *Work: Journal of Prevention, Assessment & Rehabilitation* 50(1): 73-83.

This study based on self-report surveys aims to describe the scope of challenges that a battalion of National Guard members (NGM) report experiencing after returning from a one-year deployment to Iraq. This article reports data from a sample of 126 NGM who recently returned from a one-year deployment to Iraq. The scope of post-deployment problems at baseline, 3- and 6-month post-deployment are presented. Overall, the rates of post-deployment psychological and behavioral problems were elevated upon returning from deployment and remained fairly constant for up to 6 months post-deployment. Approximately 30% of respondents were unsatisfied with their relationship and upwards of 30% reported family reintegration challenges. Comparisons with similar research and implications for prevention and improvement of post-deployment quality of life are addressed.

7.1.8. Health Service Determinants/ Improving Access, Support and Culturally-Appropriate Care Canadian Documents

Garber, B. G. and M. A. Zamorski (2012). Evaluation of a third-location decompression program for Canadian Forces members returning from Afghanistan. *Military medicine*, 177(4): 397 - 403.

This study is a self-report survey of perceived value of a Canadian Forces (CF) provided, 5-day, Third-location Decompression (TLD) program in Cyprus for members returning from deployment to Afghanistan. A 68-item voluntary, anonymous survey was administered. Its perceived value and impact were measured immediately afterward and 4 to 6 months later. Respondents overwhelmingly supported the TLD concept. Perceived value persisted 4 to 6 months after return, and 74% felt that it helped to make reintegration easier for them.



Fertout, M., Jones, N., Greenberg, N., Mulligan, K., Knight, T., & Wessely, S. (2011). A review of United Kingdom Armed Forces' approaches to prevent post-deployment mental health problems. *International Review of Psychiatry*, 23(2), 135-143.

This is a review of the variety of programs which attempt to mitigate the increased psychological risk and to assist personnel who are returning from a military deployment to make a smooth transition home. The review addresses some of the key post-deployment issues facing the UK Armed Forces and highlights the recent interventions which have been put in place to promote successful adjustment in the early post-deployment period. The paper is based upon research identified through a thorough literature search, for studies that focused on this area and included a recognized measure of mental health as an outcome. The paper focuses on three main areas; psychological decompression, psycho-education and screening. The current philosophical approaches to post-deployment mental health problems of some of the UK's coalition partners are also discussed.

Ray, S. L. and K. Heaslip (2011). Canadian military transitioning to civilian life: A discussion paper. *Journal of Psychiatric and Mental Health Nursing*, 18(3): 198-204.

This is a discussion paper exploring the existing literature from Canada on transitioning from military to civilian life for Veterans of recent deployments. A number of topics relating to the transition experience emerged: interpersonal readjustment, emotional including mental health needs, school needs, and social needs. Implications for nursing are discussed in terms of Veterans as a cultural group and culturally competent nursing care. Recommendations for future nursing are made.

Sloan, K. L. (2009). Overgrown Lawn: Military Veteran no longer able to maintain the yard. *Canadian Family Physician*, 55(5), 483-485.

This article discusses how Veterans Affairs Canada can collaborate with family physicians to help frail elderly Veteran clients remain independent at home. Key points discussed are: 1. Frail elderly people are vulnerable because they must finely balance the demands of independent life with the ability to cope. 2. Physician home visits improve the ability of frail elderly people to remain at home. 3. Veterans Affairs Canada can collaborate with family physicians to help frail elderly clients remain independent at home. 4. Veterans Affairs Canada's Veterans Independence Program allows eligible clients to remain at home by providing essential supports for activities of daily living.

Westwood, M. J., McLean, H., Cave, D., Borgen, W., & Slakov, P. (2010). Coming Home: A Group-Based Approach for Assisting Military Veterans in Transition. *The Journal for Specialists in Group Work*, 35(1), 44-68.

This study is an evaluation of the Veterans Transition Program, a residential, group-based program designed to assist the transition of military personnel back into Canadian society by aiding with their personal and career readjustment. Participants in the program included 18 male soldiers who experienced varying degrees of combat-related trauma. Standard measures of traumatic stress symptoms, depression, and self-esteem were administered to the participants in addition to participant interviews. The measures were administered before, immediately after, and 3 months post-program. Post-program research interviews were conducted and analyzed using the Critical Incident Technique research approach. An overview of the program is presented, along with



research results and recommendations to practitioners working with soldiers experiencing trauma-related stress reactions.

Thompson, J., & Poirier, A. (2011). *Survey on Transition to Civilian Life: Veterans not Receiving Benefits from VAC*. Charlottetown, PEI: Research Directorate, Veterans Affairs Canada, Charlottetown PE Canada, 15 August 2011: 16 p.

This report is a descriptive analysis of data collected in The Survey on Transition to Civilian Life, which asked 3,154 Regular Force former personnel who released from service during 1998 to 2007 about their health, disability and determinants of health. Analysis was conducted using weighted population estimates of proportions to address two distinct research questions: 1. What were the health, disability and determinants of health status of CF Regular Force personnel who released during 1998-2007 and were not participating in VAC programs (non-clients)? 2. How many non-clients might have needed assistance with re-establishment? Two-thirds of CF former Regular Force personnel who released during 1998-2007 were not receiving benefits from VAC. Of those, many attributed their health conditions and disability to military service, and an important minority had problems with health, disability and the determinants of health.

Harper, N. J., Norris, J., & D'Astous, M. (2014). Veterans and the Outward Bound Experience: An Evaluation of Impact and Meaning. *Ecopsychology*, 6(3), 165-173.

This study reports on a mixed-methods evaluation of Veterans' courses run by Outward Bound Canada, which assesses learning outcomes and articulates the subjective meaning of course experiences for participating Veterans. Results for 50 participants from the Outward Bound Outcomes Instrument show significant increases from pre-course to 6 weeks post-course on nine psychosocial constructs. Additionally, themes emerging from semi-structured interviews with 12 participants from the sample brought voice to the impact, personal growth and change experienced, and the potential value of such wilderness adventure-based courses for Veterans transitioning from combat to noncombat or civilian realities.

Health Service Determinants/Improving Access, Support and Culturally-Appropriate Care Other Countries

Amdur, D., et al. (2011). VA integrated post-combat care: A systemic approach to caring for returning combat Veterans. *Social Work in Health Care* 50(7): 564-575.

This article describes VA's system of Veteran-centered, post-combat care programs that rely on significant involvement of social workers to support Service Members, Veterans and their families through recovery, rehabilitation, and re-integration into their home communities.

Beck, C. E., Gonzales, F., Jr., Sells, C. H., Jones, C., Reer, T., & Zhu, Y. Y. (2012). The effects of animal-assisted therapy on wounded warriors in an Occupational Therapy Life Skills program. *US Army Medical Department Journal*, 38-45.

This pretest, posttest nonrandomized control group study evaluated the effects of Animal Assisted Therapy (AAT) on Warriors in transition (N=24) attending an Occupational Therapy Life Skills program with the long-



term goal of improving their successful reintegration. Participants were administered formal measures of mood, stress, resilience, fatigue and function. Although significant differences were not found between the groups on most measures, anecdotal reports by participants and observers indicate that participants eagerly anticipated being with the therapy dogs, expressed pleasure and satisfaction with the experience, and regretted seeing it end. There were significant correlations between mood, stress, resilience, fatigue, and function at various measurement points. This is the first study to formally assess the benefits of AAT with wounded service members in garrison. Suggestions for future research are provided.

Bohnert, K. M., Pfeiffer, P. N., Szymanski, B. R., & McCarthy, J. F. (2012). Continuation of care following an initial primary care visit with a mental health diagnosis: differences by receipt of VHA Primary Care-Mental Health Integration services. *General Hospital Psychiatry, 35*(1), 66-70.

This study evaluated patients with an initial primary care (PC) encounter in the Veterans Health Administration (VHA), to determine whether same-day receipt of Primary Care-Mental Health Integration (PC-MHI) services is associated with the likelihood of receiving a subsequent mental-health-related encounter in the following 90 days. Using VHA administrative data, the study identified 9046 patients who received VHA care for the first time in fiscal year 2009, received a PC encounter that included a mental health diagnosis on the first day of their VHA services and initiated care at a VHA facility that provided PC-MHI services. Logistic regression analyses were conducted, and adjusted for Operation Enduring Freedom/Operation Iraqi Freedom Veteran status, demographic characteristics, service-connected disability, psychiatric and non-psychiatric diagnoses, and psychotropic medication initiation on the index day of service use. Results demonstrated that receipt of same-day PC-MHI services was positively associated with having a mental-health-related encounter in the following 90 days, and it was concluded that PC-MHI services may enhance mental health continuation of care among PC patients with mental health conditions who initiate VHA services.

Castro, C. A. (2014). The US framework for understanding, preventing, and caring for the mental health needs of service members who served in combat in Afghanistan and Iraq: a brief review of the issues and the research. *European Journal of Psychotraumatology, 5*, 1-12.

This is a literature review of the psychological health research conducted in the United States in support of combat Veterans from Iraq and Afghanistan, using the Military Psychological Health Research Continuum, which includes foundational science, epidemiology, etiology, prevention and screening, treatment, follow-up care, and services research. The review is limited to those studies involving combat Veterans and military families. The review discusses issues regarding the impact of combat on the mental health of service members such as risk and resilience factors of mental health, biomarkers of posttraumatic stress syndrome (PTSD), mental health training, psychological screening, psychological debriefing, third location decompression, combat and suicide, the usefulness of psychotherapy and drug therapy for treating PTSD, role of advanced technology, telemedicine and virtual reality, methods to reduce stigma and barriers to care, and best approaches to the dissemination of evidence-based interventions. The mental health research of special populations such as women, National Guardsmen and reservists, and military families is also presented.

Coll, J. E., Weiss, E. L., & Yarvis, J. S. (2011). No one leaves unchanged: insights for civilian mental health care professionals into the military experience and culture. *Social Work in Health Care, 50*(7), 487-500.

This article is a discussion that aims to elucidate an understanding of military culture and experience, so as



to better frame the services offered by civilian professional counselors and social workers addressing the reintegration process with Veteran clients. The article highlights a few of the major mental health concerns that are prevalent in combat Veterans, especially for those returning from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF), and presents a brief overview of treatment modalities implemented both within and outside of the military. Practical therapeutic suggestions for clinicians with little or no knowledge of the military are discussed. The objective is to educate and prepare civilian mental health practitioners to administer culturally sensitive prevention and intervention services to meet the unique needs of this population.

Duchnick, J. J., Ropacki, S., Yutsis, M., Petska, K., & Pawlowski, C. (2015). Polytrauma transitional rehabilitation programs: Comprehensive rehabilitation for community integration after brain injury. *Psychological Services, 12*(3), 313-321.

This article presents the context and describes the program designs behind the first four polytrauma rehabilitation centers and polytrauma transitional rehabilitation programs (PTRPs) developed by Veterans Affairs (VA) traumatic brain injury centers: Minneapolis, Minnesota, Palo Alto, California, Richmond, Virginia, and Tampa, Florida. PTRPs provide specialized, interdisciplinary brain injury rehabilitation to active-duty service members and Veterans with complex rehabilitation needs. A total of 286 individuals participated in the first 4 PTRPs during the first 3 years. This article also summarizes outcome data on these initial participants, describing the demographic, injury, and neurobehavioral functioning outcomes. Mayo-Portland Adaptability Inventory Abilities, Adjustment, and Participation subscales and total scale T-scores served as primary functioning outcome measures. Statistical analysis found a significant change in total scale T-score from admission to discharge, consistent with improved patient functional ability. Challenges associated with the development and implementation of programs are discussed.

Jordan, K. (2011). Counselors helping service Veterans re-enter their couple relationship after combat and military services: A comprehensive overview. *The Family Journal, 19*(3), 263-273.

This article provides an overview of the unique challenges combat service Veterans deployed in Afghanistan and/or Iraq are dealing with today, and how these challenges can impact reintegration into civilian life. Attention is paid to how the attachment bond between the Veteran and spouse/partner often is impacted by the trauma of re-deployment/deployment/separation. The importance of couple counseling using Emotion-Focused Therapy (EFT) is addressed, as is a careful assessment at the onset of counseling.

Maguen, S., et al. (2010). The role of psychologists in the care of Iraq and Afghanistan Veterans in primary care settings. *Professional Psychology: Research and Practice 41*(2): 135-142.

The purpose of this article is to describe the role of psychologists in a Department of Veterans Affairs (VA) integrated primary care clinic that serves Veterans of Iraq and Afghanistan. Psychologists based in primary care can assist Veterans with reintegration to civilian life by providing rapid mental health assessment, normalizing re-adjustment concerns, planning for Veterans' safety, implementing brief interventions within primary care, facilitating transition to additional mental health care, and informing Veterans of other available psychosocial services. A case example demonstrating the psychologist's role highlights the benefits of an integrated care model. Implications of employing this model include reduction of symptoms and impairment by reducing stigma and barriers to seeking mental health care, increased motivation to engage in



treatment, and implementation of early interventions.

Mallen, M. J., et al. (2014). Providing coordinated care to Veterans of Iraq and Afghanistan wars with complex psychological and social issues in a department of Veterans affairs medical center: Formation of seamless transition committee. *Professional Psychology: Research and Practice* 45(6): 410-415.

This article reviews the relevant literature related to the most common struggles of Veterans adjusting to their return home and the transition from military to civilian culture. A template for how one Midwestern Veterans Affairs Medical Center provides coordinated care to high-risk Veterans returning home is presented. The Seamless Transition Committee (STC) is composed of leaders in mental health and other disciplines to provide expert consultation and coordination of care for high-risk, postdeployment Veterans. A case vignette is presented to illustrate common issues and challenges faced by postdeployment Veterans and how the STC functions together to design and implement treatment recommendations. Data is presented on the composition of 149 Veterans served through the committee during the first 3 years including changes in their utilization of services at the medical center. Finally, outcome data from staff members utilizing the committee indicate the STC enhanced care and saved time during treatment planning and implementation.

McFee, R. B. (2008). Gulf war servicemen and servicewomen: the long road home and the role of health care professionals to enhance the troops' health and healing. *Disease-a Month* 54(5): 265-333.

This monograph describes the myriad of challenges experienced by troops who fought in the Persian Gulf, written with the intent of preparing civilian health care professionals to provide appropriate services, address gaps in resources, promote collaboration between biomedical and psychosocial professional discipline and assist patients to reenter society successfully.

Morie, J. F., et al. (2009). Virtual worlds as a healing modality for returning soldiers and Veterans. *Frontiers in Neuroengineering* 7: 273-276.

This article reports about the development of a space that provides ongoing opportunities for healing activities, personal exploration and social camaraderie in an online virtual world to address the challenges experienced by those who have served in conflicts and are recovering from physical wounds, traumatic brain injury, and post-traumatic stress disorders, as well as basic psychological issues about who they are and how to find their place in a society that has not shared their experiences. Results of usability testing with an in-world Veterans' group are preliminary. Tests comparing soldiers who use this space as part of their reintegration regimen compared to those who do not are being scheduled.

Pols, H. (2007). War Neurosis, Adjustment Problems in Veterans, and an Ill Nation: The Disciplinary Project of American Psychiatry during and after World War II. *Osiris* 22(1): 72-92.

In this article, the author presents the development of American psychiatry in the context of its relationship with the armed forces during World War II and investigates the broader social and political concerns of psychiatry following the war. During the war, the incidence of mental breakdown continued to increase despite the screening programs established to weed out unfit individuals. For that reason, new forms of psychotherapeutic interventions were developed and



widely applied throughout the forces. Despite the effort of American psychiatrists to guide the reintegration and rehabilitation of returning ex-servicemen after the war, they were not successful. In time, the focus shifted from clinical care of individuals with clearly identifiable diagnoses who appeared to benefit from defined interventions, to a focus on the reform of child-rearing methods, seen as an essential condition of changing the poor mental health of the American population. Veterans believed that jobs, job security, financial support for education and housing, and family life were the essential ingredients for a happy postwar life.

Quinlan, J. D. (2010). Care of the Returning Veteran. *American Family Physician* 82(1): 43-49.

This article defines the role of family physicians in providing medical care for returning vets. Their injuries and illnesses are predictable. Blast injuries are common and most often present as mild traumatic brain injury. Family physicians caring for returning Veterans will also encounter conditions such as posttraumatic stress disorder at rates higher than those in the general population. Treatment of traumatic brain injury should be based on symptoms and guided by clinical practice guidelines from the U.S. Department of Veterans Affairs and Department of Defense. Family physicians should understand the range of post-war health concerns and screen returning service members for posttraumatic stress disorder, substance abuse, suicidality, and clinical depression. Family physicians are well positioned to offer continuity of care for issues affecting returning service members and to coordinate the delivery of specialized care when needed.

Wands, L. M. (2011). Caring for Veterans returning home from Middle Eastern wars. *Nursing Science Quarterly* 24(2): 180-186.

The purpose of this paper is to present a model (Swanson's work on caring) by which nurses can find guidance on how to better connect with Veterans returning home from war.

7.1.9. Population Research and Special Reports on MCT Determinants Canadian Documents

Black, T. G., & Papile, C. (2010). Making It on Civvy Street: An Online Survey of Canadian Veterans in Transition. *Canadian Journal of Counselling and Psychotherapy*, 44(4), 383-401.

This article presents the results of a non-governmental study focusing on the transition experiences of Canadian Forces personnel who had served in a full-time capacity for a period of at least 6 months. The survey generated basic demographic data as well as Veterans' subjective experiences of their transition from the Canadian military into civilian life. Results show that 37.6% of Veterans surveyed felt they did not make a successful transition to civilian life. Results of the study are intended to aid counsellors, Veterans' groups, and federal government agencies in developing a broader understanding of the issues that Canadian Veterans in transition currently face.

Thompson, J., & Lockhart, W. (2015). *Backgrounder for the Road to Civilian Life (R2CL) Program of Research into the Mental Health and Well-Being of Canadian Armed Forces Members/Veterans During Military-Civilian Transition*. Charlottetown, PE, Canada: Research Directorate, Veterans Affairs Canada.

This resource paper summarizes anecdotal information and published research on the mental health and



well-being of CAF Veterans during MCT to provide background information as the Road to Civilian Life (R2CL) program stands up.

Thompson, J., MacLean, M. B., Van Til, L., Sweet, J., Poirier, A., & Pedlar, D. (2011). *Survey on Transition to Civilian Life: Report on Regular Force Veterans*. Charlottetown, PEI: Research Directorate, Veterans Affairs Canada, Charlottetown, and Director General Military Personnel Research and Analysis, Department of National Defence, Ottawa. 04 January 2011:103 p.

This report describes the health, disability and determinants of health of Canadian Forces (CF) Regular Force Veterans after transition when they released from service in 1998-2007. The Survey on Transition to Civilian Life (STCL) was conducted to determine the health, disability, and determinants of health status for CF Regular Force Veterans after release from service. This descriptive report gives a basic picture of the status of the STCL population soon after transition. The findings suggest that VAC programs and services should be capable of assisting those with complex states of health. This complexity is demonstrated by the number, variety and comorbidity of physical, mental and social conditions reported by those receiving benefits from VAC. The survey yields little information about Veterans' life courses, and the findings cannot be used to prove a cause-and-effect relationship between military service and health after release from service, or outcomes of VAC programs.

MacLean, M. B., VanTil, L., Kriger, D., Sweet, J., Poirier, A., & Pedlar, D. (2013). *Well-Being of Canadian Armed Forces Veterans: Canadian Community Health Survey 2003*. Veterans Affairs Canada, Research Directorate Technical Report. Charlottetown. May 10, 2013; 64 p.

This study, conducted in collaboration with Statistics Canada, examines the well-being of Canadian Armed Forces (CAF) Veterans for a variety of indicators compared to other Canadians. The study is based on data collected from The 2003 Canadian Community Health Survey (CCHS) of the general Canadian population, which included a series of questions to identify Veterans living in Canada. The CCHS included a total sample of 135,573 Canadians living in households and not serving in the military representing a population of 26.6 million. This study included a sample of 3142 CAF Veterans and 105,467 other Canadians as a comparison group. CAF Veterans were similar to other Canadians in many areas of well-being. However, there were differences in some indicators as well as differences among sub-groups of the CAF Veteran population (Regular Force, Reserves, males, females and age groups) highlighting the need for planning and policy that is sensitive to these differences. For example, CAF Veterans were found to have higher rates of separation/divorce, were worse off for life satisfaction, disability and having co-morbid physical and mental chronic conditions. CAF Veterans had higher use of family doctors, specialists, nurses, other health professionals and home care.

MacLean, M. B., Van Til, L., Thompson, J. M., Sweet, J., Poirier, A., Sudom, K., & Pedlar, D. J. (2013). Postmilitary adjustment to civilian life: potential risks and protective factors. *Physical Therapy*, 94(8), 1186-1195.

The objectives of this study were: (1) to explore dimensions of post-military adjustment to civilian life and (2) to identify demographic and military service characteristics associated with difficult



adjustment. Data were analyzed from a national sample of 3,154 Veterans in a cross-sectional survey conducted in 2010 called the Survey on Transition to Civilian Life. The prevalence of difficult adjustment to civilian life for selected characteristics was analyzed descriptively, and multivariable logistic regression analysis was used to identify characteristics that were associated with difficult adjustment. The prevalence of difficult adjustment to civilian life was 25%. Statistically significant differences were found across indicators of health, disability, and determinants of health. In multivariable regression, lower rank and medical, involuntary, mid-career, and Army release were associated with difficult adjustment, whereas sex, marital status, and number of deployments were not. The study concludes that post-military adjustment to civilian life appears to be multidimensional, suggesting the need for multidisciplinary collaboration between physical therapists and other service providers to mitigate difficult transition.

Neary, P. (2004). *Honouring Canada's Commitment: "Opportunity with Security" for Canadian Forces Veterans and Their Families in the 21st Century*. Veterans Affairs Canada Canadian Forces Advisory Council.

This document was produced by The Veterans Affairs Canada – Canadian Forces Advisory Council, to address challenges facing the members and Veterans of the Canadian Forces and their families. The document recommends that six issues be given priority consideration: 1. A complete and thorough overhaul of the way that Canadian Forces members and Veterans are compensated for injury. 2. The development of a robust program of transition services and benefits. This must be easily accessible, responsive to client needs, timely, and flexible. 3. The development of policies that will enhance the support provided to spouses and children, most particularly in the areas of health care and structural economic inequalities. 4. The expansion of existing health-care benefits to reflect a more comprehensive mental health strategy and new approaches to rehabilitation and retraining. 5. Acknowledgment of the government's "duty to accommodate" disabled members of the Canadian Forces through an enhanced priority for employment in the Public Service. 6. The provision of equitable access to funeral and burial benefits.

Van Til, L., Poirier, A., Sweet, J., McKinnon, K., & MacLean, M. B. (2013). *Methodology: Life After Service Studies 2013*. Charlottetown, PEI: Veterans Affairs Canada.

This methodology report provides the technical specification for data users of both Life After Service Studies (LASS) 2013 studies: Life After Service Survey, and Income Study: data linkage to Statistics Canada's longitudinal income data. The Life After Service Studies (LASS) program of research is designed to further understand the transition from military to civilian life and ultimately improve the health of Veterans in Canada, through the following objectives: Measure the well-being of released Reserve Force personnel after transition to civilian life (in terms of health, disability and determinants of health); compare released Reserve and Regular Force personnel; understand changes over time; and examine program reach, potential needs not addressed by current programs, and program effectiveness.



Population Research and Special Reports on MCT Determinants

Other Countries

Ashcroft (2014). Veterans Transition Review UK MoD: 1-202.

This Review looks in detail at many aspects of transition including training, employment, health, housing, welfare and finance. These are discussed at length, with specific recommendations relating to each.

Berglass, N. and M. C. Harrell (2012). Well After Service: Veteran reintegration and American communities, Center for a New American Security.

This is a report that includes a range of research, analysis and convening activities that explore the impact of military service on service members, Veterans and their families; their deployment-related needs; and the ways in which their country (US) can best support them.

Buckman, J. J., Forbes, H. J., Clayton, T., Jones, M., Jones, N., Greenberg, N., & Fear, N. T. (2013). Early Service leavers: a study of the factors associated with premature separation from the UK Armed Forces and the mental health of those that leave early. *European Journal Of Public Health, 23*(3), 410-415 6p.

This study aims to identify characteristics associated with being an Early Service Leaver (ESL), and compare the post-discharge mental health of ESLs and other Service leavers (non-ESLs). A cross-sectional study used data on ex-Serving UK Armed Forces personnel. Multivariable logistic regression was used to estimate odds ratios and 95% confidence intervals for the associations between Service leaving status with socio-demographics, military characteristics and mental health outcomes. ESLs were at an increased risk of probable post-traumatic stress disorder (PTSD), common mental disorders, fatigue and multiple physical symptoms, but not alcohol misuse. Current mental health problems were more commonly reported among ESLs than other Service leavers. There may be a need to target interventions to ESLs on leaving Service to smooth their transition to civilian life and prevent the negative mental health outcomes experienced by ESLs further down the line.

Castro, K. H., Kintzle, S., & Hassan, A. (2014). The State of the American Veteran. USC School of Social Work, Centre for Innovation and Research on Veterans and Military Families.

The Los Angeles County Veterans Study, conducted by the USC School of Social Work Center for Innovation and Research on Veterans & Military Families, is an effort to provide data-driven recommendations for serving the large population of Veterans residing in Los Angeles County.

CSJ. (2014). *Doing Our Duty? Improving transitions for military leavers*. Breakthrough Britain, (2). Centre Social Justice: London, UK.

This policy report was generated by The Centre for Social Justice (CSJ), a British non-partisan working group, comprising prominent academics, practitioners and policy makers. The report examines how and why the lives of some service personnel fall apart on leaving the British Armed Forces, asks how they can be rebuilt and presents solutions to prevent these personal tragedies. This report is based around five key issues that confront some service leavers, and it explores the barriers that exist to their successful re-integration at their point of discharge, and examines the



consequences of failing to overcome them. They are: Employment; Housing and Homelessness; Alcohol and Drug Use; Mental Health; Crime. This report addresses why and how negative outcomes in these areas are a reality for some current and future service leavers.

Fear, N. T., Wood, D., & Wessely, S. (2009). Health and Social Outcomes and Health Service Experiences of UK Military Veterans: A Summary of Evidence: 1-82.

This report is a summary of the available evidence on the health and social outcomes, and the health service experiences, of former members of the UK Armed Forces.

FiMT (2013). "The Transition Mapping Study UK: Understanding the transition process for Service personnel returning to civilian life." 1-92.

This report reviews existing research, to understand how the transition process currently works, how it is viewed by stakeholders and by recent Service leavers, to develop a model that quantified the costs of poor transition to the UK as a whole, and to make recommendations on how to reduce the number of poor transitions. The research focused on full-time personnel.

Hotopf, M., Hull, L., Fear, N. T., Browne, T., Horn, O., Iversen, A., Jones, M., Murphy, D., Bland, D., Earnshaw, M., Greenberg, N., Hughes, J.H., Tate, A.R., Dandeker, C., Rona, R., Wessely, S. (2006). The health of UK military personnel who deployed to the 2003 Iraq war: a cohort study. *The Lancet*, 367(9524), 1731-1741.

This study explores the mental and physical health outcomes of UK military personnel by comparing health outcomes in a random sample of 4722 UK armed forces personnel who were deployed to the 2003 Iraq war with those in personnel who were not deployed. Participants completed a questionnaire covering the nature of the deployment and health outcomes, which included symptoms of post-traumatic stress disorder, common mental disorders, general wellbeing, alcohol consumption, physical symptoms, and fatigue. Differences in health outcomes between groups were found to be slight. There was a modest increase in the number of individuals with multiple physical symptoms. No other differences between groups were noted. There was no evidence that later deployments, which were associated with escalating insurgency and UK casualties, were associated with poorer mental health outcomes. For regular personnel in the UK armed forces, deployment to the Iraq war has not, so far, been associated with significantly worse health outcomes, apart from a modest effect on multiple physical symptoms. There is evidence of a clinically and statistically significant effect on health in reservists.

Iversen, A., Nikolaou, V., Greenberg, N., Unwin, C., Hull, L., Hotopf, M., & ... Wessely, S. (2005). What happens to British Veterans when they leave the armed forces?. *European Journal Of Public Health*, 15(2), 175-184.

In this report, an analysis of existing data from the King's Military Cohort suggests that the majority of service leavers do well after leaving and are in full-time employment. Those with poor mental health during service however, were more likely to leave, had a greater chance of becoming unemployed after leaving, and are at higher risk of social exclusion.

van Staden, L. (2007). Transition Back into Civilian Life: A Study of Personnel Leaving the U.K. Armed Forces via "Military Prison". *Military Medicine*, 172(9): 925-930.

The purpose of this study was to identify the factors associated with poor outcomes for personnel leaving the United Kingdom Armed Forces early. Participants were interviewed 1 week before



leaving (predischarge) and followed up 6 months later. Following the predischarge interview of 111 participants, seventy-four (67%) were followed up and interviewed 6 months later. Two measures of mental health were administered: the Primary Care Evaluation of Mental Disorders Patient Health Questionnaire for general mental health and the Post-Traumatic Stress Disorder Checklist. Thirty-eight of those followed up (56%) were classed as being disadvantaged after leaving. Factors associated with poor out-comes on leaving were often interrelated, making causal relationships complex. This study provides a basis from which to identify, at the point of discharge, those most at risk of further disadvantage.

7.1.10. Homelessness

Johnsen, S., Jones, A., & Rugg, J. (2008). *The Experience of Homeless Ex-Service Personnel in London*. This report identifies the number, characteristics and experiences of homeless Veterans, routes into homelessness, the effectiveness of services for homeless Veterans in London and a series of important recommendations, many of which have already been actioned or are planned. The report also provides very clear guidelines about focusing the efforts of ESAG partners to be able to provide innovative and effective support for Veterans who have just become homeless, are long-term homeless or may be about to become homeless.

Thompson, J. (2008). *Homeless Veterans in Canada – Rapid Skim of Published Research*. Charlottetown, PEI. Research Directorate Brief. Veterans Affairs Canada. Charlottetown. 05 November, 2008;11 p. This literature search conducted by the VAC Research Directorate scanned published information on homeless persons in Canada, and homeless Veterans in Canada and other nations, to address two questions: 1. What is the nature of the UK report, and is it applicable to Canadian Veterans? 2. What is the nature and quality of published evidence on Canadian homelessness in general, and homeless Veterans in particular? Significant findings include: Canadian definitions of “homeless”, “homeless Veteran” and “homelessness” appear to need development. There is little published on homeless Canadian military Veterans; Findings for homeless non-Veterans apply also to Veterans. Veteran homeless rates are not constant from era to era. Internationally, programs to assist homeless Veterans include options that were familiar to previous generations of Canadian Veterans, in some cases back to World War I. It remains unclear precisely why there are homeless Veterans in Canada. Further research could identify risk factors and therefore opportunities to prevent or mitigate homelessness in Canadian military Veterans.

7.2. Research concerning Personal Emotional/Cognitive Factors

7.2.1. Gender

Hachey, K. K. (2014). *Transition from Military to Civilian Life*. Department of National Defence, Director General Military Personnel Research & Analysis.

This paper reports on a secondary analysis conducted using the Survey on Transition to Civilian Life (STCL)



data to examine gender differences on several variables, including general and mental health, life stress, and satisfaction with elements of civilian life for CAF Veterans. Results revealed significant differences between male and female Veterans on their self-reported mental health, level of life stress, and satisfaction with elements of civilian life. No significant differences were found on other important measures, such as self-reported general health and satisfaction with financial situation and social environment. Further analyses revealed variables that significantly predicted adjustment to civilian life. Future research should examine why these gender differences exist in the transition from military to civilian life in order to identify the gender-specific resources needed in transition.

Jakupcak, M., Osborne, T. L., Michael, S., Cook, J. W., & McFall, M. (2006). Implications of masculine gender role stress in male Veterans with posttraumatic stress disorder. *Psychology Of Men & Masculinity*, 7(4), 203-211.

In this study, relationships between masculine gender role stress and posttraumatic stress disorder (PTSD) symptom severity, alexithymia, fear of emotional states, and social support were examined in a sample of male Veterans seeking inpatient treatment for PTSD. After accounting for PTSD symptom severity, masculine gender role stress was significantly and positively associated with alexithymia and significantly and negatively related to social support. Masculine gender role stress was not associated with PTSD symptom severity or fear of emotional states.

Pelts, M. D., et al. (2014). Wounded bonds: A review of the social work literature on gay, lesbian and bisexual military service members and Veterans. *Journal of Social Work* 15(2): 207-220.

This article reviews the historical accounts of the military's treatment of people who identify as GLB, emphasizing the importance of understanding this history for the social work profession. It also reports on the review of content related to GLB service members and Veterans in 13 journals of social work, identifying implications for social work. The 'journal impact factor' was utilized to identify the 13 primary journals of social work from 1992–2013 for content related to GLB and military or Veterans. On that basis only eight articles were published during this period relevant to this population. The results of this literature review suggest a strong need to provide more scholarly literature and research with military and Veterans that identify as GLB in order to understand the needs and inform social work education and practice.

Vogt, D. S., et al. (2005). Deployment stressors, gender, and mental health outcomes among Gulf War I Veterans. *Journal of Traumatic Stress* 18(3): 115-127.

The purpose of this study, using a survey comprised of a collection of stressor and health outcome measures, was to examine an array of deployment stressors that were content valid for both female and male Gulf War I military personnel in order to elucidate gender differences in war-zone exposure and identify gender-based differential associations between stressors and mental health outcomes. The three hundred and seventeen participants were deployed from Active Duty, Reserve, and National Guard units and represented the Army, Navy, Air Force, Marines, and Coast Guard branches of the military. While women and men were exposed to both mission-related and interpersonal stressors and both stressor categories were associated with mental health outcomes, women reported more interpersonal stressors and these stressors generally had a stronger impact on women's than on men's mental health. Exceptions are described, and implications are discussed.



7.2.2. Female Veterans

Basham, K. (2014). Returning servicewomen and Veterans. In A. Gitterman (Ed.), *Handbook of social work practice with vulnerable and resilient populations* (3 ed., pp. 441-461). New York, NY, US: Columbia University Press.

This chapter examined the ways that women in the military and their families cope with the challenges of deployment and post-deployment, through an examination of bio-psychosocial-spiritual variables. The risk factors and vulnerabilities for this population are described, including: (i) pre-military trauma; (2) responses to trauma; (3) military sexual harassment and assault; (4) health and mental health; (5) caregiver burden vs. caregiver satisfaction; (6) marriage/ partnerships and divorce; (7) intimate partner violence; and (8) complex social identities. Various Department of Defense prevention and resilience-building programs are introduced, followed by a general description of social work interventions aimed to assist with the health, mental health, and psychosocial needs of servicewomen and their families. A phase-oriented trauma-informed clinical social work practice model is introduced, illustrated with clinical vignettes. The chapter concludes by suggesting that by moving beyond micro practice to a focus on the workplace, community, and health and mental health organizations, each clinical social worker needs to move from "case to cause" regularly in working with this population.

Burkhart, L. and N. Hogan (2015). Being a female Veteran: A grounded theory of Coping with transitions. *Social Work in Mental Health, 13*(2), 108-127.

The purpose of this grounded theory study is to discover the categories and processes grounded in the experience of female Veterans who transitioned into, through, and out of the military. Data from 20 female Veterans were analyzed to generate a substantive theory of the process of women who have transitioned out of the military. Results of this study provide a theoretical description of the process female Veterans experience when transitioning from a civilian identity, through military life stressors and adaptations, toward gaining a dual identity of being a Veteran-civilian.

Chang, B. H., Skinner, K. M., & Boehmer, U. (2001). Religion and mental health among women Veterans with sexual assault experience. *International Journal of Psychiatry in Medicine, 31*(1), 77-95.

This study examined the buffering effect of religion on mental health and depression for women who report experiencing sexual assault while in the military. The sample includes a nationally representative sample of 3,543 women Veterans who use VA ambulatory care. Two dimensions of religiosity were used: organizational (frequency of religious service attendance) and subjective (the extent religious beliefs are a source of strength/comfort). Mental health was measured by the mental component summary (MCS) from the SF36 and depressive symptoms were measured by the Center for Epidemiologic Studies-Depression (CES-D) scale. Women Veterans who reported experiencing sexual assault while in the military had lower mental health scores and higher levels of depression. Linear regression analysis indicated that these negative impacts diminished with increased frequency of religious service attendance, supporting the buffering effect of organizational religiosity on mental health and depression. Although the buffering effect of subjective religiosity was not evident, subjective religiosity was shown to be positively associated with better mental health in both groups of women with and without sexual assault experience in the military.



Crompvoets, S. (2011). The health and wellbeing of female Veterans: A review of the literature. *Journal of Military and Veterans' Health, Volume 19 Number 2; April 2011 p 25-31.*

This paper examines health and wellbeing issues that emerged in a systematic review of the war, peacekeeping and peacemaking experiences of female Veterans. Research questions that informed the search were: firstly, what is known about the experiences of female Veterans, and in particular, military nurses; and secondly, what influences the perceptions of a Veteran of their health and wellbeing?

Components of wellbeing that emerged included the ability to cope, ease of access to services and support, satisfaction with parenting, the effects of sexual harassment, and symptoms of PTSD (Post Traumatic Stress Disorder). Perceptions of wellbeing were both informed and challenged by the women's individual and collective identities, for example a professional identity, military identity, being a parent and being female.

Englebrect, K. M. (2013). *Healing the invisible wounds: A grant proposal for female Veterans suffering from PTSD.* (M.S.W.), California State University, Long Beach.

This document is a grant proposal to fund a mental health and family services program for female Veterans suffering from Posttraumatic Stress Disorder (PTSD) at Veterans Village of San Diego, Oceanside. The proposed program is aimed at improving the mental health functioning of women Veterans and at helping them to transition from military service members to mothers and/or partners. The program includes individual counseling for Veterans, conjoint family therapy, a PTSD psycho-educational group for children and partners, and case management services. The document includes a comprehensive review of the literature on the main causes of PTSD (Military Sexual Trauma, combat exposure, and combat related Traumatic Brain Injury); consequences of this mental disorder among women returning from the military service (substance misuse, suicidal attempts and/or ideation and family problems); and effective interventions, such as Eye Movement Desensitization and Reprocessing therapy, Cognitive Processing Therapy and Prolonged Exposure Therapy, for the treatment of PTSD among the Veteran population.

Evans, L., Cowlshaw, S., & Hopwood, M. (2009). Family functioning predicts outcomes for Veterans in treatment for chronic posttraumatic stress disorder. *Journal of Family Psychology, 23(4), 531-539.*

A longitudinal framework was used to examine the competing hypotheses of (a) whether family functioning predicts changes in posttraumatic stress disorder (PTSD) symptoms or (b) whether PTSD symptoms predict changes in family functioning. 311 Veterans admitted to a treatment program completed a series of questionnaires at 3 time points: at intake, from intake to completion of a treatment program, and at the 6-month follow-up. Alcohol use and general mental health symptoms were also measured at intake. A cross-lagged panel model using structural equation modeling analyses indicated that family functioning was a moderate predictor of PTSD symptoms at post-treatment and at the 6-month follow-up. PTSD was found to not be a significant predictor of family functioning across time and alcohol use, and general mental health symptoms did not affect the overall findings. Further analyses of PTSD symptom clusters indicated that the avoidance symptom cluster was most strongly related to family functioning.

Frayne, S. M., Parker, V. A., Christiansen, C. L., Loveland, S., Seaver, M. R., Kazis, L. E., & Skinner, K. M. (2006). Health status among 28,000 women Veterans: The VA Women's Health Program Evaluation Project. *Journal of General and Internal Medicine, 21(3), S40-S46.*

The purpose of this study was to characterize the health status of women (vs. men) Veteran VA patients across age cohorts, and assess gender differences in the effect of social support upon health status.

Drawing on data came from the national 1999 Large Health Survey of Veteran Enrollees, which included



28,048 women and 651,811 men who had used VA in the prior 3 years, dimensions of health status were evaluated based on the validated Veterans Short Form-36 instrument; social support (married, living arrangement, have someone to take patient to the doctor). Gender had a clinically insignificant effect upon Physical Component Summary (PCS) and Mental Component Summary (MCS) scores after adjusting for age, race/ethnicity, and education. Women had lower levels of social support than men. It was concluded that women Veteran VA patients have as heavy a burden of physical and mental illness as do men in VA, and are expected to require comparable intensity of health care services.

Katz, L. S., Bloor, L. E., Cojucar, G., & Draper, T. (2007). Women who served in Iraq seeking mental health services: Relationships between military sexual trauma, symptoms, and readjustment. *Psychological Services, 4*(4), 239-249.

This article is an inquiry about women who have served in Operation Enduring Freedom and are seeking psychological services at a Veterans' Affairs (VA) Medical Center, comparing and highlights the prevalence of military sexual trauma (MST). A comparison between those with and without MST revealed that those with MST had higher clinician ratings and readjustment scores, suggesting greater difficulty with readjustment. While MST was significantly correlated with clinician ratings and readjustment scores, the variables "being injured" and "witnessing others injured or killed" were not.

McCall-Hosenfeld, J. S., et al. (2009). Sexual assault in the military and its impact on sexual satisfaction in women Veterans: a proposed model. *Journal of Womens Health 18*(6): 901-909.

The purpose of this paper is to describe the mediators associated with sexual assault in the military (SAIM) and decreased sexual satisfaction. Using a retrospective analysis of cross-sectional data collected for the national Veterans Affairs (VA) Women's Health Survey, a mediator model to explain the association between SAIM and decreased sexual satisfaction among women Veterans is proposed. Four mediators of the association between SAIM and decreased sexual satisfaction were tested using the responses of 3161 women who answered the sexual satisfaction question. In age-adjusted logistic regression analyses, both SAIM and sexual dissatisfaction were strongly associated with each of the proposed mediators. SAIM's negative impact on sexual satisfaction in women Veterans operates both directly and through its physical and mental health sequelae.

Yaeger, D., et al. (2006). DSM-IV diagnosed posttraumatic stress disorder in women Veterans with and without military sexual trauma. *Journal of General Internal Medicine 21*(S3): S65-S69.

This study compares rates of posttraumatic stress disorder (PTSD) in female Veterans who had military sexual trauma (MST) with rates of PTSD in women Veterans with all other types of trauma. Subjects were recruited at the Women's Comprehensive Healthcare Center when attending medical or psychiatric appointments or through a mailing; 230 women agreed and 196 completed the study. They completed questionnaires on health and military history, along with the Stressful Life Events Questionnaire (SLEQ). Those who met DSM-IV PTSD Criterion A completed the PTSD Symptom Scale-Interview (PSS-I) on which PTSD diagnoses were based. Military sexual trauma and other trauma both significantly predicted PTSD in regression analyses but MST predicted it more strongly. Prior trauma did not contribute to the relationship between MST and PTSD. Findings suggest that MST is common and that it is a trauma especially associated with PTSD.



Zinzow, H. M., et al. (2007). Trauma among female Veterans: a critical review. *Trauma, Violence & Abuse* 8(4): 384-400.

This article reviews the literature documenting the nature and prevalence of traumatic experiences, trauma-related mental and physical health problems, and service use among female Veterans. Existing research indicates that female Veterans experience higher rates of trauma exposure in comparison to the general population. Emerging data also suggest that female Veterans may be as likely to be exposed to combat as male Veterans, although not as directly or as frequently. Female Veterans also report high rates of posttraumatic stress disorder, which has been associated with poor psychiatric and physical functioning. Although sexual assault history has been related to increased medical service use, further research is needed to understand relationships between trauma history and patterns of medical and mental health service use. Researchers also are encouraged to employ standardized definitions of trauma and to investigate new areas, such as treatment outcomes and mediators of trauma and health. Policy and practice implications are discussed.

7.2.3. Identity

Griffith, J. (2011). Decades of transition for the US reserves: changing demands on reserve identity and mental well-being. *International Review of Psychiatry* 23(2), 181-191.

This article summarizes the experiences of US reservists during these mobilizations and deployments, focusing on preparatory inadequacies related to the health and well being of reservists and subsequent personal adjustment. The author proposes that identities of reservists relate to the readiness, deployment experiences, and post- deployment life of reservists, including personal adjustment and mental health needs. It concludes by offering implications of identities for reservists' readiness and effectiveness.

Herman, A., & Yarwood, R. (2014). From services to civilian: The geographies of Veterans' post-military lives. *Geoforum*, 53(1), 41-50.

This military geography paper explores the spatiality of (post)military identities, demonstrating the continuing impact of having been part of the military community despite the passage of time. Data from tri-service respondents highlighted the challenges faced even by those deemed to have 'successfully' transitioned to 'Civvy Street', articulating discourses of loss and separation. While some had achieved closure with their past military selves, others struggled and became stuck in a liminal space between civilian and military lives that perpetuated feelings of isolation. The study highlights the importance of conceptualizing post-institutional transitions as a process in order to understand how individuals negotiate their identities in changing spatial circumstances.

Kelty, R., Kleykamp, M., & Segal, D. R. (2010). The Military and the Transition to Adulthood. *Future of Children*, 20(1), 181-207.

This paper examines the effect of military service on the transition to adulthood, highlighting changes since World War II in the role of the military in the lives of young adults, focusing especially on how the move from a conscription to an all-volunteer military has changed the way military service affects youths' approach to adult responsibilities. It examines four broad areas of military service affecting the transition into adulthood: social characteristics, race, ethnicity, and sexual



orientation. It looks at effects on family formation, educational and employment consequences, and the dangers of military service in times of war.

Savion, S. M. (2009). How do retired military officers start anew in civilian society? A phenomenological study of life transition. *Human and Organizational Learning*. George Washington University. Ed.D.: 316.

This phenomenological study explored how ten retired senior officers who had been living in civilian society for 2 to 5 years navigate a change in cultural differences and attend to the identity, awareness, and self-renewal that lead to a new beginning and a potential for learning. Eight themes and thirteen sub-themes emerged. This study offers new insights that contribute to the life transition literature and provide military officers with insights to consider long before retiring from the military and returning to civilian society. The intent is that this research enrich practice but, moreover, generate dialogue that fosters an appreciation of the life transitioning experience of a invaluable yet often overlooked segment of our society.

Yanos, R. C. (2005). *Perceptions of transition to civilian life among recently retired Air Force officers*. Psychology. University of Maryland, College Park. Ph.D.: 555.

This dissertation explored the perceptions of recently retired Air Force officers and their wives of their adjustment to civilian life and their general well-being through in-depth personal interviews. The case study method using a biographical interview approach was chosen as the primary research method for this study. The case study method and biographical interview were used in conjunction with a quantitative measure, Bradburn's Affect-Balance Scale. The Long Form Personal Interview that was developed at the National Opinion Research Center, as a method to measure fluctuations in behavior related to mental health, was used as the research interview portion of the biographical interview. The participants in this study consisted of 3 male, Caucasian, recently retired, Air Force officers and their wives. Based on the themes that emerged, a multidimensional model of adjustment to retirement was developed. The model considers retirement to be a precipitating event and addresses changes in the domains of economic impact, social support, identity reconstruction, and physical and mental health. Identity reconstruction and mental health represented the area of greatest challenge. All three individuals experienced great difficulty in reconstructing an identity for the civilian sector.

7.2.4. Meaning Making/Narrativity/Posttraumatic Growth

Fontana, A., & Rosenheck, R. (2004). Trauma, change in strength of religious faith, and mental health service use among Veterans treated for PTSD. *J Nerv Ment Dis*, 192, 579-584.

The purpose of this study is to examine a model of the interrelationships among Veterans' traumatic exposure, posttraumatic stress disorder (PTSD), guilt, social functioning, change in religious faith, and continued use of mental health services. Data are drawn from studies of 554 outpatients and 831 inpatients receiving specialized treatment of PTSD in Department of Veterans Affairs programs. Structural equation modeling suggested that Veterans' experiences of killing others and failing to prevent death weakened their religious faith, both directly and as mediated by feelings of guilt. Weakened religious faith and guilt each



contributed independently to more extensive use of Veterans Affairs (VA) mental health services. Severity of PTSD symptoms and social functioning played no significant role in the continued use of mental health services. It was concluded that Veterans' pursuit of mental health services appears to be driven more by their guilt and the weakening of their religious faith than by the severity of their PTSD symptoms or their deficits in social functioning, and further, that a primary motivation of Veterans' continuing pursuit of treatment may be their search for a meaning and purpose to their traumatic experiences.

Huff, M. B. (2000). *Does the Timing of Life Course Events Really Matter: The Perceptions of Vietnam Veterans*. (Ph.D. Dissertation), University of Kentucky.

This dissertation examined how Veterans understand and give meaning to the life events that they experienced in combat, and have experienced following their service in the Vietnam conflict. Meaning-making was compared between groups who have and have not been diagnosed with PTSD. Seventy-five Veterans of the Vietnam war participated in one of three groups: (1) diagnosed with PTSD and active in mental health treatment programs; (2) diagnosed with PTSD but not active in a mental health treatment program or (3) no diagnosis of PTSD. Sixty of the Veterans participated in qualitative interviews. All of these Veterans also believed that Vietnam had significantly altered their subsequent life course and initial expectations. Many Veterans diagnosed with PTSD report having experienced major life events such as employment, marriage, and parenthood "off-time": a number of these events were experienced later than the Veterans had expected. For many, delays were perceived as advantageous, providing an important period of adjustment following their combat experience, in contrast to the thesis that life events experienced off-time are typically negative in their effects on individuals' subsequent life course.

Karlsen, E., Dybdahl, R., & Vittersø, J. (2006). The possible benefits of difficulty: How stress can increase and decrease subjective well-being. *Scandinavian Journal of Psychology*, 47(5), 411-417.

This study explores the effects of stress, trauma, coping and growth orientation on subjective well-being. Based on cognitive stress theory, it was hypothesized that adversity may contribute to increased or decreased well-being, depending on the subsequent meaning these experiences are given. Survey data from Norwegian UN/NATO Veterans showed that stress and well-being were negatively associated at the level of zero-order correlations. A full structural equation model revealed that the effect of stress on well-being was mediated positively through a problem-focused coping process combined with a growth component. Stress was negatively mediated through an avoidant-focused coping process and a distress component. The effect from stress was fully mediated in the model. The hypothesis that stress can produce both increased and decreased subjective well-being was confirmed.

Maclean, A. (2008). The Cold War and Modern Memory: Veterans Reflect On Military Service. *Journal of Political and Military Sociology*. 36(1): 103-130.

This paper uses data from focused interviews to look at how 20 Veterans who served during the peacetime Cold War portrayed the effects of military service. Interviews were open ended; transcribed and coded using software. Most Veterans described being a soldier, sailor, or airman as a neutral, transitional role. Veterans also described their service as having features that are consistent with views of such service as both a positive turning point and a negative disruption. In addition, Veterans who served as officers described learning leadership and confidence in the armed forces, which may help explain an observed quantitative officer premium. This latter finding



is consistent with a view of the armed forces as facilitating the accumulation of advantage.

Osorio, C., et al. (2013). Perceptions of stigma and barriers to care among UK military personnel deployed to Afghanistan and Iraq. *Anxiety, Stress & Coping* 26(5): 539-557.

The purpose of this study was to examine the relationship between stigmatizing beliefs, perceived barriers to care (BTC), and probable post-traumatic stress disorder (PTSD) in 23,101 UK military personnel deployed to Afghanistan and Iraq both during and after deployment; and in a smaller group some six months later. The study used information derived from nine different UKAF data-sets where information regarding stigma and BTC were assessed during and after an operational deployment to Afghanistan and Iraq. A stigma scale was used as were measures of probable PTSD. Results suggested that stigma/BTC perceptions were significantly, and substantially higher during deployment than when personnel are returning home; however, within the smaller follow-up group, the rates climbed significantly over the first six-months post-deployment although they still remained lower than during-deployment levels. Male personnel, those who reported higher levels of PTSD symptoms and/or greater combat exposure were significantly more likely to endorse more stigma/BTC at both sampling points. Rates of stigma/BTC on deployment are substantially higher than rates measured when personnel are in less threatening environments.

Schok, M. L., et al. (2007). Meaning as a mission: a review of empirical studies on appraisals of war and peacekeeping experiences. *Clinical Psychology Review* 28(3): 357-365.

This review of the scientific literature aims to make sense of war and peacekeeping experiences, and it includes an analysis of empirical studies that examine appraisals of military deployment experiences among Veterans. For the purpose of this review relevant publications were searched with Webspirs and PILOTS using general terms such as Veterans, soldiers in combination with meaning, appraisals. Additional specific search terms were used such as benefit finding, coping, change, effects, consequences. Seven empirical studies met our criteria of inclusion. In those studies Veterans reported more positive than negative effects in the studies of this review. Furthermore, construing positive meaning from war and peacekeeping experiences, especially related to combat exposure or high perceived threat, is associated with better psychological adjustment. More insight on "normal" psychological processing of stressful and traumatic experiences is obtained when the concept of meaning is used in research. This perspective emphasizes the perception of individuals and focuses on beliefs and attitudes in making sense of threatening events instead of pathologizing the response to trauma.

Settersten, R. A., Jr., et al. (2012). Men's Appraisals of Their Military Experiences in World War II: A 40-Year Perspective. *Research in Human Development* 9(3): 248-271.

This study used data on Veterans from the longitudinal Harvard Study of Adult Development (N=241), examining how Veterans of World War II appraised specific dimensions of military service directly after the war and over 40 years later, as well as the role of military service in their life course. Other features that were examined were how postwar appraisals of service mediated the effects of objective aspects of service, and how postwar psychological adjustment and health mediated the effects of postwar appraisals, on later-life appraisals. Results reinforce the idea that how men perceive their military experiences may be more important in predicting outcomes than



the experiences themselves. Results are discussed in light of the sample characteristics, the historical context of World War II, and the complexities of appraisal and retrospection.

Tedeschi, R. G. (2011). Posttraumatic growth in combat Veterans. *Journal of Clinical Psychology in Medical Settings* 18(2): 137-144.

This paper presents a model of posttraumatic growth in combat Veterans. Combat Veterans and their families face significant challenges not only to their abilities to cope, but often to their fundamental belief systems. Traumatic events represent assaults on core beliefs, yet at times, produce cognitive processing that can ultimately result in personal transformations called posttraumatic growth (PTG). Clinicians can utilize a systematic therapeutic approach to facilitate PTG as they carry out a relationship of expert companionship. PTG in service members is described in this article, as well as the approach to facilitation of PTG.

Terrill, J. (2014). "Thoughts on logotherapy for combat Veterans." *International Forum for Logotherapy* 37: 13-18.

This paper discusses coping with the difficulties in transitioning from a war zone to an inner climate of peace, focusing primarily on United States Veterans of the Iraq and Afghanistan wars. Many of these Veterans return with issues of Posttraumatic Stress Disorder (PTSD) that affect not only themselves but also their families, friends, and co-workers. The returning Veteran faces existential questions that are similar to those confronted by victims of the Holocaust: what, where, and how should I begin life?

Wright, B. K., et al. (2015). Symptom attribution and symptom reporting in Australian Gulf War Veterans. *Journal of Psychosomatic Research* 79(6): 674-679.

The purpose of this study was to better understand the consistent elevated symptom reporting by Gulf War Veterans. Australian Gulf War Veterans were compared to a military-comparison group on symptom attributional styles and the relationship with total number and grouping of somatic and psychological symptoms, based on the results of postal questionnaires completed by Australian Gulf War Veterans (n=697) and military-comparison group (n=659) in 2000-2002 and 2011-2012. Data were collected on deployments, military-psychological stressors, symptom reporting, symptom factors and attributional style (normalising, psychologising, somatising, mixed-attribution). In Veterans, psychologising was associated with higher symptom reporting, whilst somatisers and mixed-attribution also demonstrated higher reporting than normalisers. Symptom persistence and incidence were associated with symptom attribution. The findings indicate that attributional style is associated with patterns of symptom reporting and highlights both past and present symptoms may influence attributional style.

Zinn, J. O. (2011). The Biographical Management of Risk and Uncertainty – British Veterans. *Historical Social Research/Historische Sozialforschung* 36(3): 237-269.

This explorative qualitative study, namely a biographical case reconstruction combining several methods of qualitative data analysis, examines the intersection of biographical experiences and organizational culture in the perspective of risk and uncertainty. This study with 14 ex-servicemen of the British Armed Forces shows that coming from different biographical contexts, young adults become soldiers for different reasons and they experience their time as soldiers differently. Some



chose the certainty culture of the military as a life perspective; others see it rather as a stage in their life. It is the group that assimilates most into military culture that has serious problems with the transition into civil life. But these problems seem to be rooted in the way in which soldiers adopt the military certainty culture rather than the transition itself. Soldiers who maintain competing interpretations and biographical projects are less assimilated but better prepared to deal with all kinds of issues such as drinking culture, ethical and life and death issues.

7.2.5. Resilience

Britt, T. W., Adler, A. B., Bliese, P. D., & Moore, D. (2013). Morale as a Moderator of the Combat Exposure-PTSD Symptom Relationship. *Journal of Traumatic Stress, 26*(1), 94-101 8p.

In this longitudinal study morale was examined as a moderator of the relationship between combat exposure and posttraumatic stress disorder (PTSD) symptoms in U.S. soldiers deployment to Iraq. Combat exposure, morale, and PTSD symptoms were assessed at 4 and 10 months, PTSD symptoms were assessed again at Time 2. Multivariate multiple regressions revealed that morale at 4 months interacted with both the breadth and stressfulness of combat exposure to predict PTSD symptoms at both 4 and 10 months, even when partialling out the effect of unit support. Results suggest that morale may buffer soldiers from the negative consequences of combat stressors.

Hourani, L., Bender, R., Weimer, B., Peeler, R., Bradshaw, M., Lane, M., & Larson, G. (2012). Longitudinal study of resilience and mental health in marines leaving military service. *Journal of Affective Disorders, 139*(2), 154-165 12p.

This longitudinal study characterizes the impact of resilience scale scores and combat exposure on mental health outcomes among Marines after separating from military service, along with intra-individual changes in mental health status. Data were collected from active duty Marines attending a random sample of mandatory Transition Assistance Program workshops before leaving the military, and responding to follow-up mail or web surveys an average of 6 months after returning to civilian life. Results revealed distinct risk and protective factors for those meeting screening criteria for mental health problems (depression, anxiety, and PTSD) and functional impairment at follow-up. The role of resilience appeared to have a greater impact on functional impairment than on mental health symptoms per se.

Kelly, D. C. (2011). The contextual challenges for young Veterans. In D. C. Kelly, S. Howe-Barksdale, D. Gitelson, D. C. Kelly, S. Howe-Barksdale, D. Gitelson (Eds.), *Treating young Veterans: Promoting resilience through practice and advocacy* (pp. 3-11). New York, NY, US: Springer Publishing Co. This book chapter challenges the presumption that most Veterans, returning from combat zones, experience some form of debilitating outcome such as a severe mental illness or incarceration, while acknowledging that many will face significant contextual challenges that increase the likelihood for debilitating outcomes such as mental illness, substance abuse, and suicide.

Penk, W. E., et al. (2011). Psychosocial rehabilitation. *Treating PTSD in military personnel: A clinical handbook*. B. A. Moore, W. E. Penk, B. A. Moore and W. E. Penk. New York, NY, US, Guilford Press: 173-194.

This book chapter reviews studies that guide recovery and resilience for warriors who are in the



process of transitioning home. The authors focus on resources that lead to deeper understandings of how psychosocial rehabilitation produces benefits for those recovering from experiences and wounds of war. They examine naturalistic and clinical observations and randomized controlled trials investigating how health services produce favorable adjustments in everyday living.

Ursano, R. J., et al. (2014). The Army study to assess risk and resilience in service members (Army STARRS). *Psychiatry* **77**(2): 107-119.

This paper presents an overview of the Army Study to Assess Risk and Resilience in Service members (Army STARRS) component study designs and of recent findings. Army STARRS includes six main component studies: (1) the Historical Administrative Data Study (HADS) of Army and Department of Defense (DoD) administrative data systems (including records of suicidal behaviors) for all soldiers on active duty 2004-2009 aimed at finding administrative record predictors of suicides; (2) retrospective case-control studies of fatal and nonfatal suicidal behaviors; (3) a study of new soldiers (n = 50,765 completed surveys) assessed just before beginning basic combat training (BCT) with self-administered questionnaires (SAQ), neurocognitive tests, and blood samples; (4) a cross-sectional study of approximately 35,000 (completed SAQs) soldiers representative of all other (i.e., exclusive of BCT) active duty soldiers; (5) a pre-post deployment study (with blood samples) of soldiers in brigade combat teams about to deploy to Afghanistan (n = 9,421 completed baseline surveys), with sub-samples assessed again one, three, and nine months after returning from deployment; and (6) a pilot study to follow-up SAQ respondents transitioning to civilian life. Army/DoD administrative data are being linked prospectively to the large-scale survey samples to examine predictors of subsequent suicidality and related mental health outcomes. Measures (self-report and administratively recorded) of suicidal behaviors and their psychopathological correlates were used. Initial findings are presented. Integration across component studies creates strengths going well beyond those in conventional applications of the same individual study designs. These design features create a strong methodological foundation from which Army STARRS can pursue its substantive research goals. The early findings reported here illustrate the importance of the study and its approach as a model of studying rare events particularly of national security concern. Continuing analyses of the data will inform suicide prevention for the U.S. Army.

Yehuda, R. and J. D. Flory (2007). Differentiating biological correlates of risk, PTSD, and resilience following trauma exposure. *Journal of Traumatic Stress* **20**(4): 435-447.

Risk and resilience factors presumably explain the individual differences in the response to adversity. However, little is known about how such factors are related. Risk and protective factors may reflect a quantitative difference along a single dimension (e.g., low IQ might be associated with risk and high IQ with resilience); however, they may also refer to orthogonal constructs that interact and/or moderate stress effects to increase or diminish the probability of developing trauma-related psychopathology (e.g., good coping could offset low IQ). Based on previous research, primarily a study in which the participants (N=40) underwent a similar psychological evaluation, magnetic resonance imaging for determination of hippocampal volume, and provided blood sample determination of glucocorticoid responsiveness assessed in a neurotransmitter, and a natural steroid prohormone. The authors illustrate experimental strategies for distinguishing between these possibilities for any putative measure relating to symptom development, using a database that includes published and unpublished psychological and biological variables from a



relatively homogenous cohort of exposed and nonexposed Veterans.

7.2.6. Risk-Taking and Health Behaviours

Almond, N., Kahwati, L., Kinsinger, L., & Porterfield, D. (2008). The Prevalence of Overweight and Obesity among U.S. Military Veterans. *Military medicine*, 173(6), 544-549.

The purpose of this study was to calculate and examine the prevalence of overweight and obesity among the U.S. Veteran population. Data were obtained from the 2004 Behavioral Risk Factor Surveillance System. Overweight prevalence in Veterans was 73.3% for males and 53.6% for females. Obesity prevalence in Veterans was 25.3% for males and 21.2% for females. After adjusting for socio-demographics and health status, Veterans were no more likely to be overweight or obese than nonVeterans. Despite previous participation in a culture and environment that selects for and enforces body weight standards, Veterans have a high prevalence of overweight and obesity that is similar to general population estimates.

Boscarino, J. A. (2006). External-cause mortality after psychologic trauma: the effects of stress exposure and predisposition. *Comprehensive Psychiatry*, 47(6), 503-514.

This study examined the survival time and cause of death among a national sample of 15288 US Army Veterans by posttraumatic stress disorder (PTSD) status 30 years after military service, to explore the etiology of the association between exposure to psychologic trauma and mortality from external causes, including homicide, suicide, drug overdoses, and unintended injury. Demographic, predisposing, and combat exposure variables were adjusted for in the analyses. For theater Veterans, those with Vietnam experience, PTSD remained significant for all-cause mortality, even after controlling for demographic, predisposition, and combat exposure measures. Among theater Veterans, PTSD remained significant for external mortality, even after controlling for all variables and combat exposure. Combat exposure was not associated with external mortality once all variables were controlled. In addition, theater Veterans who volunteered for Vietnam and those with dishonorable discharges were found to be at increased risk for external-cause mortality.

7.2.7. Preparation

Buell, S. D. (2011). *Life is a cruise: What does it mean to be a retired naval officer transitioning into the civilian world*. (Ed.D. Dissertation), University of St. Thomas (Minnesota), .

The purpose of this dissertation is to present the experiences of retired military naval officers during their transition from the military to civilian life from a phenomenological approach. This study focused on the perceptions, experiences, and attitudes of six retired Lieutenant Commanders from diverse geographical and socio-economic backgrounds and is comprised of five males and one female. Culled from a variety of personal interview tools, the data sets compiled by this researcher indicated three distinct phases: identity, transition, and change. Across these phases, a major theme for all participants was a sense of loss: loss of identity, structure, financial security, and career satisfaction. Based on the evidence gathered, preparation for the inevitable transition into retirement is paramount for success in the civilian world. Conclusions are drawn that military policies should allow for intensive preparatory activities of retiring officers to include financial planning, life coaching, advanced education, and civilian management training at least 2 years prior to separation.



Moore, B. A. and C. H. Kennedy (2011). The homecoming. *Wheels down: Adjusting to life after deployment*. Washington, DC, US, American Psychological Association: 7-17.

This book chapter has two goals. First, it explains what might be expected on returning home from deployment, stating that perceptions and expectations shape much of one's experiences. It is the intent of the authors to help those returning from deployment to be prepared, believing that knowledge of what the first few days, weeks, and months have in store for will help to ease those returning back into their old lives. Second, tips are provided to help the transition go a more smoothly, although not without hurdles.

Taylor, M. A. (2007). Occupational Attachment and Met Expectations as Predictors of Retirement Adjustment of Naval Officers. *Journal of Applied Social Psychology* 37(8): 1697 - 1725.

The purpose of this study was to determine if attachment to one's former occupation and met expectations regarding retirement could serve as predictors of the adjustment of military retirees. Analysis of data, namely, a questionnaire (Officer Career Questionnaire) and a survey (Retirement from Navy Life Survey) collected from 672 naval officers before and after their retirement from the Navy suggested that while occupational attachment had a minimal impact, the extent to which expectations of civilian work, financial, and family aspects of life were met emerged as significant predictors of satisfaction and adjustment after military retirement. These findings suggest that the characteristics of the post-retirement environment, and expectations regarding this environment, outweigh the importance of occupational attachment in determining post-retirement adjustment in this setting.

Spiegel, P. E. (2003). The Influence of Preretirement Planning and Transferability of Skills on Naval Officers' Retirement Satisfaction and Adjustment. *Military Psychology* 15(4): 285-307.

This study, by way of a questionnaire (Officer Career Questionnaire) and a survey (Retirement from Navy Life Survey) sought to determine if preretirement planning and having knowledge, skills, and abilities (KSAs) that are readily transferable to civilian work affected the retirement satisfaction and adjustment of retired naval officers. Data (N=672) from a large scale, longitudinal study of naval officers' career development were used. Results from the analysis of the questionnaire and the survey indicated that both preretirement planning and transferability of KSAs influence the retirement satisfaction and adjustment of naval officers. The authors discuss how these findings add to our understanding of both military retirement and civilian late career transitions.

7.2.8. Anger/Antisocial or Violent Behaviour

Beckham, J. C., Barefoot, J. C., Fairbank, J., Vrana, S. R., Feldman, M. E., & Moore, S. D. (2002). Magnitude and Duration of Cardiovascular Responses to Anger in Vietnam Veterans with and without Posttraumatic Stress Disorder. *Journal of Consulting and Clinical Psychology*, 70(1), 228-234.

This study investigated the cardiovascular responses to a relived anger task in 118 male Vietnam combat Veterans (62 with posttraumatic stress disorder [PTSD] and 56 without PTSD). Participants completed standardized diagnostic measures, hostility measures, and a laboratory session in which they relived a self-chosen anger memory while heart rate (HR), systolic blood pressure, and diastolic blood pressure (DBP)



were measured continuously. Compared with Veterans without PTSD, PTSD Veterans took less time to feel anger, had greater mean HR and DBP response during relived anger, and reported greater anger and anxiety during the task. There was a significant relationship between covert hostility and anger response during and after the anger task only in participants with PTSD.

Benda, B. B. (2003). Crime Among Homeless Military Veterans Who Abuse Substances. *Psychiatric Rehabilitation Journal*, 26(4), 332-345.

The purpose of the study was to examine criminal behaviours within a sample of 188 homeless persons who were in a Veterans' Affairs Medical Center program for substance abusers. The study determined what proportion committed crimes, and explored what other problems, relational factors, and personal attributes predict crime. The results indicated that 27% of these homeless Veterans committed nuisance offenses, and 41% committed crimes in the past year. Logistic regression procedures indicated that alcohol and other drug abuse, less education, lack of employment, psychiatric problems, and living with a substance abuser increased the odds of committing crimes. This study also finds that physical and sexual abuse before 18 years of age increases the odds of committing crimes, whereas self-efficacy, ego integrity, and resilience decrease these odds.

Elbogen, E. B., Wagner, H. R., Fuller, S. R., Calhoun, P. S., Kinneer, P. M., & Beckham, J. C. (2010). Correlates of anger and hostility in Iraq and Afghanistan war Veterans. *American Journal of Psychiatry*, 167(9), 1051-1058.

This study sought to identify variables empirically related to anger and hostility in Iraq and Afghanistan Veterans. Data reveal the presence of mental health problems in these soldiers, including posttraumatic stress disorder (PTSD), head injury, and alcohol abuse. Each of these conditions has been associated with elevated anger and hostility in Veterans from previous conflicts. A total of 676 Veterans were interviewed with instruments designed to collect information on psychiatric symptoms, health, and possible postdeployment adjustment issues. The primary outcome measures were variables measuring aggressive impulses or urges, difficulty managing anger, and perceived problems controlling violent behavior. The three outcome measures were each significantly associated with PTSD hyperarousal symptoms. Other PTSD symptoms were less strongly and less consistently linked to anger and hostility. Traumatic brain injury and alcohol misuse were related to the outcome variables in bivariate analyses. The results underscore the need to tailor interventions individually to address anger and hostility effectively and to develop theoretically sophisticated, evidence-based knowledge to identify service members at risk of problematic postdeployment adjustment.

Fontana, A., & Rosenheck, R. (2005). The role of war-zone trauma and PTSD in the etiology of antisocial behavior. *J Nerv Ment Dis*, 193, 203-209.

This study seeks to develop and evaluate an etiological model of postwar antisocial behavior, based on data drawn from the National Vietnam Veterans Readjustment Study. Two initial models specified causal paths among five sets of variables, ordered according to their historical occurrence: (a) pre-military risk factors, (b) military traumas and disciplinary actions, (c) the homecoming reception, (d) post-military PTSD and substance abuse, and (e) post-military antisocial behavior. PTSD and substance abuse were omitted in one model and included in the other. The initial models were refined and then cross-validated, leading to the specification of replicated models with highly satisfactory fit and parsimony. Comparison of the two models suggested that (1) pre-military experiences and behavior exert the largest effects on post-military antisocial



behavior, and that (2) PTSD plays a necessary mediating role for the effects of war-zone traumatic exposure on post-military antisocial behavior.

Heesink, L., Rademaker, A., Vermetten, E., Geuze, E., & Kleber, R. (2015). Longitudinal measures of hostility in deployed military personnel. *Psychiatry research*, 229(1-2), 479-484.

This study used growth mixture modeling (GMM), a technique used to identify homogenous groups within a larger heterogeneous sample, to examine trajectories of hostility in military personnel from pre-deployment to two years after homecoming. The first aim was the determination of the trajectories of hostility after deployment. The next aim was the identification of predictors of these trajectories, specifically age, education, early trauma, deployment stressors and personality. Data of 745 Veterans one month before deployment to Afghanistan and one, six, twelve and 24 months after deployment were analyzed in a growth model, and revealed four classes based on their growth in hostility. Most of the participants belonged to a low-hostile group or a mild-hostile group that remained stable over time. Two smaller groups were identified that displayed increase in hostility ratings after deployment. The first showed an immediate increase after deployment. The second showed a delayed increase between twelve and 24 months after deployment. No groups were identified that displayed a decrease of hostility symptoms over time. Multinomial logistic regression was applied to predict group membership by age, education, early trauma, deployment stressors and personality factors. This study gains more insight into the course of hostility over time, and identifies risk factors for the progression of hostility.

Kurt-Hilditch, J. (2015). Female Justice-Involved Veterans: The Nature of the Relationship between Military Discharge and Entry into the Correctional System, Walden University. AAI3616001.

This dissertation is a mixed methods study focused on the nature of the relationship between type of military discharge and entry into community or institutional correctional systems for female military Veterans who committed crimes after military service. An online survey with quantitative and open-ended qualitative questions was distributed. Results indicate minimal agency collection of information relative to female military Veterans, their type of military discharge, and any subsequent criminal behavior.

MacManus, D., et al. (2013). Violent offending by UK military personnel deployed to Iraq and Afghanistan: a data linkage cohort study. *The Lancet* 381(9870): 907-917.

The purpose of this cohort study is to use criminal records to investigate the effect of deployment, combat, and postdeployment mental health problems on violent offending among military personnel relative to pre-existing risk factors. Data from 13 856 randomly selected, serving and ex-serving UK military personnel were linked with national criminal records stored on the Ministry of Justice Police National Computer database. Two thousand one hundred and thirty-nine of 12 359 male UK military personnel had a criminal record for any offence during their lifetime. Violent offenders were the most prevalent offender types; prevalence was highest in men aged 30 years or younger and fell with age. Deployment was not independently associated with increased risk of violent offending, but serving in a combat role conferred an additional risk, even after adjustment for confounders. Increased exposure to traumatic events during deployment also increased risk of violent offending. Violent offending was strongly associated with post-deployment alcohol misuse, post-traumatic stress disorder, and high levels of self-reported aggressive behavior.



7.2.9. Patient Satisfaction/Quality of Life

El-Gabalawy, R., Thompson, J. M., Sweet, J., Erickson, J., Mackenzie, C. S., Pietrzak, R. H., Van Til, L., Sareen, J. (2015). Comorbidity and functional correlates of anxiety and physical conditions in Canadian Veterans. *Journal of Military, Veteran and Family Health*, 1(1), 37-46.

The purpose of this investigation was to examine the comorbidity of anxiety and physical conditions and their relation to physical and mental health–related quality of life and activity limitations in a nationally representative sample of Canadian Veterans. 3154 participants were selected from the cross-sectional 2010 Survey on Transition to Civilian Life. Multivariate logistic and linear regression models found that any anxiety disorder was associated with significantly elevated rates of cardiovascular, gastrointestinal, respiratory, and musculoskeletal conditions; diabetes; and chronic pain after controlling for socio-demographics, military characteristics, any mood disorder, and heavy drinking. The article concludes that anxiety disorders and physical health problems co-occur at high rates among Canadian Veterans, and this comorbidity is linked to poorer physical health–related quality of life and activity limitations.

Hopman, W. M., et al. (2015). Multivariate assessment of health-related quality of life in Canadian Armed Forces Veterans after transition to civilian life. *Journal of Military, Veteran and Family Health*, 1(2): 61 - 70.

This survey was a national computer-assisted telephone survey of Canadian Armed Forces (CAF) Regular Force personnel who released during 1998–2007. The goal was to identify factors associated with physical and mental health-related quality of life (HRQOL) in former Canadian Armed Forces (CAF) Veterans after transition to civilian life. Data were taken from the 2010 Survey on Transition to Civilian Life. Multivariate linear regression models were developed using a variety of socio-economic, military, health, and disability characteristics. The findings of this multivariate analysis confirm that multiple socio-economic, military, coping, and satisfaction factors were associated with the HRQOL of CAF Regular Force Veterans, as well as physical and mental health conditions.

Mageroy, N. (2007). Health-Related Quality of Life in the Royal Norwegian Navy: Does Officer Rank Matter? *Military Medicine* 172(8): 835-842.

The health-related quality of life of Royal Norwegian Navy officers was compared with that of the general population and the association between health-related quality of life and the rank of the officers was estimated in a cross-sectional survey of 1,316 male officers. Standardized scores for the SF-36 Health Survey were used for the comparison with the general population, and the mean raw scores for the eight SF-36 subscales were used for the association within the Navy study population. The health-related quality of life of the Navy officers was similar to that of the general population of Norway when adjusted for age, gender, having a job, and educational level. Higher military rank among male Navy officers was associated with better health-related quality of life when adjusted for age but not when adjusted for other sociodemographic variables and lifestyle factors. Physical activity seemed to be the most important positive lifestyle factor.

Schok, M. and J. de Vries (2005). Predicting Overall Quality of Life and General Health of Veterans With and Without Health Problems. *Military Psychology* 17(2): 89-100.



The purpose of this study was to describe quality of life (QOL) of Dutch New Guinea Veterans with and without health problems and to identify predictors of overall QOL and general health using the World Health Organization Quality of Life Assessment Instrument-100 (WHOQOL-100). One hundred and fifty-three Veterans ranging in age from 59 to 76 years completed the questionnaire. Current health problems in New Guinea Veterans negatively affect overall QOL and general health; physical health; psychological health; level of independence; social relationships; and important features of the environment, when compared with their healthy counterparts. Predictors of overall QOL and general health differed between Veterans with and without health problems, with the emphasis on quality of psychological health, social relationships, and level of independence as a means of improving the overall QOL and general health among Veterans with health problems.

Seidl, J. N., et al. (2015). Factors related to satisfaction with life in Veterans with mild traumatic brain injury. *Rehabilitation Psychology* 60(4): 335-343.

This study aimed to identify factors related to satisfaction with life (SWL) in 95 Veterans of Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND) with a history of mild traumatic brain injury (mTBI). Participants completed a structured clinical interview as well as a battery of neuropsychological tests. Regression analyses of the test results indicated that headache impact, pain interference, sleep quality, posttraumatic stress symptom severity, and social support were all significantly related to SWL. However, when secondary analyses were conducted including posttraumatic stress symptom severity as a covariate before the entry of other predictors, only sleep quality and social support remained significantly associated with SWL. These results indicate the importance of properly identifying and treating symptoms of posttraumatic stress in Veterans with a history of mTBI, as posttraumatic stress symptoms appear to be strongly related to SWL in those with a history of mild TBI. Optimizing sleep quality and social support may also be important in improving SWL.

Thompson, J., Hopman, W., Sweet, J., Van Til, L., MacLean, M. B., VanDenKerkhof, E., Sudom, K., Poirier, A., Pedlar, D. (2013). Health-related Quality of Life of Canadian Forces Veterans After Transition to Civilian Life. *Canadian Journal of Public Health*, 104(1), e15-e21.

This study describes health-related quality of life (HRQoL) of former Canadian Forces Veterans after transition to civilian life, in comparison with age- and sex-adjusted Canadian norms. The 2010 Survey on Transition to Civilian Life was a national computer-assisted telephone survey of CF Regular Force personnel who released during 1998-2007. HRQoL was assessed using the SF-12 Physical and Mental Component Summary scores. Descriptive analysis of HRQoL was conducted for socio-demographic, health, disability and determinants of health characteristics. HRQoL was found to vary across a range of biopsychosocial factors, suggesting possible protective factors and vulnerable subgroups that may benefit from targeted interventions.

Wright, S. M., et al. (2006). Patient satisfaction of female and male users of Veterans Health Administration services. *Journal of General Internal Medicine* 21(S3): S26-S32.

This Cross-sectional study based on secondary analysis of data from VHA's Survey of Healthcare Experiences of Patients (SHEP) compared patient satisfaction of male and female users of Veterans Health Administration (VHA) services. It included a national random sample of 107,995 outpatients and 112,817 inpatients. Data were comprised of patient's rating of overall quality (OQ), unique dimensions of satisfaction and sociodemographic and health-related patient attributes. Bivariate



unadjusted analyses of the association between gender and other patient attributes and the outcomes of OQ and dimensions of satisfaction were conducted followed by multivariate analyses for each outcome, adjusting for demographic and health variables. Significant differences between female and male reporting of satisfaction were found in the unadjusted analyses with males showing greater levels of satisfaction than females. These differences disappeared or became smaller for both outpatient and inpatient services, after adjusting for covariates. For 6 of the inpatient dimensions (Transitions, Physical Comfort, Involvement Family and Friends, Courtesy, Coordination, and Access) males had higher satisfaction than females after statistical adjustment. After adjustment for patient attributes, female VHA outpatients report similar OQ with VHA services as male patients.

7.3. Research relating to Physical and Mental Conditions, State or Capacity

7.3.1. Mental Health Canadian Documents

Boulos, D., & Zamorski, M. A. (2013). Deployment-related mental disorders among Canadian Forces personnel deployed in support of the mission in Afghanistan, 2001–2008. *Canadian Mental Association Journal*, 185(11), E545-E552.

This study sought to determine the incidence of Afghanistan deployment–related mental disorders and associated risk factors among personnel previously deployed in support of this mission. The study population consisted of 30,513 Canadian Forces personnel who began a deployment in support of the mission in Afghanistan before Jan. 1, 2009. Data on diagnoses and perceptions were abstracted from medical records of a stratified random sample of 2014 personnel. Sample design weights were used in all analyses to generate descriptive statistics for the entire study population. Over a median follow-up of 1364 days, 13.5% of the study population had a mental disorder that was attributed to the Afghanistan deployment. Posttraumatic stress disorder was the most common diagnosis. Deployment to higher-threat locations, service in the Canadian Army and lower rank were independent risk factors associated with an Afghanistan-related diagnosis. In contrast, sex, Reserve Forces status, multiple deployments and deployment length were not independent risk factors. The study concludes that an important minority of Canadian Forces personnel deployed in support of the Afghanistan mission had a diagnosis of a mental disorder perceived to be related to the deployment, and that determining long-term outcomes is an important next step.

Fikretoglu, D., & Liu, A. (2012). Prevalence, correlates, and clinical features of delayed-onset posttraumatic stress disorder in a nationally representative military sample. *Social Psychiatry and Psychiatric Epidemiology*, 47(8), 1359-1366.

The objective of this study was to address observed skepticism over the validity of delayed-onset posttraumatic stress disorder (PTSD), by examining the prevalence, the correlates, and the clinical consequences of delayed-onset PTSD using data from a large epidemiological survey. Data on 8441 participants were drawn from the Canadian Community Health Survey-Canadian Forces



Supplement, a cross-sectional epidemiological survey of mental health in the Canadian Forces. Logistic regressions were used to identify correlates of delayed onset. Cox regressions were used to examine the impact of delayed onset on symptom duration. Results demonstrated that the prevalence of delayed-onset PTSD in this Canadian population was less than 1%. Delayed-onset cases accounted for 8.5% of all PTSD cases. Experiencing trauma in early childhood, experiencing a repeated trauma, and serving in the land troops were all associated with greater likelihood of developing delayed-onset PTSD. Delayed onset, after controlling for important sociodemographic, military, and clinical variables, was associated with greater symptom duration.

Poundja, J., Fikretoglu, D., & Brunet, A. (2006). The co-occurrence of posttraumatic stress disorder symptoms and pain: Is depression a mediator? *Journal of Traumatic Stress, 19*(5), 747 - 751.

This survey study sought to examine whether the relationship between current PTSD symptom severity and current pain severity would be mediated by current depressive symptom severity. In a sample of 130 male Veterans seeking assessment or treatment for deployment-related PTSD, results suggest that PTSD and pain are moderately related but that this relationship is fully mediated by depression. Our findings have important clinical implications: Treatment of PTSD and pain in Veteran populations should include careful assessment and regular monitoring of depression.

Richardson, J. D., Long, M. E., Pedlar, D., & Elhai, J. D. (2008). Posttraumatic stress disorder and health-related quality of life among a sample of treatment- and pension-seeking deployed Canadian Forces peacekeeping Veterans. *Canadian Journal of Psychiatry, 53*(9), 594-600.

The objective of this study was to examine the health-related quality of life (HRQOL) in deployed Canadian Forces peacekeeping Veterans, addressing associations with posttraumatic stress disorder (PTSD), and depression severity. Participants were 125 male Veterans who were referred for a psychiatric assessment. Instruments administered included the Clinician-Administered PTSD Scale, Hamilton Depression Scale, Short-Form-36 Health Survey, and socio-demographic characteristics. Data were analyzed using univariate analyses and sequential regression analyses. Results indicated that Mental HRQOL was significantly lower for peacekeepers with, than without, PTSD; that PTSD and depression severity were each significantly negatively related to mental HRQOL; and that PTSD and depression severity significantly predicted both mental and physical HRQOL.

Richardson, J. D., Thompson, J. M., Boswall, M., & Jetly, R. (2010). Horror comes home: Veterans with Posttraumatic Stress Disorder. *Canadian Family Physician, 56*(5), 430-433.

This article discusses issues that are helpful for family physicians in accurately diagnosing PTSD in their patients who are Veterans. Key points addressed are as follows: 1. Posttraumatic stress disorder (PTSD) in Veterans secondary to service-related psychological trauma can present in subtle ways. 2. physicians should consider PTSD based on two factors: previous exposure to psychological trauma and presence of any PTSD symptoms. 3. Family physicians play important roles by initiating medications to reduce symptoms, making referrals, improving functioning and quality of life, assisting with treatment compliance, monitoring progress, and facilitating psychotherapy. 4. With treatment, patients with PTSD achieve substantial symptom reduction and improved quality of life; 30% to 50% achieve complete remission.



Sareen, J., Belik, S. L., Afifi, T. O., Asmundson, G. J., Cox, B. J., & Stein, M. B. (2008). Canadian military personnel's population attributable fractions of mental disorders and mental health service use associated with combat and peacekeeping operations. *American Journal of Public Health, 98*(12), 2191-2198.

This study investigated mental disorders, suicidal ideation, self-perceived need for treatment, and mental health service utilization attributable to exposure to peacekeeping and combat operations among Canadian military personnel. Using data from the Canadian Community Health Survey Cycle 1.2 Canadian Forces Supplement, a cross-sectional population-based survey of 8441 active Canadian military personnel, the study estimates population attributable fractions (PAFs) of adverse mental health outcomes. Results demonstrated that exposure to either combat or peacekeeping operations was associated with posttraumatic stress disorder, one or more mental disorder assessed in the survey, and a perceived need for information. The study concludes that a substantial proportion, but not the majority, of mental health-related outcomes were attributable to combat or peacekeeping deployment.

Shields, N., White, M., & Egan, M. (2009). Battlefield Blues: Ambivalence about treatment among military Veterans with depression. *Canadian Family Physician, 55*(8), 799-802.

This article discusses strategies family physicians can use to engage military Veterans who might be reluctant to seek help in pursuing investigation and treatment of depression. Key points discussed are: 1. The need for sensitivity regarding attitudes of Veterans toward mental health treatment, and the use of tailored brief interventions to deal with their ambivalence about treatment. 2. Continuous screening for a range of mental health conditions, including addictions. Feedback using brief interventions, such as motivational interviewing, can improve engagement in treatment. 3. Veterans Affairs Canada supports a national network of specialized clinics for managing operational stress injuries incurred by members of the military and the Royal Canadian Mounted Police. These clinics work collaboratively with family physicians, Veterans Affairs Canada district office area counsellors, and families. 4. Engaging families and peers of military Veterans at the outset can inform treatment plans and provide additional support to maintain treatment gains.

Thompson, J., Pranger, T., Poirier, A., Sweet, J., Lucci, S., & Ross, D. (2012). *Mental health findings in the 2010 Survey on Transition to Civilian Life*. Charlottetown, PEI: Veterans Affairs Canada. Research Directorate Technical Report. Charlottetown. 01 August 2012;42 p.

This report is a more in-depth descriptive analysis of the mental health of the participants in the 2010 Survey on Transition to Civilian Life (STCL), a survey of the health, disability and determinants of health of former Canadian Forces (CF) Regular Force personnel who released from service in 1998-2007, 2-12 years after leaving service. They were surveyed in 2010 at a time when significant advancements in services for serving personnel and Veterans with mental health problems that were still being put into place by Veterans Affairs Canada (VAC), Department of National Defence (DND) and CF. Most had released from service prior to the New Veterans Charter programs in 2006, and prior to additional significant advancements in services for serving personnel and Veterans with



mental health problems that were established later. Initial findings from STCL are available in other reports.

Thompson, J., Van Til, L., Sweet, J., Poirier, A., McKinnon, K., Pedlar, D., Ross, D., Hoskins, C. (2015). *Canadian Armed Forces Veterans: Mental Health Findings from the 2013 Life After Service Survey*. Charlottetown PE: Research Directorate, Veterans Affairs Canada. Research Directorate Technical Report. Charlottetown. March 15, 2015.

This document reports analysis of the mental health findings from the 2013 Life After Service Survey of Canadian Armed Forces Veterans. The goal was to produce a comprehensive reference document to inform policies, programs, services and research intended to support the mental health and well-being of Canadian Armed Forces (CAF) Veterans after leaving service. The objectives were to describe need in terms of the prevalence and severity of mental health problems, identify characteristics of subgroups with and without mental health problems, describe service utilization by Veterans with mental health problems and identify possible implications of the findings for policies, programs and services. The survey confirmed the elevated prevalences of mental and physical health problems and disability in Regular Force Veterans compared to the general population that had been identified in the 2010 survey. Former Reserve Class C (deployed) Reservists were more like Regular Force Veterans in terms of mental health status. Former Class A/B (non-deployed) Reservists had very similar mental health to Canadians in the general Canadian population, and very few of them had accessed VAC programs. Consistent with studies in civilian and other military populations, mental health problems were found to be associated with multiple socioeconomic factors and physical health problems.

Thompson, J., & Zamorski, M. A. (2014). Out of the shadows: mental health of Canadian armed forces Veterans. *International Psychiatry*, 11(4), 85-87.

This study describes the renewal of services and key findings from Canadian national surveys of serving personnel and Veterans. The article states that, while the majority of Veterans are doing well, the studies found that an important minority have mental health problems affecting functioning and successful transition to civilian life. Moreover, there was evidence of a higher prevalence of mental health problems in recent Veterans compared with serving personnel, earlier contemporary Veterans and the Canadian general population. These findings underline the need for strong mental health services for today's Veterans.

Zamorski, M. A. and D. Boulos (2014). The impact of the military mission in Afghanistan on mental health in the Canadian Armed Forces: a summary of research findings. *European Journal of Psychotraumatology*, 5(0): 423 - 435.

This is a literature review designed to reflect on the accomplishments and costs of the Afghanistan mission. It summarizes research on the mission's impact on the mental health of the 40,000+ deployed. All major CF studies of mental health outcomes done before and during the Afghanistan era are summarized. Studies on traumatic brain injury (TBI), high-risk drinking, and suicidality are included given their conceptual link to mental health. Afghanistan era findings confirm service-related mental health problems (MHPs) in an important minority. The findings of the studies cohere that combat exposure is the most important driver



of deployment-related MHPs, but meaningful rates will be found in those in low-threat areas. Reserve service and cumulative effects of multiple deployments are not major risk factors in the CF. Deployment-related mental disorders do not translate into an overall increase in in-service suicidal behavior in the CF, but there is concerning evidence of increased suicide risk after release. TBI occurred in a distinct minority on this deployment; such symptoms are closely associated with MHPs. While ongoing and planned studies will provide additional detail on its impacts, greater research attention is needed on preventive and therapeutic interventions.

Zamorski, M., Rusu, C., & Garber, B. G. (2014). Prevalence and Correlates of Mental Health Problems in Canadian Forces Personnel Who Deployed in Support of the Mission in Afghanistan: Findings From Post-deployment Screenings, 2009–2012. *Canadian Journal of Psychiatry*, 59(6), 319-326.

This study sought to describe the prevalence and correlates of post-deployment mental health problems in Canadian Forces personnel. Subjects were 16 193 personnel who completed post-deployment screening after return from deployment in support of the mission in Afghanistan. Screening involved a detailed questionnaire and a 40-minute, semi-structured interview with a mental health clinician. Mental health problems were assessed using the Patient Health Questionnaire and the Posttraumatic Stress Disorder Checklist—Civilian Version. Logistic regression was used to explore independent risk factors for 1 or more of 6 post-deployment mental health problems. Symptoms of 1 or more of 6 mental health problems were seen in 10.2% of people screened; the most prevalent symptoms were those of major depressive disorder (3.2%), minor depression (3.3%), and posttraumatic stress disorder (2.8%). The strongest risk factors for post-deployment mental health problems were past mental health care and heavy combat exposure.

Mental Health Other Countries

Andrews, B., et al. (2009). Comparison of immediate-onset and delayed-onset posttraumatic stress disorder in military Veterans. *Journal of Abnormal Psychology* 118(4): 767-777.

Retrospective interviews were conducted with 142 United Kingdom Veterans receiving a war pension for PTSD or physical disability to look at differences in symptoms, trauma exposure, dissociative and emotional reactions to trauma, and subsequent life stress in war Veterans reporting immediate-onset or delayed-onset posttraumatic stress disorder (PTSD). Results suggest that delayed onsets involve a more general stress sensitivity and a progressive failure to adapt to continued stress exposure.

Aslan, M., et al. (2013). Design of "neuropsychological and mental health outcomes of operation Iraqi freedom: A longitudinal cohort study". *Journal of Investigative Medicine* 61(3): 569-577.

This study aimed to describe methodological challenges encountered in designing a follow-up assessment of US Army Soldiers who served in Operation Iraqi Freedom. Specific aims include evaluating the prevalence and course of posttraumatic stress disorder (PTSD), the persistence of previously observed neuropsychological changes, and the relationship of these changes and traumatic brain injury to subsequent PTSD. 6 methodological challenges were found. The study



provides unique insights regarding elements of study design and analysis that are relevant to longitudinal research.

Barrett, D. H., Doebbeling, C. C., Schwartz, D. A., Voelker, M. D., Falter, K. H., Woolson, R. F., & Doebbeling, B. N. (2002). Posttraumatic stress disorder and self-reported physical health status among U.S. Military personnel serving during the Gulf War period: a population-based study. *Psychosomatics*, *43*(3), 195-205.

The objective of this study was to investigate the relation between posttraumatic stress disorder (PTSD) and perceived physical health. Participants included 3,682 Gulf War Veterans and control subjects of the same era who completed a telephone survey about their health status. PTSD was assessed using the PTSD Checklist-Military Version. Veterans screening positive for PTSD reported significantly more physical health symptoms and medical conditions than did Veterans without PTSD. They were also more likely to rate their health status as fair or poor and to report lower levels of health-related quality of life. The results of this study are consistent with studies of other combat Veterans and provide further support for an association between PTSD and adverse physical health outcomes. Stressful or traumatic life events, such as those encountered during a rapid military deployment and conflict, are associated with a variety of adverse health effects. These health effects may manifest themselves in both psychological and physical outcomes.

Benyamini, Y., Ein-Dor, T., Ginzburg, K., & Solomon, Z. (2009). Trajectories of self-rated health among Veterans: a latent growth curve analysis of the impact of posttraumatic symptoms. *Psychosomatic Medicine*, *71*(3), 345-352.

This study examined the effects of combat stress reaction (CSR) and posttraumatic stress symptoms (PTS) on the level and trajectories of self-rated health (SRH) in Israeli Veterans, over 20 years after war exposure. A prospective longitudinal design assessed 675 Veterans comprising two groups, a CSR group (n = 369) and a matched control group without CSR (n = 306), 1, 2, 3, and 20 years after their participation in the 1982 Lebanon War. SRH and PTS were assessed repeatedly, at each point of measurement. The CSR participants showed more impaired initial SRH than the controls. Although the CSR group showed an improvement in SRH over time, its SRH level remained lower than that of the control group in all 4 points in time. Initial levels of PTS were associated with more impaired SRH and lower improvement over time. In addition, increased levels of PTS in the first follow-up period were related to poorer SRH, in comparison to the predicted trajectory on the basis of CSR and initial PTS. Although the differences between Veterans who had shown acute stress reaction and those who had not persisted over the entire period, there was slow improvement in SRH over time among the more impaired CSR group. PTS in the first years after the war slowed this improvement and thus played a key role in the relationship between war trauma and physical health.

Benyamini, Y., & Solomon, Z. (2005). Combat stress reactions, posttraumatic stress disorder, cumulative life stress, and physical health among Israeli Veterans twenty years after exposure to combat. *Social Science & Medicine*, *61*(6), 1267-1277.

This study examined the association of initial combat stress reaction (CSR), chronic post-traumatic stress disorder (PTSD) and cumulative life stress on physical health 20 years after the 1982 war with Lebanon, in a sample of 504 Israeli Veterans of the war. Two groups were assessed: male Veterans who fought and suffered from CSR and a matched group of male Veterans from the same units who did not exhibit such reactions. Twenty years following the war, participants were asked to rate their general physical health



status, report health complaints and risk behaviors, and were screened for PTSD. CSR and, to a greater extent, PTSD, were found to be associated with general self-rated health, chronic diseases and physical symptoms, and greater engagement in risk behaviors. CSR and PTSD were also related to greater cumulative life stress since the war. Both negative and positive life events were independently related to most of the physical health measures but did not account for the associations of CSR and PTSD with poorer health. Tests of the interactions between CSR, PTSD and life stress in their association with physical health and risk behaviors showed that PTSD suppressed the effects of additional life stress (negative life events had a weaker effect on health among participants with PTSD).

Berg, G. (2011). The relationship between spiritual distress, PTSD and depression in Vietnam combat Veterans. *Journal of Pastoral Care and Counseling, 65*(1-2), 1-11.

This study examined the relationship between combat-related posttraumatic stress disorder (PTSD), depression and spiritual distress, using surveys conducted with 94 Vietnam Veterans in a Veterans affairs medical center. Spiritual distress was assessed using a spiritual injury scale including measures of guilt, anger or resentment, sadness/grief, lack of meaning, feeling God/life has treated one unfairly, religious doubt, and fear of death. This study demonstrated high association between spiritual injuries and both PTSD and depression, and found an inverse relationship between intrinsic religious faith and these two diagnostic categories. An inverse relationship also exists between religious faith as measured by regular worship with a faith community and both depression and PTSD.

Brewin, C. R., Andrews, B., & Hejdenberg, J. (2012). Recognition and treatment of psychological disorders during military service in the UK armed forces: a study of war pensioners. *Social Psychiatry and Psychiatric Epidemiology, 47*(12), 1891-1897.

This is a retrospective record-based study looking at whether personnel who developed disorders while serving in the UK armed forces came to the attention of medical services for these problems, received corresponding diagnoses, and were treated. PTSD and depression, but not alcohol abuse, were independently associated with mental health contacts while in service. War pensioners are more likely than not to have had their psychological problems acknowledged and treated while in service, however, there is a continuity of care problem associated with MTC transition.

Brown, A. D., Antonius, D., Kramer, M., Root, J. C., & Hirst, W. (2010). Trauma centrality and PTSD in Veterans returning from Iraq and Afghanistan. *Journal of Traumatic Stress, 23*(4), 496-499.

This study investigated trauma centrality - the extent to which an individual integrates a traumatic event into their identity - using the abridged Centrality of Event Scale (Berntsen & Rubin, 2006) among Operation Enduring Freedom/Operation Iraqi Freedom combat Veterans (n = 46). This was conducted based on research that has demonstrated that trauma centrality positively correlates with posttraumatic stress disorder (PTSD) symptom severity, but that this association has not been explored with individuals exposed to combat-related stress. Symptoms of PTSD were measured using the PTSD Checklist-Military Version. Multiple regression analyses demonstrated that trauma centrality predicted PTSD symptoms. Trauma centrality and PTSD symptoms remained significantly correlated when controlling for depression in subgroups of Veterans with or without probable PTSD. This study replicates and extends findings that placing trauma at the center of one's identity is associated with PTSD symptomatology.



Clancy, C. P., Graybeal, A., Tompson, W. P., Badgett, K. S., Feldman, M. E., Calhoun, P. S., Eranli, A., Hertzberg, M.A., Beckham, J. C. (2006). Lifetime trauma exposure in Veterans with military-related posttraumatic stress disorder: association with current symptomatology. *J Clin Psychiatry, 67*, 1346-1353.

This retrospective study examined whether trauma exposure before, during, and/or after military service contributed to current levels of post-traumatic stress disorder (PTSD) and adjustment, and whether trauma exposure before military service was mediated or moderated by military trauma in its effects on current PTSD and adjustment. Archival data from the medical records of 422 male Veterans diagnosed with PTSD between December 2001 and July 2004 at a Veterans Administration Medical Center PTSD clinic were analyzed. Measures included the Clinician-Administered PTSD Scale interview as well as self-report measures assessing trauma history, health problems, and general psychopathology (including PTSD). Findings indicated that nonmilitary-related trauma was prevalent in this sample (90%). Regression analyses for PTSD symptom severity revealed that age, greater combat exposure, and a history of physical assault after military service were significantly associated with more severe PTSD symptoms. Childhood physical abuse, adult sexual trauma, and a history of being physically assaulted during military service were also significantly associated with PTSD symptom severity. Mediation analyses indicated that childhood trauma was associated with both adult trauma and increased symptomatology on various outcome measures. Results suggest that several variables, including age, greater combat exposure, and premilitary and postmilitary traumas, are associated with increased PTSD symptomatology.

Ginzburg, K., & Solomon, Z. (2011). Trajectories of stress reactions and somatization symptoms among war Veterans: a 20-year longitudinal study. *Psychological Medicine, 41*(2), 353-362.

This study examined the chronological inter-relationships between post-traumatic stress reactions and somatization symptoms among Israeli combatants in the Lebanon war, over a 20-year period. Two groups of Veterans were assessed 1, 2, 3 and 20 years after their participation in the 1982 Lebanon War: a clinical group of 363 Veterans who had been diagnosed with combat stress reaction (CSR) on the battlefield, and a matched control group of 301 Veterans. The CSR Veterans reported higher initial levels of intrusion and avoidance and a steeper decline in those symptoms over time in comparison to the control group. The former also reported higher initial levels of somatization symptoms than the latter. In addition, over the years, stress reactions were positively associated with somatization symptoms. For both study groups, in the first years after the war, stress reaction symptoms predicted somatization symptoms. However, with time, the trend was reversed and somatization symptoms predicted stress reactions. The findings suggest that CSR is a marker for future stress reactions and somatization symptoms, and indicate a long-term role for these symptoms in Veterans' psychological distress.

Goldmann, E., Calabrese, J., Prescott, M., Tamburrino, M., Liberzon, I., Slembariski, R., & ... Galea, S. (2012). Potentially modifiable pre-, peri-, and postdeployment characteristics associated with deployment-related posttraumatic stress disorder among ohio army national guard soldiers. *Annals Of Epidemiology, 22*(2), 71-78 8p.

This qualitative research evaluated potentially modifiable deployment characteristics may be associated with deployment-related posttraumatic stress disorder (PTSD). In a sample of Ohio Army National Guard (OHARNG) soldiers structured interviews were conducted to assess traumatic event exposure and PTSD related to most recent deployment. Multimeasure scales adapted from the Deployment Risk and Resilience Survey were used. Postdeployment support emerged an essential factor in the prevention of PTSD. Results suggest that the development of suitable postdeployment



support opportunities may be centrally important in mitigating the psychological consequences of war.

Gould, C. E., Rideaux, T., Spira, A. P., & Beaudreau, S. A. (2015). Depression and anxiety symptoms in male Veterans and non-Veterans: The Health and Retirement Study. *International Journal of Geriatric Psychiatry, 30*(6), 623-630.

This study examined whether Veteran status was associated with elevated depression and anxiety symptoms in men aged 50 and older after adjusting for socio-demographic factors. Participants were 6577 men aged 50 years and older who completed the 2006 wave of the Health and Retirement Study (HRS). Forty-nine percent of participants were Veterans. The HRS Psychosocial Questionnaire contained anxiety items, and elevated depression and anxiety symptoms were determined based on brief versions of Center for Epidemiologic Studies--Depression Scale (CES-D) and Beck Anxiety Inventory (BAI) Veteran status was not found to be associated with increased odds of anxiety or depression symptoms in the multivariable-adjusted logistic regression analyses. Additional analyses indicated that Vietnam War Veterans were more than twice as likely as World War II or Korean War Veterans to have elevated depression symptoms. In a community-based sample of men aged 50 and older, Veteran status was not associated with the presence of elevated depression and anxiety symptoms. Rather, these symptoms were associated with age, ethnicity, education, and medical conditions.

Grieger, T. A., & Benedek, D. M. (2006). Psychiatric disorders following return from combat duty during the twenty-first century. *Primary Psychiatry, 13*(3), 45-50.

This article compares the nature of conflict, composition of deployed forces, combat exposures, and injuries in the US military deployment settings of Afghanistan and Iraq, compared to late 20th century conflicts, such as Vietnam. It also reviews early findings on rates of psychiatric disorders among returning troops and compares these findings with those of studies of troops returning from prior conflicts. Evaluation and treatment approaches to posttraumatic stress disorder in combat Veterans are then provided. Preliminary findings suggest that early assessment of Veterans may not represent the long-term psychiatric needs of returning Veterans and that ongoing surveillance and availability of psychiatric care will be needed for this population.

Iversen, A., Fear, N., Ehlers, A., Hughes, J., Hull, L., Earnshaw, M., & ... Hotopf, M. (2008). Risk factors for post-traumatic stress disorder among UK Armed Forces personnel. *Psychological Medicine, 38*(4), 511-522 12p.

This study aimed to investigate the relative contribution of demographic variables; childhood adversity; the nature of exposure to traumatic events during deployment; appraisal of these experiences; and home-coming experiences in relation to the prevalence of PTSD 'caseness' as measured by a score of 50 on the PTSD Checklist (PCL) in UK Armed Forces personnel who have been deployed in Iraq since 2003. Data from the first stage of a retrospective cohort study comparing UK military personnel who were deployed to the 2003 Iraq War with personnel serving who were not deployed to the initial phase of war fighting. Participants were randomly selected and invited to participate. Results identify individual variable associated with post-traumatic stress symptoms. Personal appraisal of threat to life during the trauma emerged as the most important predictor of post-traumatic stress symptoms. Recommendations on interventions are included.



Johnson, D. R., & Lubin, H. (2002). Effect of brief versus long-term inpatient treatment on homecoming stress in combat-related posttraumatic stress disorder: Three-year follow-up. *Journal of Nervous and Mental Disease*, 190(1), 47-50.

This study attempted to measure changes in homecoming stress of Veterans who completed two forms of inpatient treatment from admission to 3 years after discharge. One-way repeated measures ANOVAs were used to evaluate changes across the three versions of a homecoming stress scale. Results indicate an overall stability in homecoming stress 3 years later in both subsamples and an increase in feelings of shame. That this increase was noted by discharge from the program suggests that in an otherwise stable picture, treatment might have the effect of increasing feelings of shame as the Veterans come to terms with what the illness has done to their lives.

Jones, N., Fear, N., Jones, M., Wessely, S., & Greenberg, N. (2010). Long-term military work outcomes in soldiers who become mental health casualties when deployed on operations. *Psychiatry: Interpersonal & Biological Processes*, 73(4), 352-364 13p.

This study examines Field Mental Health Team (FMHT) records to examine the short- and long-term military work outcomes in soldiers deployed to Iraq. Categorical variables were described and associations between demographic, illness, management/ treatment variables, and military work outcomes were assessed. Linear associations were examined with univariable linear regression, and continuous data were examined with the t-test for equality of means. The findings of this study support that those entering the casualty evacuation chain had worse long-term occupational outcomes than those who did not and that soldiers who are evacuated out of the operational theatre are at risk of premature discharge from the Army.

Marshall, R. D., et al. (2006). Symptom patterns associated with chronic PTSD in male Veterans: new findings from the National Vietnam Veterans Readjustment Study. *The Journal of Nervous and Mental Disease* 194(4): 275-278.

A subsample of 255 male Vietnam Veterans from the National Vietnam Veterans Readjustment Study received in-depth psychiatric diagnostic interviews. This paper focuses on the 88 Veterans with a war-related onset of PTSD. Analysis of the interviews included a comparison of war-related lifetime symptom profiles of three groups (Veterans with current war-related PTSD, Veterans with past (not current) war-related PTSD, and Veterans with no PTSD diagnosis) and multiple regressions assessing whether symptom differences between the current and past PTSD groups remain after controlling for other variables possibly associated with chronic PTSD. Among these Veterans, the avoidance cluster, especially its symptoms of numbing, was most strongly associated with chronic PTSD; less strongly but also significantly associated was the hyperarousal cluster. Further analyses show that these associations are not artifacts of the relationship of symptom patterns to prewar demographic factors (race/ethnicity, socioeconomic status, age at entry into Vietnam), comorbidity, treatment and compensation seeking, or probable severity of war-related trauma. It was concluded that certain symptom profiles may predict enduring pathological responses to trauma and therefore provide targets for intervention efforts.



Marshall, B. D., et al. (2012). Coincident posttraumatic stress disorder and depression predict alcohol abuse during and after deployment among Army National Guard soldiers. *Drug and Alcohol Dependency* 124(3): 193-199.

The purpose of this study was to examine whether pre-existing or coincident depression and post-traumatic stress disorder (PTSD) predicted new onset peri-/post-deployment alcohol abuse among Ohio Army National Guard (OHARNG) soldiers. Nine hundred and sixty-three participants who had ever been deployed and who did not report an alcohol abuse disorder prior to deployment were eligible. Participants completed interviews assessing alcohol abuse, depression, PTSD, and the timing of onset of these conditions. Logistic regression was used to determine the correlates of peri-/post-deployment alcohol abuse. Coincident depression and PTSD were predictive of developing peri-/post-deployment alcohol abuse, and thus may constitute an etiologic pathway through which deployment-related exposures increase the risk of alcohol-related problems.

Marx, B. P., et al. (2009). Association of time since deployment, combat intensity, and posttraumatic stress symptoms with neuropsychological outcomes following Iraq war deployment. *Arch Gen Psychiatry* 66(9): 996-1004.

The purpose of this prospective cohort study was to determine the associations of time since deployment, combat intensity, and posttraumatic stress disorder (PTSD) and depression symptoms with longer-term neuropsychological outcomes in war-deployed soldiers. Using outcome measures of neuropsychological performances (verbal learning, visual memory, attention, and reaction time), it involved two hundred and sixty-eight male and female active-duty (1) soldiers assessed at baseline (median, 42 days prior to deployment) and following return from Iraq (median, 404 days after return and 885 days since baseline), and (2) soldiers more recently returned from deployment assessed at baseline (median, 378 days prior to deployment) and following return from Iraq (median, 122 days after return and 854 days since baseline assessment). In this study of army soldiers deployed to the Iraq war, only PTSD symptoms (among soldiers back from deployment for 1 year) were associated with a neuropsychological deficit (reduced attention). Greater combat intensity was associated with enhanced reaction time, irrespective of time since return.

McFarlane, A. C. (2015). The impact of war on mental health: lest we forget. *World Psychiatry* 14(3): 351-353.

The purpose of this article is to reflect on what has been learnt about the impacts of war on mental health especially as costs and lessons learned by psychiatry tend to be forgotten.

McFarlane, A. C. (2015). One hundred years of lessons about the impact of war on mental health; two steps forward, one step back. *Australasian Psychiatry* 23(4): 392-395.

This paper takes a historical perspective, outlining the substantial stigmatization of soldiers who suffered psychiatric disorders during World War I, and how there was little acceptance of the enduring impact of prolonged combat exposure once the war ended. Recent decades of research highlight the delayed impact of combat exposure and its long-term neurobiological consequences. The author emphasizes the need for an independent body of research into the impact of combat on Veterans to inform the development of optimal health services and compensation systems for Veterans.



McKenzie, D. P., et al. (2010). Temporal relationships between Gulf War deployment and subsequent psychological disorders in Royal Australian Navy Gulf War Veterans. *Social Psychiatry and Psychiatric Epidemiology* 45(9): 843-852.

This study aims to identify the most common psychological disorders that first appeared post-Gulf War, the period of peak prevalence and the sequence of multiple psychological disorders. The results of the study are based on a postal questionnaire completed by 1197 male Royal Australian Navy Gulf War Veterans. The temporal progression of psychological disorders in these Veterans with no prior psychological disorders was calculated across each year of the post-Gulf War period. DSM-IV diagnoses were obtained using the Composite International Diagnostic Interview. Psychological disorder rates peaked in the first 2 years (1991-1992) following the Gulf War. Alcohol use disorders were the most likely to appear first. Classification and regression tree analysis found that risk of disorder was exacerbated if Veterans had been exposed to a high number of potential psychological stressors during their military service. Lower military rank was associated with increased risk of alcohol disorders, particularly during the first 2 years post-Gulf War. In Veterans with two or more disorders, anxiety disorders and alcohol disorders tended to appear before affective disorders. The study found that psychological disorders occur in sequence following Gulf War deployment. The findings may help clinicians to anticipate, and better manage, multiple symptomatology. The findings may also assist Veteran and defence organisations in planning effective mental health screening, management and prevention policy.

Mehlum, L., et al. (2006). Risk factors for long-term posttraumatic stress reactions in unarmed UN military observers: a four-year follow-up study. *Journal of Nervous and Mental Disease* 194(10): 800-804.

In this study, using a questionnaire, follow-up data from 187 male Norwegian Veteran officers from unarmed UN military observer missions were compared with follow-up data from 211 male Veteran officers from Norwegian contingents of the UNIFIL peacekeeping mission in South Lebanon on stress exposure, posttraumatic stress symptoms, level of alcohol consumption, and problems with social adaptation after redeployment from the mission. Observer mission Veterans reported exposure to significantly higher levels of war zone stressors than Veterans from peacekeeping units did. Observer Veterans also reported significantly more posttraumatic stress symptoms at follow-up, higher alcohol consumption levels during service and at follow-up, and more problems with social adaptation to their lives at home in the years after their UN military service. All of these difficulties were most prominent in observers having served in missions with high-intensity stress exposure. Multivariate analyses demonstrated stress exposure during the mission and problems with social adaptation after homecoming to predict posttraumatic stress symptoms at follow-up.

Neria, Y. and K. C. Koenen (2003). Do combat stress reaction and posttraumatic stress disorder relate to physical health and adverse health practices? An 18-year follow-up of Israeli war Veterans. *Anxiety, Stress, and Coping* 16(2): 227-239.

This study investigated the long-term health effects of combat stress reaction (CSR) among Israeli CSR casualties (112) and control Veterans (184) of the 1973 Yom Kippur war. Posttraumatic stress disorder (PTSD), physical symptoms, and adverse health practices were examined 18 years after the



war. The relationship between CSR, PTSD, physical symptoms and adverse health practices was examined via hierarchical linear regression. While CSR was found to be positively associated with more current physical symptoms and adverse health practices in univariate analyses, the associations were not significant once demographic differences between the groups were controlled. In contrast, current PTSD symptoms were positively associated with current physical symptoms and showed a trend association with adverse health practices.

O'Toole, B. I. and S. V. Catts (2008). Trauma, PTSD, and physical health: An epidemiological study of Australian Vietnam Veterans. *Journal of Psychosomatic Research* 64(1): 33-40.

This epidemiological study aimed to examine the relative contributions to physical health of combat trauma exposure and posttraumatic stress disorder (PTSD), which have both been implicated separately in poorer physical health but whose unconfounded effects have not been teased apart. Data from an epidemiological study of Australian Vietnam Veterans, which used personal interviews and standardized physical and psychiatric health assessments, provided the means to assess the independent and joint effects of psychological trauma exposure and PTSD on a wide range of self-reported measures of physical health. Logistic regression modeling was used to assess the relative importance of trauma exposure and PTSD to health. Greater health service usage and more recent health actions were associated more strongly with PTSD, which was also associated with a range of particular illness conditions. This study provided evidence that PTSD, rather than combat exposure and peritraumatic dissociation, is associated with a pattern of physical health outcomes that is consistent with altered inflammatory responsiveness.

Polusny, M. A., et al. (2010). Prospective risk factors for new-onset post-traumatic stress disorder in National Guard soldiers deployed to Iraq. *Psychological Medicine* 41(4): 687-698.

This study is a prospective, longitudinal investigation of 522 Army National Guard troops deployed to Iraq from March 2006 to July 2007. Participants completed measures of PTSD symptoms and potential risk/protective factors 1 month before deployment. Of these, 81% completed measures of PTSD, deployment stressor exposure and post-deployment outcomes 2-3 months after returning from Iraq. Independent predictors of new-onset probable PTSD were identified using hierarchical logistic regression analyses. New-onset probable PTSD was predicted by exposure to combat and to combat's aftermath. Reporting more stressful life events after deployment was associated with increased odds of new-onset probable PTSD, while post-deployment social support was a significant protective factor in the etiology of PTSD. Combat exposure may be unavoidable in military service members, but other vulnerability and protective factors also predict PTSD and could be targets for prevention strategies.

Polusny, M. A., et al. (2011). Longitudinal effects of mild traumatic brain injury and posttraumatic stress disorder comorbidity on postdeployment outcomes in national guard soldiers deployed to Iraq. *Archives of General Psychiatry* 68(1): 79-89

The purpose of this longitudinal cohort study was to assess, by survey and self reports, the longitudinal associations between concussion/mild traumatic brain injury (MTBI) and PTSD symptoms reported in theater and longer-term psychosocial outcomes in 953 combat-deployed National Guard soldiers. Postconcussive, depression, and physical symptoms; alcohol use; social



functioning; and quality of life were assessed. Although combat-related PTSD was strongly associated with postconcussive symptoms and psychosocial outcomes 1 year after soldiers returned from Iraq, there was little evidence of a long-term negative impact of concussion/MTBI history on these outcomes after accounting for PTSD. These findings and the 2-fold increase in reports of deployment-related concussion/MTBI history have important implications for screening and treatment.

Reger, G. M. and N. A. Skopp (2012). Posttraumatic stress disorder, depression, and other psychological sequelae of military deployment. *Military psychology: Clinical and operational applications (2nd ed.)*. C. H. Kennedy, E. A. Zillmer, C. H. Kennedy and E. A. Zillmer. New York, NY, US, Guilford Press: 93-120.

After a brief discussion of the stressors common to the deployment experience, the authors of this book chapter review the psychological challenges facing single service members, common difficulties associated with post-deployment family life, and the psychosocial challenges of the post-deployment transition period. They review relevant literature on the treatment of deployment-related PTSD, depression, and substance abuse. Military deployments change the warrior. These changes can manifest in numerous ways, perhaps as unique as each individual who deploys. It is also true that there are common postdeployment difficulties that many warriors experience. In general, military personnel adjust well and effectively transition to new missions, duty stations, or civilian roles. Some, however, face considerable and broad-ranging difficulties affecting many aspects of their lives, including problems on the job, in their relationships, and in society. Some service members face adjustment to visible or invisible wounds or losses, others may experience a combination of difficulties and personal growth. The discussion that follows seeks to emphasize some of the most commonly observed psychosocial and behavioral health challenges.

Reijnen, A., et al. (2015). The effect of deployment to a combat zone on testosterone levels and the association with the development of posttraumatic stress symptoms: A longitudinal prospective Dutch military cohort study. *Psychoneuroendocrinology* 51: 525-533.

The aim of this longitudinal prospective cohort study was to assess the effect of deployment to a combat zone on plasma testosterone levels, and the possible association with the development of symptoms of posttraumatic stress disorder (PTSD). A total of 918 males enlisted in the Dutch Military were included in the study before deployment to a combat zone in Afghanistan. The effect of deployment on testosterone was longitudinally assessed; starting prior to deployment and follow-up assessments were performed at 1 and 6 months after return. Furthermore, the association with PTSD symptoms reported at 1 and 2 years post-deployment was assessed. Plasma testosterone levels were significantly increased after deployment compared with pre-deployment levels. Although no difference was found between individuals reporting high or low levels of PTSD symptoms, pre-deployment testosterone levels predicted the development of PTSD symptoms at 1 and 2 years post-deployment. This study provides evidence that not the alterations in testosterone levels shortly after deployment, but the pre-deployment testosterone levels are associated with PTSD symptoms, which is of value in the identification of biological vulnerability factors for the development of PTSD.



Richardson, J. D., et al. (2014). Predictors of Long-Term Treatment Outcome in Combat and Peacekeeping Veterans With Military-Related PTSD. *Journal of Clinical Psychiatry* 75(11): E1299-E1305.

This retrospective chart review of 151 consecutive Veterans treated at an outpatient clinic for Veterans with psychiatric disorders resulting from their military operations between January 2002 and May 2012 examined the predictors of long-term treatment outcomes in a group of Veterans with military-related PTSD. The diagnosis of PTSD was made using the Clinician-Administered PTSD Scale. As part of treatment as usual, all patients completed the PTSD Checklist-Military version and Beck Depression Inventory at intake and at each follow-up appointment, the Short-Form Health Survey (SF-36) at intake, and either the SF-36 or the 12-item Short-Form Health Survey at follow-up. All patients received psychoeducation about PTSD and combined pharmacotherapy and psychotherapy. Analyses demonstrated a significant and progressive improvement in PTSD severity over the 2-year period. Comorbid depressive symptom severity was found to act as a significant predictor of PTSD symptom decline. This study highlights the importance of treating comorbid symptoms of depression aggressively in Veterans with military-related PTSD. It also demonstrates that significant symptom reduction, including loss of probable PTSD diagnosis, is possible in an outpatient setting for Veterans with chronic military-related PTSD.

Solomon, Z., et al. (2005). Frontline treatment of combat stress reaction: a 20-year longitudinal evaluation study. *American Journal of Psychiatry* 162(12): 2309-2314.

The purpose of the longitudinal quasi-experimental study design was to evaluate the long-term (20-year) effectiveness of frontline treatment provided to combat stress reaction casualties. Seventy-nine combat stress reaction casualties of the 1982 Lebanon War who received frontline treatment were compared to 156 combat stress reaction casualties who did not receive frontline treatment, and 194 matched soldiers who did not experience combat stress reaction. Subjects were asked which of the frontline treatment principles (proximity, immediacy, expectancy) were applied in their treatment, whether or not they returned to their unit after frontline treatment, and if so, whether they returned before or after they felt completely recovered. Outcome assessments included measures of posttraumatic and psychiatric symptoms and of social functioning. Twenty years after the war, traumatized soldiers who received frontline treatment had lower rates of posttraumatic and psychiatric symptoms, experienced less loneliness, and reported better social functioning than similarly traumatized soldiers who did not receive frontline treatment. Frontline treatment is associated with improved outcomes even two decades after its application.

Stein, A. L., et al. (2005). Correlates for posttraumatic stress disorder in Gulf War Veterans: a retrospective study of main and moderating effects. *Journal of Anxiety Disorders* 19(8): 861-876.

With a sample of 120 Gulf War Veterans, the present study had participants complete a battery of self-report measures and clinician-administered scales. The purpose of the study was to investigate the main effects of childhood and lifetime trauma, combat exposure, and coping strategies on posttraumatic stress disorder (PTSD), as well as combat exposure's moderating effects on the other variables' relationships with PTSD. Logistic regression results indicated correct classification of PTSD diagnosis for 88% of the participants, with combat exposure and avoidant coping making significant contributions to this classification. Multiple regression results indicated that lifetime trauma,



combat exposure, and avoidant coping were strongly related to PTSD symptoms. Multiple regression results also revealed that combat exposure moderated the strength and direction of PTSD's relationships with childhood trauma and avoidant coping. Study findings have implications for longitudinal investigation of PTSD development and preventive interventions.

Stevellink, S. A., et al. (2015). The prevalence of mental health disorders in (ex-) military personnel with a physical impairment: a systematic review. *Occupational and environmental medicine* 72(4): 243-251.

This paper reviews the existing literature regarding the prevalence of mental health problems among (ex-)military personnel who have a permanent, predominantly, physical impairment. Multiple electronic literature databases were searched for relevant studies. Twenty-five papers were included in the review, representing 17 studies. Studies conducted among US military personnel (n=8) were most represented. A range of mental health disorders were investigated; predominately post-traumatic stress disorder (PTSD), but also depression, anxiety disorder (excluding PTSD), psychological distress and alcohol misuse. Common mental health disorders were frequently identified among (ex-)military personnel with a physical impairment. Future research should be directed into factors impacting on the mental well-being of (ex-)military personnel with an impairment, how prevalence rates vary across impairment types and to identify and act on specific needs for care and support.

Taylor, J. T. P., Sally Haw and Ruth Jepson (2012). Military Veterans with mental health problems: a protocol for a systematic review to identify whether they have an additional risk of contact with criminal justice systems compared with other Veterans groups. *Systematic Reviews* 1(1): 53-50. The aim of this literature review was to examine whether military Veterans with mental health problems, including substance use, had an additional risk of contact with criminal justice systems when compared with Veterans who did not have such problems. The review sought to identify Veterans' views and experiences on their contact with criminal justice services, what contributed to or influenced their contact and whether there were any differences, including international and temporal, in incidence, contact type, Veteran type, their presenting health needs and reported experiences. The model, used as a framework for conducting a review of observational and qualitative studies, consisted of two parallel synthesis stages within the review process; one for quantitative research and the other for qualitative research. The third stage involved a cross study synthesis, enabling a deeper understanding of the results of the quantitative synthesis. A range of electronic databases were systematically searched, from 1939 to present day, using a broad range of search terms that covered four key concepts: mental health, military Veterans, substance misuse, and criminal justice.. Included studies, both quantitative and qualitative, underwent stage-specific analysis and synthesis. The final stage combined the findings of both syntheses to enable new understandings of why, how, and by how much, military Veterans with mental health problems including problematic drug and alcohol use, came into contact with the criminal justice system.



Vermetten, E., Greenberg, N., Boeschoten, M. A., Delahaije, R., Jetly, R., Castro, C. A., & McFarlane, A. C. (2014). Deployment-related mental health support: comparative analysis of NATO and allied ISAF partners. *European Journal of Psychotraumatology*, 5(0), 1-19. doi:10.3402/ejpt.v5.23732

This review aims to compare the organization and practice of mental support by five partnering countries in the recent deployment in Afghanistan in order to identify and compare the key methods and structures for delivering mental health support, describe bottlenecks and illustrate new developments. Information was collected through document analysis and semi-structured interviews with key military mental healthcare stakeholders professionals within the Australian Defense Forces (ADF), Canadian Armed Forces (CAF), United Kingdom Armed Forces (UK), Netherlands Armed Forces (NLD), and the United States Army (US). The main items discussed were training, prevention, early identification, intervention, and aftercare in the field of mental health. This analysis concluded that in all five partners state-of-the-art preventative mental healthcare was included in the last deployment in Afghanistan, including a positive approach towards strengthening the mental resilience, a focus on self-regulatory skills and self-empowerment, and several initiatives that were well-integrated in a military context.

Vogt, D., et al. (2011). Pre-deployment, deployment, and post-deployment risk factors for posttraumatic stress symptomatology in female and male OEF/OIF Veterans. *Journal of Abnormal Psychology* 120(4): 819-831.

The aims of this study were to identify, using data collected by mailed surveys, the mechanisms through which previously documented risk factors contribute to posttraumatic stress symptomatology (PTSS) in a national sample of 579 female and male Veterans deployed to Afghanistan for Operation Enduring Freedom (OEF) or to Iraq for Operation Iraqi Freedom (OIF), as well as to examine the extent to which results mirror associations observed among Vietnam Veterans. Consistent with conservation of resources (COR) theory, findings indicated that PTSS is accounted for by multiple chains of risk, many originating in predeployment experiences that place Veterans at risk for additional stress exposure, and foretell difficulty accessing resources in the face of subsequent stressors. Importantly, the majority of previously documented mechanisms were replicated in this study, suggesting key pathways through which risk factors may contribute to PTSS across different Veteran populations. Results also revealed a number of novel risk mechanisms for OEF/OIF female Veterans, particularly with respect to the role of deployment family relationships in risk for PTSS.

Yaffe, K., et al. (2010). Posttraumatic stress disorder and risk of dementia among US Veterans. *Archives of General Psychiatry* 67(6): 608-613.

The purpose of this stratified, retrospective cohort study was to determine whether PTSD is associated with the risk of developing dementia among older US Veterans receiving treatment in the Department of Veterans Affairs medical centers. Using the Department of Veterans Affairs National Patient Care Database, the study included a total of 181 093 Veterans 55 years or older without dementia from fiscal years 1997 through 2000 (53 155 Veterans with and 127 938 Veterans without PTSD). With age as the time scale, Cox proportional hazards models indicated that patients with PTSD were more than twice as likely to develop incident dementia compared with those without PTSD. After multivariable adjustment, patients with PTSD were still more likely to develop



dementia. Results were similar when those with a history of head injury, substance abuse, or clinical depression were excluded.

Yarvis, J. S. and L. Schiess (2008). Subthreshold Posttraumatic Stress Disorder (PTSD) as a Predictor of Depression, Alcohol Use, and Health Problems in Veterans. *Journal of Workplace Behavioral Health* 23(4): 395-424.

The purpose of this study is to forecast comorbidities in patients who have classic or subclinical PTSD. Participants were 1,968 previously deployed male and female peacekeepers who completed a battery of questionnaires, including measures of PTSD symptoms, depression, alcohol use, and physical health. Logistic regression was used to forecast alcohol, depression and health problems in groups of Veterans with classic, subclinical, or no PTSD. Findings suggest that subthreshold PTSD can also be comorbid alcoholism, depression, and poor health but is not as strong of an indicator as classic PTSD.

7.3.2. *Physical Health, Illness and Injury* *Canadian Documents*

Thompson, J., Scott, K. C., & Dubinsky, L. (2008). Battlefield Brain: Unexplained Symptoms and Blast-Related Mild Traumatic Brain Injury. *Canadian Family Physician*, 54(11), 1549-1551.

This article discusses blast injuries and mild traumatic brain injury among Veteran patients, for family physicians. Key points discussed include: Most patients who suffer mild traumatic brain injury recover completely within 3 months. However, a small minority report persistent, nonspecific symptoms that can be disabling. Although the etiology of persistent symptoms following mild traumatic brain injury might remain uncertain, standard treatments are likely to be effective when provided by a primary care provider and multidisciplinary team familiar with the military context. Still-serving Regular and Reserve Canadian Forces members may be referred to Department of National Defence medical services, and Canadian Forces members and Veterans might be eligible for Veterans Affairs Canada services.

Thompson, J. (2008). *Persistent Symptoms Following Mild Traumatic Brain Injury (mTBI) -A Resource for Clinicians and Staff*. Charlottetown, PEI: Veterans Affairs Canada Research Directorate Technical Report. 09 September 2008:26 p.

The Veterans Affairs Canada Research Directorate prepared this report as a resource for clinicians and staff developing services for Veterans with persistent symptoms after concussion. Persistent and even disabling symptoms may occur in some Veterans who report prior concussion (mTBI, mild traumatic brain injury). It is observed that, although mTBI is not a new concept, the recognition, assessment and treatment of persistent symptoms can be challenging and require a coordinated approach.

Thompson, J., Chiasson, R., & Loisel, P. (2009). A Sailor's Pain: Veteran's musculoskeletal disorders, chronic pain, and disability. *Canadian Family Physician*, 55(11), 1085-1088.



This discussion addresses assessment and diagnosis of musculoskeletal disorders, chronic pain, and disability in Veteran patients. Key points discussed include: Managing disability requires optimizing treatment of the impairment, assisting mental adaptation, and reducing external social and physical environmental barriers. The goal in managing disability is to assist patients in achieving optimal quality of life by restoring health, independence, and participation in life. Family physicians have key roles in collaborative disability case management with Veterans Affairs Canada.

St. Cyr, K., McIntyre-Smith, A., Contractor, A. A., Elhai, J. D., & Richardson, J. D. (2014). Somatic symptoms and health-related quality of life among treatment-seeking Canadian Forces personnel with PTSD. *Psychiatry research*, 218(1-2), 148-152.

This study examined the association between somatic complaints and health-related quality of life (HR-QoL) in treatment-seeking Canadian military personnel with military-related Posttraumatic Stress Disorder (PTSD). 291 Current and former CF members attending an Operational Stress Injury Clinic were administered self-report questionnaires assessing number and severity of somatic complaints, PTSD and depressive symptom severity, and mental and physical health-related quality of life (HR-QoL) prior to commencing treatment. Regression analyses were used to identify the role of somatic complaints on physical and mental HR-QoL, after controlling for PTSD symptom cluster and depressive symptom severity. The results of this study indicate that somatic symptom severity is a significant predictor of physical HR-QoL, even above and beyond PTSD symptom cluster and depressive symptom severity. The results suggest that somatic complaints have significant independent contributions to HR-QoL, and as such, should be additionally considered in the assessment of military members and Veterans presenting with mental health-related concerns.

VanDenKerkhof, E. (2015). Pain in Canadian Veterans: Analysis of data from the Survey on Transition to Civilian Life. *Pain Research and Management: The Journal of the Canadian Pain Society*, 20(2), 89-95.

The objective of this study was to describe the prevalence of chronic pain and associated socio-demographic, health behaviour, employment/income, disability, and physical and mental health factors in Canadian Veterans. Data from the 2010 Survey on Transition to Civilian Life were linked with Department of National Defence and Veterans Affairs Canada administrative databases. 41% of the population experienced constant chronic pain and 23% experienced intermittent chronic pain. 25% reported pain interference. Needing help with tasks of daily living, back problems, arthritis, gastrointestinal conditions and age ≥ 30 years were independently associated with chronic pain. Needing help with tasks of daily living, back problems, arthritis, mental health conditions, age ≥ 30 years, gastrointestinal conditions, low social support and non-commissioned member rank were associated with pain interference. These findings provide evidence for agencies and those supporting the well-being of Veterans, and inform longitudinal studies to better understand the determinants and life course effects of chronic pain in military Veterans.



Physical Health, Illness and Injury
Other Countries

- Hazard Vallerand, A., Cosler, P., Henningfield, J. E., & Galassini, P. (2015). Pain management strategies and lessons from the military: A narrative review. *Pain Research and Management, 20*(5), 261-268. The purpose of this literature review is to provide a narrative review regarding US military pain management guidelines and initiatives, which may guide improvements in pain management, particularly chronic pain management and prevention, for the general population. A review of US military pain management guidelines and initiatives was conducted, with a particular focus on the potential of these guidelines to address shortcomings in chronic pain management in the general population.
- Hoencamp, R., Idenburg, F. J., van Dongen, T. F., de Kruijff, L. M., Huizinga, E. P., Plat, M. J., Hoencamp, E., Leenen, L. P., Hamming, J. F. & Vermetten, E. (2015). Long-Term Impact of Battle Injuries; Five-Year Follow-Up of Injured Dutch Servicemen in Afghanistan 2006-2010. *Plos ONE, 10*(2), 1-14. This observational cohort study was conducted among Dutch service members to look at the long-term impact of combat injuries at their five-year end point. To date, no systematic inventory has been performed of an identified group of battle casualties (BC) in comparison to non-injured service members from the same operational theatre. Participants rated their impact of trauma exposure, post deployment reintegration, general symptoms of distress, and current perceived quality of life. Cost effectiveness and care consumption were also assessed. Results showed a clear long-term impact on a wide range of scales that contributes to a reduced quality of life in a group of BC. Low perceived cost effectiveness matched with high consumption of care in the BC group in comparison with control groups.
- Holland, J. M., Lisman, R., & Currier, J. M. (2013). Mild traumatic brain injury, meaning made of trauma, and posttraumatic stress: a preliminary test of a novel hypothesis. *Rehabilitation Psychology, 58*(3), 280-286. This study sought to provide a preliminary examination of whether meaning made of trauma could account for the association between mTBI and PTSD (i.e., reexperiencing, avoidance, and hyperarousal symptoms). Participants were 162 Iraq and/or Afghanistan Veterans who presented for health care services at a Department of Veterans Affairs hospital and completed a two-level evaluation for mTBI as well as a self-report questionnaire assessing demographic and military background factors, meaning made of trauma, and PTSD symptomatology. Results of structural equation modeling indicated that probable mTBI was indirectly associated with the three domains of PTSD symptomatology via Veterans' meaning made of trauma. Results were considered in support of the idea that difficulties with meaning-making are a contributing factor for risk of PTSD among Veterans with mTBI.
- Knoop, H., van der Meer, J. M., & Bleijenbergh, G. (2009). Chronic fatigue in Gulf War Veterans: should it be treated as chronic fatigue syndrome?. *Psychological Medicine, 39*(8), 1401-1402. This is a letter to the editor about a 2008 study (Ismail et al.) finding that a substantial number of UK Veterans of the Gulf War of 1990–1991 who report (medically unexplained) physical disabilities meet the criteria for chronic fatigue syndrome (CFS).



Kraus, A., Geuze, E., Schmahl, C., Greffrath, W., Treede, R., Bohus, M., & Vermetten, E. (2009). Differentiation of pain ratings in combat-related posttraumatic stress disorder. *Pain (03043959)*, 143(3), 179-185 7p.

In this study, authors investigated whether pain perception would be reduced in PTSD patients who are not suffering from chronic pain symptoms, and whether a reduction in pain sensitivity would also be present in combat Veterans who did not develop PTSD. Results suggest an association of PTSD with reduced pain sensitivity, which could be related to PTSD-related (neuro-)psychological alterations or to a pre-existing risk factor for the disorder.

Radomski, M. V., et al. (2009). Occupational therapy for service members with mild traumatic brain injury. *American Journal of Occupational Therapy* 63(5): 646-655.

The Proponency for Rehabilitation and Reintegration tasked a team of occupational and physical therapists to assemble evidence-based best practices specific to mTBI. The team developed the Clinical Practice Guidance: Occupational Therapy and Physical Therapy for Mild Traumatic Brain Injury. This article is a composite of occupational therapy practice recommendations specific to client education, vision, cognition, resumption of roles, and emotional well-being. Each are summarized for civilians and characterized as practice standards or practice options.

Sayer, N. A., et al. (2008). Characteristics and rehabilitation outcomes among patients with blast and other injuries sustained during the Global War on Terror. *Archives of Physical Medicine and Rehabilitation* 89(1): 163-170.

The purpose of this observational study based on chart review and Department of Veterans Affairs (VA) administrative data was to describe characteristics and rehabilitation outcomes among patients who received inpatient rehabilitation for blast and other injuries sustained in Iraq and Afghanistan during the Global War on Terror. The study included 188 service members admitted to one of four VA polytrauma rehabilitation centers (PRCs) during the first 4 years of the Global War on Terror for injuries sustained during Operation Iraqi Freedom or Operation Enduring Freedom. They participated in a multidisciplinary comprehensive rehabilitation program. Measures used were cognitive and motor Functional Impairment Measure (FIM) instrument gain scores and length of stay (LOS). Most war-injured patients had traumatic brain injury, injuries to several other body systems and organs, and associated pain. The mechanism of the injury did not predict functional outcomes. LOS was variable, particularly for those with blast injuries. Patients with low levels of independence at admissions made the most progress but remained more dependent at discharge compared with other PRC patients. The rate of gain was slower in this low-functioning group. Findings underscore the need for assessment and treatment of pain and mental health problems among patients with polytrauma and blast-related injuries. Patients with polytrauma have lifelong needs, and future research should examine needs over time after community re-entry.

Teachman, J. and L. Tedrow (2013). Veteran Status and Body Weight: A Longitudinal Fixed-Effects Approach. *Population Research and Policy Review* 32(2): 199-220.

This article provides estimates of the relationship between men's peacetime military service during the all-volunteer era (AVE) and body weight using longitudinal data on 6,304 men taken from the National Longitudinal Survey of 1979 (NLSY-79). Using fixed-effects estimators on up to 13 years of data and numerous controls for time-varying life-course characteristics linked to body weight,



Veterans of active-duty military service were found to have higher levels of BMI and obesity. Authors argue that eating habits learned during service, coupled with patterns of physical activity, lead to a situation whereby Veterans making the transition to less active civilian lifestyles gain weight that is not lost over time.

Walter, K. H., et al. (2015). Psychiatric comorbidity effects on compensatory cognitive training outcomes for Veterans with traumatic brain injuries. *Rehabilitation Psychology* 60(3): 303-308.

The purpose of this study was to investigate the influence of posttraumatic stress disorder (PTSD) diagnosis, and PTSD and depression severity, on the postconcussive symptom trajectory over the course of a 1-year study period by conducting a secondary analysis of a randomized controlled trial comparing Veterans who received supported employment combined with compensatory cognitive training to those who received supported employment only. Assessments were conducted at baseline, and at 3, 6, 12-months following the intervention. Participants were 50 Operation Enduring and Iraqi Freedom (OEF/OIF) Veterans with a history of mild to moderate traumatic brain injury (TBI) who were unemployed, seeking work, and who had neuropsychological impairment. Study results suggest that for Veterans with a history of mild to moderate TBI, presence of comorbid PTSD or depressive symptoms should not preclude participation in cognitive rehabilitation interventions.

7.3.3. Disability and Rehabilitation Canadian Documents

Clarke, D. (2008). *Reserved Care: An Investigation into the Treatment of Injured Reservists*. National Defence and Canadian Forces Ombudsman.

This is the first systemic investigation undertaken by the Office of the Ombudsman involving Canada's Reserve Force. The investigation was launched in 2006 following complaints from Canadian Forces Reserve members who indicated that different standards of health care were applied to those injured while serving Canada. This investigation identified four major issues, and makes several recommendations to address each: 1. Provision of health care to Reservists: there are huge inequities in the interpretation of when health care will be provided, which is frustrating for medical officials and Reservists. 2. Consistency of standards: Standards are either different for, or applied differently to, Reserve Force personnel than their Regular Force counterparts in numerous health related areas. 3. Benefits for injured Reservists: Compensation under the Accidental Dismemberment Insurance Plan for some Reservists is only 40 percent of the compensation for identical injuries suffered by other Reservists and by all Regular Force personnel. 4. Reserve administration: The Canadian Forces is not able to process medical releases for Reservists in a timely manner. This results in financial disadvantages for the Reservist.

Boswall, M., O'Hanley, S., Caron-Boulet, N., & Thompson, J. M. (2010). Forms for father: Military Veteran with unmet health care needs. *Canadian Family Physician*, 56(2), 147-149.

This is a brief description of one Veteran's navigation of the Veteran Affairs Canada's disability program. Key points made are as follows: 1. Veterans and still-serving Canadian Forces and Royal Canadian Mounted Police members can apply to Veterans Affairs Canada (VAC) for benefits for



disabilities they believe are related to their service. 2. Family physicians play a key role in providing necessary information on VAC forms, enabling VAC to adjudicate disability entitlement claims and assess degree of disability. 3. Incomplete forms lead to delays in providing Disability Program benefits to Veterans and their families. 4. A family physician can offer opinions about a service connection for a Veteran's condition, but VAC determines whether there is a connection between military service and a claimed disability.

Besemann, M. (2011). Physical rehabilitation following polytrauma. The Canadian Forces Physical Rehabilitation Program 2008-2011. *Canadian Journal of Surgery*, 54(6), S135-S141.

This study describes a hybrid model of civilian-military physical rehabilitation by the Canadian Forces Health Services (CFHS), for injured soldiers returning from Afghanistan. Six lessons are identified: 1. Military rehabilitation programs form an integral part of comprehensive care for injured and ill service members and should not be dismantled during peacetime. 2. Injured service members expect to be rehabilitated with the same intensity at which they were initially trained. 3. Rehabilitating military personnel need to be treated in groups to enhance motivation and morale. 4. In hybrid military-civilian models of care, the assumption cannot be made that all issues of importance to service members will be dealt with by the civilian institutions, nor is this a reasonable expectation. 5. Despite the lack of pure "specialized clinical expertise," military rehabilitation clinicians can substantially improve rehabilitation care delivery owing to the breadth of their expertise. 6. Technological advances, although important, are not in and of themselves the answers to the wide-ranging issues involved in rehabilitating "the whole person."

DND. (2012). *Caring for Our Own: A comprehensive approach for the care of CF ill and injured members and their families*.

This document, generated by the Canadian Department of National Defense, introduces a comprehensive framework, which organizes the programs and services offered to CF ill and injured members and their families into an integrated system of care through successive phases of recovery, rehabilitation, and reintegration or return to civilian life. This comprehensive approach to care calls upon all current systems of support to serve a common objective, and takes into account all phases of treatment and rehabilitation – from the onset of illness or injury to the return to work. This approach is intended to integrate and coordinate services available through the military health care system, the military administrative and social support system, and the transition and Veteran support system managed by Veterans Affairs Canada (VAC).

Thompson, J., Pranger, T., Sweet, J., Van Til, L., McColl, M. A., Besemann, M., Shubaly, C., Pedlar, D. (2015). Disability correlates in Canadian Armed Forces Regular Force Veterans. *Disability and Rehabilitation*, 37(10), 884-891.

This study was undertaken to inform disability mitigation for military Veterans by identifying personal, environmental, and health factors associated with activity limitations. A sample of 3154 Canadian Armed Forces Regular Force Veterans who were released during 1998-2007 participated in the 2010 Survey on Transition to Civilian Life. Associations between personal and environmental factors, health conditions and activity limitations were explored using ordinal logistic regression.



The prevalence of activity reduction in life domains was higher than the Canadian general population (49% versus 21%), as was the need for assistance with at least one activity of daily living (17% versus 5%). Disability odds were highest for chronic pain, any mental health condition, and musculoskeletal conditions, and there was a synergistic additive effect of physical and mental health co-occurrence. The study concludes that disability, measured as activity limitation, was associated with a range of personal and environmental factors and health conditions, indicating multifactorial and multidisciplinary approaches to disability mitigation.

Thompson, J., Pranger, T., Sweet, J., Poirier, A., McColl, M., MacLean, M., Besemann, M., Shubaly, C., Moher, D., Pedlar, D. (2013). *Disability Findings from the 2010 Survey on Transition to Civilian Life*. Charlottetown PEI: Veterans Affairs Canada. Research Directorate Technical Report. Charlottetown, PE: 28 October, 2013: p. 79.

This report is the first comprehensive descriptive analysis of the STCL activity limitation findings. Initial findings from STCL are available in other reports. Previous reports focused on income, health, general adjustment to civilian life and other topics, but not activity limitations. The Veterans were surveyed in 2010 at a time when significant advancements in services for serving personnel and Veterans experiencing disability were being put into place by VAC, DND (Department of National Defence) and CAF. Most in the study population had released from service prior to the New Veterans Charter programs in 2006, and prior to additional significant advancements in services for serving personnel and Veterans with mental health problems that were established later.

Galipeau, R. (2015). *Continuum of Transition Services: Report of the Standing Committee on Veterans Affairs*. Standing Committee on Veterans Affairs.

This report examined the process by which members of the Canadian Armed Forces (CAF) are medically released, and responsibility for that member's rehabilitation and compensation are transferred from the Department of National Defence (DND) to other stakeholders, in particular, Veterans Affairs Canada (VAC) and the Service Income Security Insurance Plan (SISIP). This report is based on testimony heard from witnesses during the seven meetings the Canadian House of Commons Standing Committee on Veterans Affairs held in 2015. The purpose of this report was to highlight the lesser-known elements of the transition process, such as what programs are available from the Canadian Armed Forces before the Veterans Affairs Canada programs take effect, what coordination measures are taken by both departments during the transition process, and what initiatives are available through third-party organizations that complement government measures.

Disability, Rehabilitation and Functioning Other Countries

Darwin, J. (2008). Disabilities and injuries among the members of the National Guard and Reserve units. In N. D. Ainspan, W. E. Penk, N. D. Ainspan, & W. E. Penk (Eds.), *Returning wars' wounded, injured, and ill: A reference handbook*. (pp. 160-172). Westport, CT: Praeger Security International.

This chapter was created for the returning members of the Reserve and National Guard and their families and friends. An unprecedented number of members of the National Guard and Reserves have been



deployed to fight overseas alongside the active duty members in virtually all capacities and are thus receiving the same types of injuries and wounds. When they return home, they need to contend with the same reintegration and transition issues and the same symptoms of PTSD and other psychological issues created by their military service. The authors contend that unlike active duty service members, these citizen soldiers are frequently unable to access the resources available to the other service members because many live in communities far removed from VA centers and military bases. Without community support, the recovery and reintegration process can be especially difficult for Reserve and Guard members.

Elmasry, H., Gubata, M. E., Packnett, E. R., Niebuhr, D. W., & Cowan, D. N. (2014). Risk factors for disability retirement among active duty air force personnel. *Military Medicine*, 179(1), 5-10 6p. This was a matched case-control study to determine risk factors for disability retirement in Air Force personnel, as well as the conditions contributing to disability retirement. Air Force personnel with accession records who were disability retired between 2002 and 2011 were included as cases. Conditional logistic regression was used to determine the odds of disability retirement. Women and those aged 25 or older were significantly more likely to be disability retired. Deployment was associated with disability retirement but was significantly protective. Psychiatric conditions were the most common condition type among those who were disability retired.

Gerber, D. A. (2003). Disabled Veterans, the State, and the Experience of Disability in Western Societies, 1914-1950. *Journal of Social History*, 36(4), 899.

The goal of this theoretical article was to analyze the relationships among group, identity, and the state, in the case of disabled Veterans. In doing so, it aims to challenge the prevailing view of disabled Veterans in social welfare policy history. The article compares and contrasts the experiences of disabled and able-bodied Veterans, and disabled civilians and disabled Veterans. Through examination of the collective experience of the adjustment of adult men to life-transforming impairments during 1914-50, the article offers an alternative perspective that emphasizes the disabled Veterans' agency in seeking to define their own needs in pursuit of a normalized existence.

Holtz, S. C. (2012). *Safeguarding Our Veterans: A Historical Study of Disability Compensation, Rating Schedules and Quality of Care with Specific Focus on Post-Traumatic Stress Disorder and Traumatic Brain Injury*. (M.A. Dissertation), State University of New York Empire State College.

This dissertation details information on post-traumatic stress disorder and traumatic brain injury prevalent in a large sample of returning Veterans from Operation Iraqi Freedom and Operation Enduring Freedom. It addresses the following questions: What is the history of compensation post deployment for United States soldiers? What is the current rating schedule used to determine eligibility and administration of costs for care to returning soldiers? What is the scope of mental health and cognitive conditions that troops face when returning from Iraq and Afghanistan? What are the costs of the conditions, including treatment costs and costs stemming from lost productivity and other consequences? What are the existing programs and services to meet health related needs of service members with PTSD, major depression and traumatic brain injury? What are the gaps in these programs and services? What steps can be taken to close these gaps? The intent of this study was to demonstrate that key strategies can be put in place to ensure that Veterans are able to have a more successful transition back into civilian life.



Larson, G. (2014). Prospective prediction of functional difficulties among recently separated Veterans. *Journal of Rehabilitation Research and Development* 51(3): 415-428.

In a survey of 461 recently separated Marines, data were analyzed using a stepwise logistic and multiple regressions to identify predictors of functional impairment, including work-related problems, financial problems, unlawful behavior, activity limitations due to mental health symptoms, and perceived difficulty reintegrating into civilian life. Posttraumatic stress disorder symptoms assessed both before and after military separation significantly predicted functional difficulties across all domains except unlawful behavior.

Penk, W. E. and R. Robinowitz (2008). The psychological impact of disabilities. *Returning wars' wounded, injured, and ill: A reference handbook*. N. D. Ainspan, W. E. Penk, N. D. Ainspan and W. E. Penk. Westport, CT, Praeger Security International: 205-221.

This book chapter focuses on psychosocial impacts of war that persist into times of peace as warriors return home. It is structured around three themes: 1) the new goals that warriors must develop for themselves as they transition home; 2) the maladies impacting their transitions to home life; and 3) the means that they can use to overcome these maladies, so that they can achieve their goals at home.

Rivera, J. C., et al. (2015). Disability After Deployment Injury: Are Women and Men Service Members Different? *Clinical Orthopaedics and Related Research* 473(8): 2448-2454.

This purpose of this study was to determine whether: women service members develop different conditions resulting in long-term disability compared with men service members after injuries sustained during deployment; women service members have more or less severe disability after deployment injury compared with men service members; men or women are more likely to return to duty after combat injury. With data from the Department of Defense Trauma Registry and the Physical Evaluation Board regarding women who had been injured during deployment from 2001 to 2011, frequency of disabling conditions, disability percentages, and return-to-duty rates for 368 women were compared with a previously published cohort of 450 men service members, 378 of whom had orthopaedic injuries. After deployment-related injury, women have higher rates of arthritis, lower rates of pain disorders, and more severely rated PTSD compared with men. Women are unable to return to duty more often than men injured in combat. These results suggest some difference between men's and women's outcomes after deployment injury, important information for military and Veterans Administration providers seeking to minimize post-deployment disability.

Wright, L. D. (2013). A phenomenological study of soldiers in the U.S. Army warrior transition unit (WTU). *Behavioural Psychology*. Ann Arbor, MI, Baker College (Michigan). D.B.A.: 134.

The purpose of this phenomenological study (dissertation) was to understand the perceived experiences, satisfaction, and needs of wounded warriors assigned or attached to the Warrior Transition Unit (WTU) at Fort Bragg, North Carolina. Theoretical support for this study was Schein's culture model and Maslow's theory of motivation and hierarchy of needs. The research questions examined the perceptions and beliefs of wounded warriors regarding the quality of medical care and administrative services rendered, and what changes are needed to improve the overall quality of services rendered. Data collection involved semi structured, in-depth interviews. The interviews were transcribed and coded to derive themes and patterns based on participants' responses.



7.3.4. Sleep

Faestel, P. M., Littell, C. T., Vitiello, M. V., Forsberg, C. W., & Littman, A. J. (2013). Perceived Insufficient Rest or Sleep among Veterans: Behavioral Risk Factor Surveillance System 2009. *Journal of Clinical Sleep Medicine*, 9(6), 577-584 8p.

The purpose of this study is to investigate whether self-reported insufficient rest or sleep varies in relation to Veteran status and to identify high-risk groups of Veterans. Multivariable logistic regression was used to estimate odds ratios of insufficient sleep or rest in subgroups of Veterans based on data from a state based national telephone survey of non-institutionalized US adults. Results suggest that Veterans have a high burden of sleep problems that some subgroups should be targeted to receive interventions and enhanced education regarding insufficient sleep.

Plumb, T. R., et al. (2013). Sleep disturbance is common among servicemembers and Veterans of Operations Enduring Freedom and Iraqi Freedom. *Psychological Services* 11(2): 209-219.

This research presents the findings of a comprehensive survey of sleep impairment in relation to demographic data, military history, combat exposure, and mental illness symptoms among a general sample of 375 service-members and Veterans of Operations Enduring Freedom and Iraqi Freedom (OEF/OIF) at a wide range of times postdeployment. Sleep impairment was assessed with a battery of questionnaires. Sleep problems were common across the sample and found to be more severe among servicemembers with less education, from lower ranks, with greater combat exposure, and greater depression, anxiety, and PTSD symptoms. These findings suggest the need for routine screening of sleep problems among Veterans and increased professional training in interventions for insomnia and nightmares. For individuals experiencing sleep problems with concurrent psychiatric symptoms, addressing sleep concerns may be one less-stigmatizing way to transition servicemembers and Veterans into needed mental health services.

Quartana, P. J., et al. (2015). Indirect associations of combat exposure with post-deployment physical symptoms in U.S. soldiers: roles of post-traumatic stress disorder, depression and insomnia. *Journal of Psychosomatic Research* 78(5): 478-483.

The purpose of this survey was to characterize the indirect associations of combat exposure with post-deployment physical symptoms through shared associations with post-traumatic stress disorder (PTSD), depression and insomnia symptoms. Surveys were administered to a sample of 587 U.S. soldiers three months after a 15-month deployment to Iraq. A multiple indirect effects model was used to characterize direct and indirect associations between combat exposure and physical symptoms. Evidence for a significant indirect association of combat exposure and physical symptoms was observed through PTSD, depression, and insomnia symptoms.

van Liempt, S., et al. (2013). Impact of impaired sleep on the development of PTSD symptoms in combat Veterans: a prospective longitudinal cohort study. *Depression and Anxiety* 30(5): 469-474.

This prospective longitudinal study investigates the impact of impaired sleep and nightmares before deployment on the development of PTSD symptoms. Reports on insomnia symptoms and nightmares in 453 Dutch service members were collected prior to military deployment to Afghanistan. PTSD symptoms were assessed at 6 months post-deployment. The predictive value of insomnia symptoms and nightmares on the development of PTSD symptoms was assessed with a logistic regression analyses, in which was controlled for pre-deployment mood and anxiety



symptoms. Self-reported pre-deployment nightmares predicted PTSD symptoms at 6 months, while pre-deployment insomnia complaints did not. The results of this study indicate that the existence of pre-deployment nightmares is associated with an increased risk for the development of PTSD symptoms.

7.3.5. Health and Well-Being

Thompson, J., Banman, M., Jaeger, H., Landry, C., Wedge, M., MacLean, M. B., Pranger, T., Van Til, L. (2013). *Veterans Well-Being Conceptual Framework*. Charlottetown, PEI: Veterans Affairs Canada, Charlottetown. Research Directorate Technical Report. 02 January 2013;32 p.

This document gives a conceptual framework to help individuals, families, communities and public and private sector agencies to find their place in promoting optimum well-being of Veterans and their families. In developing this framework, the working group began with a conceptual framework developed in the VAC Research Directorate to guide its studies of well-being in Veterans. They reviewed existing frameworks developed in VAC for specific dimensions of the well-being of Veterans and their families, and frameworks advanced by Canada, other national governments, and international organizations. This framework was informed by these other frameworks and the expertise and knowledge of the working group members, which included policy, legal, operational, research and clinical knowledge; and by findings from health and disability research studies of Canadian serving personnel, Veterans and VAC clients, and studies of Veterans in other nations.

Thompson, J., Van Til, L., Poirier, A., Sweet, J., McKinnon, K., & Pedlar, D. (2014). *Health and Well-Being of Canadian Armed Forces Veterans: Findings from the 2013 Life After Service Survey*. Charlottetown, PEI: Veterans Affairs Canada. Research Directorate Technical Report. Charlottetown PE: 03 July 2014.

This report gives findings from the Life After Service Survey (LASS 2013), which extended the 2010 Survey on Transition to Civilian Life (STCL 2010) studies by including Primary Reserve Force Veterans for the first time, and by including Regular Force Veterans who had released in 1998-2012. This survey was the first comprehensive study of the health and well-being of CAF Primary Reserve Force Veterans. Reserve Class A/B Veterans had very similar health and well-being compared to Canadians in the general population, and very few of them had accessed VAC programs. Primary Reserve Class C Veterans were more similar to Regular Force Veterans in terms of socio-demographics, military characteristics, health and well-being and participation in VAC programs. The survey also confirmed the heterogeneity of CAF Regular Force Veterans: they are all ages and all ranks with a wide variety of years of service and states of health and well-being.

7.3.6. Ageing and the Life Course

Settersten, R. A., Jr. (2006). When Nations Call How Wartime Military Service Matters for the Life Course and Aging. *Research on Aging* 28(1): 12-36.

This article provides a comprehensive review and critique of the current knowledge base, elaborating what is known about the social, psychological, and physical outcomes of wartime



service and outlining an agenda to bring military service front and center in scholarship on aging. It illustrates the powerful insights gained when research on this topic is guided by life course propositions and data. It reveals how wartime military service, especially during World War II, affected the short- and long-ranging development of recruits. It also highlights the need to better account for the potential legacies of service for physical, psychological, and social functioning in late life. These matters will become increasingly important as sizable World War II and Korean Veteran populations move through advanced old age, and as the Vietnam Veteran population moves into old age. Systematic attention to the effects of wartime service is necessary to determine the degree to which contemporary knowledge about aging can be generalized to future cohorts.

Spiro, A., 3rd, et al. (2015). Long-term Outcomes of Military Service in Aging and the Life Course: A Positive Re-envisioning. *The Gerontologist* 0(0): 1-9.

The authors of this article propose a life-span model of the effects of military service that provides a perspective for probing both long-term positive and negative outcomes for aging Veterans. They explicate the model by focusing on both sociocultural dynamics and individual processes. They identify public-use data that can be examined to evaluate this model, and offer a set of questions that can be used to assess military service. Finally, they outline an agenda for dedicated inquiry into such effects and consider policy implications for the health and well-being of aging Veterans in later life.

7.4. Suicide

Canadian Documents

Rose, S. (2015). *Applying Durkheim's Theory of Suicide: A Study of Altruism and Anomie Among Canadian Veterans of Afghanistan*. (Ph.D. Dissertation), Queens University, Kingston, Ontario, Canada.

This dissertation inquires into the lived-experience of Canadian Veterans who have made the transition into civilian life. The purpose of this dissertation is to connect the literature on suicide with research on issues related to social belonging during transition. This research employs semi-structured qualitative in-depth interviews with 35 Canadian male Veterans who deployed to Afghanistan. Following the interviews, a thematic analysis was conducted to understand the major social barriers individuals face as they transition into civilian occupations and family life.

Thompson, J., Pranger, T., Ross, D. F., & Morrison, M. (2010). *Suicide Prevention at Veterans Affairs Canada: Framework*. Charlottetown, PE: Veterans Affairs Canada. Suicide Prevention Approach Working Group, National Mental Health Directorate Technical Report. 02 September 2010;71 p. Based on an extension of prior literature reviews and expert opinion, the VAC suicide prevention working group modified an evidence-informed framework for evaluating suicide prevention for VAC clients and Canadian Veterans. The working group added a pathway to suicidality through physical and social health, supplementing the original pathways through stressful life events and mood and other psychiatric disorders. In developing this framework, the VAC working group observed that the



most promising interventions probably would involve knowledge exchange among clients, families and staff; screening/assessment; overcoming barriers to accessing programs, benefits and services; the effective coordination of services delivered by multiple providers, and promoting best practices.

Thompson, J., Sweet, J., Poirier, A., & Van Til, L. (2011). *Suicide ideation and attempt findings in the Survey on Transition to Civilian Life: Descriptive Analysis*. Charlottetown, PEI: Veterans Affairs Canada Technical Report. 30 November 2011;39 p.

This report is a descriptive analysis of the weighted population estimates of those who had suicidal thoughts and attempts, from the respondents to the STCL, a computer-assisted telephone survey that sampled 3,354 of 32,015 former CF Regular Force personnel who released from service during 1998-2007. The objectives of this analysis of the suicidal ideation and attempt data collected in the Survey on Transition to Civilian Life (STCL) were to better understand suicidality in Canadian Forces (CF) Regular Force personnel who released during 1998-2007, determine where they sought help, and identify factors associated with suicidality in Veterans.

Thompson, J., Zamorski, M. A., Sweet, J., Van Til, L., Sareen, J., Pietrzak, R. H., Hopman, W.H., MacLean, M.B., Pedlar, D. (2014). Roles of physical and mental health in suicidal ideation in Canadian Armed Forces Regular Force Veterans. *Canadian Journal of Public Health*, 105(2), e109-e115.

The objective of this study was to examine the relationship of both physical and mental health problems with suicidal ideation in a representative national sample of Canadian Veterans. Subjects were a stratified random sample of 2,658 Veterans who had been released from the Canadian Armed Forces Regular Force during 1998-2007 and had participated in the 2010 Survey on Transition to Civilian Life. Associations between physical and mental health and past-year suicidal ideation were explored in multivariable regression models using three measures of physical and mental health. The prevalence of suicidal ideation was 5.8%. After adjustment for covariates, ideation was associated with gastrointestinal disorders, depression or anxiety, mood disorders, number of physical and mental conditions. The study concludes that physical health was independently associated with suicidal ideation after adjustment for mental health status and socio-demographic characteristics. The findings underscore the importance of considering physical health in population-based suicide prevention efforts and in mitigating suicide risk in individual Veterans.

Suicide

Other Countries

Castro, C. A., & Kintzle, S. (2014). Suicides in the military: the post-modern combat Veteran and the Hemingway effect. *Current Psychiatry Reports*, 16(8), 1-9. 1

The purpose of this article was to present a short review of the current state of suicide prevention interventions within the context of the military. The root causes of suicidal behavior and the role of combat in the military are each discussed. Interpersonal-psychological theory of suicide and the military transition theory are introduced as guiding frameworks for understanding suicides and suicidal behavior amongst active military personnel and military Veterans. The article concludes with a set of recommendations for



moving forward in understanding and addressing suicides in the military.

Chang, B. H., Skinner, K. M., & Boehmer, U. (2001). Religion and mental health among women Veterans with sexual assault experience. *International Journal of Psychiatry in Medicine*, 31(1), 77-95.

The purpose of this article was to present a short review of the current state of suicide prevention interventions within the context of the military. The root causes of suicidal behavior and the role of combat in the military were each discussed. Interpersonal-psychological theory of suicide and the military transition theory are introduced as guiding frameworks for understanding suicides and suicidal behavior amongst active military personnel and military Veterans. The authors observed that, while much effort has been focused on suicide prevention and treatment, as well as understanding the reasons for the sharp increase in military suicides, the definitive causes of military suicides remain elusive. Further, highly effective suicide prevention and treatment approaches have not yet been developed. The article concludes with a set of recommendations for moving forward in understanding and addressing suicides in the military.

Lusk, J., et al. (2015). A Qualitative Study of Potential Suicide Risk Factors Among Operation Iraqi Freedom/Operation Enduring Freedom Soldiers Returning to the Continental United States (CONUS). *Journal of Clinical Psychology* 71(9): 843-855.

A qualitative study among Operation Enduring Freedom/Operation Iraqi Freedom (OEF/OIF) Soldiers was conducted to explore potential constructs underlying suicide according to the interpersonal-psychological theory of suicide (IPTS); including burdensomeness, failed belonging, and acquired capability. Qualitative semi-structured interviews were conducted with 68 Soldiers at 3 months post-OEF/OIF deployment. Soldiers were asked about changes in their experiences of pain, burdensomeness, and lack of belonging. The methodology employed was descriptive phenomenological. Transcripts were reviewed and themes related to the IPTS constructs emerged. Soldiers' post-deployment transition experiences included higher pain tolerance, chronic pain, emotional reactivity, emotional numbing and distancing, changes in physical functioning, combat guilt, discomfort with care seeking, and difficulties reintegrating into family and society. Findings highlight the utility of the IPTS in understanding precursors to suicide associated with transition from deployment, as well as treatment strategies that may reduce risk in Soldiers during reintegration.

Mansfield, A. J., et al. (2011). Suicidal or Self-Harming Ideation in Military Personnel Transitioning to Civilian Life. *Suicide and Life-Threatening Behavior* 41(4): 392-405.

In this study path analysis (a methodology used to fit a complex statistical model to the covariance matrix of data set) was used to examine factors associated with suicidal/self-harming ideation among male Navy and Marine Corps personnel transitioning to civilian life. A sample of three thousand and sixty-nine individuals completed a survey on health-related issues. It included questions regarding recent suicidal or self-harm ideation, mental health symptoms, substance abuse, combat and deployment, and general well-being. Survey data were linked with personnel and medical records. Roughly 7% of men (Sailors = 5.3%, Marines = 9.0%) reported ideation during the previous 30 days. Results suggest that combat exposure, substance abuse, and resilience are associated with suicidal ideation/self-harming thoughts through the mediation of posttraumatic



stress disorder symptoms and/or depression symptoms. Substance abuse plays a moderating role. Resilience had a direct effect only among the Marines. Implications for improving the transition to civilian life are discussed.



8. Analysis

It is clear, from the scope of articles included in the Annotated Bibliography, that the long-term adjustment of those who serve is emerging as an area of considerable interest and inquiry for government, professional and academic communities. The over 300 articles catalogued in this review represent thousands of hours of research invested to understand the issues.

Despite the accumulating knowledge base, summarizing the state of current knowledge in any given area is challenging both within and across health care disciplines (Collins & Fauser, 2005). Efforts to synthesize the research on military to civilian transition bring particular challenges because MCT is not a single monolithic event that is well defined in the research or in practice. Multiple terminologies are in use across nations, service types and disciplines. Multiple frameworks are being elaborated with little consensus seeming to emerge, other than a rough division of pre, during and post transition phases. There is also no clear consensus regarding how to organize the pertinent literature, nor agreement on how to define the scope of what is pertinent.

A number of repeating themes can be seen in the research reviewed in this report. It is not clear whether the convergence of these themes reflects the nature of MCT or whether it is an artifact of converging researcher interests. It is possible that researchers have confined their investigation to significant and salient aspects of the MCT phenomenon, but left other equally important areas relatively under-investigated. There are areas effecting adjustment in MCT, such as the study of post-deployment PTSD, that have garnered a significant amount of research attention and accumulated an extensive knowledge base, while other areas, that may challenge a far greater number of personnel in the transition period, receive significantly less attention.

Compilation of themes from the existing evidence can compound this difficulty – it is by nature reductive. It results in a description of what researchers looked at, rather than a description of the phenomenon itself. It is likely that there are key facts missing from the evidentiary trail, and as Berger (1996) warns, there is always a danger that in researching the familiar, we will fuse personal experience with the evidence and “push” the story in certain directions. This raises the perennial question for researchers, does a complete picture of the evidence gathered reflect a complete picture of the phenomenon of interest? Picking up glass at the beach, and then cataloguing the types of glass gathered doesn’t tell much about the composition of the beach – only what interested the gatherer. Have we “gathered” evidence on all the important aspects of MCT to assemble a complete picture?

What we must do, as a research, practice and policy community, is link the existing body of evidence to theory, from which we can identify knowledge gaps, make propositional statements, and propose new areas for research – not merely to describe MCT, but to create programs and policies that makes a difference in the lives of Veterans, their families, their workplaces, and our communities.

When theory is not coherent, or not generally agreed upon, gap analysis—the ability to identify areas of missing knowledge—is compromised. Similarly, the heterogeneous nature of the evidence makes it difficult to assess the strength of the evidence that has been gathered. Keeping these limitations in



mind, the following brief analysis discusses gaps and strengths in the evidence concerning MCT trajectories, determinants, interventions and the impact of MCT long term. Looking at this literature globally, there are a number of recurring and converging themes that emerge.

8.1. Mental health and well-being trajectories during peri-release MCT

What is evident in the research is that there is a great deal of variation in individuals' transition experiences. All are significantly influenced by the particulars of the transition itself (for example, is it early or voluntary), the individual's approach to the transition, feelings about and meaning attributed to the transition, the individuals wider social context, by physical illness and injury, and by mental health risk factors that existed pre-service or that develop in-service.

What is also clear is that, undeniably, MCT is a challenging time, bringing significant changes in community, identity, family roles, finances, routine, responsibilities, supports and culture. Some degree of struggle is normal as with all life transitions. Most Veterans will successfully negotiate this transition. Yet, although the transition is inevitable for most service personnel (only a smaller proportion will go on to a full career), the normative course of adaptation is poorly understood, not widely communicated, and therefore unexpected difficulties catch Veterans unprepared. Institutional culture, such as the desire to perform and to focus on readiness for military career opportunity, may contribute to a tendency to not focus on leaving or preparing in advance of MCT. After MCT, the legacy of a military culture of stoicism can exacerbate the tendency to isolate and avoid help seeking when problems emerge and grow. This underutilization of services and supports can result in Veterans remaining under resourced during the normal, yet challenging times of transition, and contribute to the exacerbation of normal transition struggles into critical or chronic difficulties unnecessarily. Stigma remains a significant barrier to service use and resource access for this population, and there is a clear need to create a culture where help seeking is normalized and care for mental health and mental fitness is part of everyday life.

In addition to these challenges, military service by nature can be physically demanding and sometimes dangerous. The experience of physical injury, chronic conditions or pain can be a significant challenge to transition well-being. Polytrauma – multiple physical injuries, conditions or limitations, whether in combination with mental health issues or alone – creates particular vulnerabilities for transitioning personnel.



8.2. Determinants of mental health and well-being during peri-release MCT

Some of the points of convergence in the literature are summarised below.

8.2.1. *Research concerning the Social or Environmental Context and Determinants*

Families at the Center – The family is often the ground zero of transition challenges. Families act as caregivers and primary supports and are also the first to become aware when problems are developing. Strong and supported families are key to successful transition, and also experience their own MCT journey at the same time as the service member.

Mind the Culture Gap – The differences between military and civilian life are under-estimated and may be widening. These differences can be disorienting and negotiating the culture shock can be a key challenge in MCT. Successful entrance into civilian education, employment or social life and community requires navigating the culture gap and changes in norms and roles successfully. There is also a disconnect between military culture and help-seeking culture that makes culturally-appropriate and culturally-competent design of support services critical.

Career skills – Those who are transitioning into the civilian workforce struggle to translate the skills they have accumulated in their military careers into marketable civilian language. This can result in struggles to find appropriate work and a tendency to be under-employed in early civilian work positions. This is particularly significant for those leaving the service after short careers, lower non-commissioned ranks and for those in combat arms. When civilian work is deemed less meaningful than previous military employment, this can create significant additional challenges for MCT.

Public perception of military Veterans. The media focusing on those who are struggling has benefits and costs. On the one hand it has raised public and political support to address the needs of those who are vulnerable. On the other hand, it has left the public with the impression that all Veterans are traumatized and not functioning well, creating barriers to employment and influencing some to keep their service history to themselves. There are opportunities for public commemoration and acknowledgement that tell a more complete story.

8.2.2. *Research concerning Personal Emotional/Cognitive Factors*

Transition awareness – It is normal for MCT to be challenging. It is clear that MCT brings significant changes in community, identity, family roles, finances, routine, responsibilities, supports and culture. Some degree of struggle is normal, as with all life transitions, and most Veterans will successfully negotiate this transition. Yet, although the transition is inevitable for most service personnel, the normative course of adaptation is poorly understood. Unexpected difficulties catch Veterans unprepared and can exacerbate other pre-existing mental and physical health issues during transition.

Preparation – Planning for MCT may contribute to practical preparation and identity “rehearsal” that paves the way for assumption of new roles. Leaving this until the end of service or after MCT is too late.



Simmonds Goulbourne (2009) likened “retirement preparedness” to “disaster preparedness”. Disaster preparedness involves all the steps to be taken to prevent a hazard from becoming a disaster. A disaster is the occurrence of a hazard that overwhelms one’s coping capacity. Preparedness activities seek to put in place the required resources and capabilities to ensure effective and efficient responses to the hazard. At this point we understand that MCT holds inevitable hazards for Veterans, but we continue to underemphasize the need to prepare.

Meaning-making – Being able to make sense of it all is essential. There are physical, educational, career, and financial costs that accrue to those who serve, particularly for those with short military careers. Integrating these sacrifices into a coherent and meaningful self-narrative – how military service makes sense in the life lived – is critical to adjustment.

8.2.3. Research relating to Physical and Mental Conditions or Capacity

There will sometimes be negative physical and mental health impacts of military service that can last a lifetime. Thompson et al. (2015) also note that mental and physical health conditions have complex causal relationships with each other. They write:

Mental health conditions can be secondary to distressing chronic physical conditions, are increasingly implicated in the onset of some physical conditions, and can occur along with physical conditions owing to other causal factors. The associations between mental and physical health are particularly relevant in the CAF Veteran population, where over 90% of Regular and deployed Reserve Force Veterans with diagnosed mental conditions have chronic physical health conditions, and a significant proportion have 3 or more comorbid physical conditions (p.29).

The Road to Civilian Life (R2CL) program attempts to harmonize the realities of negative health legacies of military service with a vision of transition success through a dual focus on mental health and well-being. In the Veterans' Well-Being Conceptual Framework Thompson et al. (2013) write:

A person with good well-being is satisfied and fulfilled. Though they may have chronic physical and mental health conditions, they live well. They have minimal disability experiences because they are participating optimally in work, family, and community life. They are independent, resilient and able to meet life’s challenges.

Berglass and Harrell (2012) offer a similar solution to conceptualizing a “successful” MCT in the face of physical and mental health issues, writing:

Our definition of Veteran wellness places equal emphasis on the interrelated and multidimensional domains of psychological and physical well-being and on aspects of life that extend beyond fitness for duty, such as personal relationships, satisfaction of material needs and a sense of daily purpose. Unlike prominent civilian interpretations that emphasize the absence of illness or infirmity as a prerequisite for being well, we propose that the new paradigm for Veteran wellness must emphasize the possibility of wellness despite physical and mental injuries caused by war (Berglass & Harrell, 2012, p. 6).



This emphasis on separating the possibility of “living well”, from the condition of experiencing illness – to understand these as separate but related states – is a well-travelled conceptual terrain in the civilian physical and mental health literature. For example, Keyes’ (2002) two continua model of “complete mental health”, identifies mental illness and mental health as separate but correlated axes – one representing the presence or absence of a diagnosable mental illness; the other, the presence or absence of mental health. Mental health, whether flourishing or languishing, is defined as a combination of feeling good about and functioning well in life – mental or physical illness alone does not dictate your functioning or how you feel about life.

The US Institute of Medicine publication, *Living Well with Chronic Illness: A Call for Public Health Action*, offers an integrated framework built on determinants of health and health outcomes to inform interventions to reduce chronic illness morbidity: helping each affected person and the population as a whole to “live well” regardless of the illness in question or an individual’s present state of disablement. The concept of living well reflects the “best achievable state of health that encompasses all dimensions of physical, mental, and social well-being” (IOM, 2012, p. S3).

The physical, social, and attitudinal environment in which people live influences their functioning in a substantial way. Although chronic physical and mental health conditions may impact a Veteran’s capacity, if environmental influences including social and health-care factors are supportive and positive, the resulting performance, and perhaps well-being, will be above the expected capacity; if that influence is negative, the person will perform, participate, and experience well-being below his or her capacity.

“Successful” MCT acknowledges the presence and persistence of physical and mental illness and injury, and also acknowledges that personal and contextual factors will play a significant role in affecting well-being and functioning. Interventions aimed at body functions and structures alone (mental and physical), may deliver sub-optimal transition outcomes if contextual barriers remain and personal coping resources are missing. Likewise, contextual and personal factors might be well established, but a lack of supports for physical and mental illness or injury might undermine their facilitative impact. Collectively, these facilitators and barriers act as determinants of physical and mental health and well-being, influencing Veterans’ ability to experience minimal disability, and to participate optimally in work, family, and community life during and after MCT.

8.3. Interventions

Interventions that are relevant to adjustment through the MCT period range from transition programs that provide assistance translating military accomplishments into marketable civilian workplace skills, to programs that support families as care-givers, mental health treatments, and post-secondary education adjustment assistance programs, rehabilitation services for physical injuries or conditions, and many more. The review did not include dedicated searches into this diverse range of interventions – it is a very broad area that requires further review and synthesis within and across specialty areas.



A number of general comments are possible regarding interventions. Thompson et al. (2012), noting the 2010 Life after Service Study finding that a third of surveyed CAF Veterans with mental health conditions (36%) were not using VAC mental health services, observed that there seemed to be a large unmet need for services among non VAC clients. This observation underscores the challenge in meeting the needs of Veterans. After areas have been identified where services are required, effective interventions need to be developed and tested, and then a final challenge exists to make those interventions accessible and culturally acceptable to the military and ex-military community so that they will use the services.

Mental health interventions, and particularly those that are pathology-focused, have particular challenges to overcome to be palatable and culturally relevant to military personnel. There is a well-documented disconnect between the culture of the military (and masculinity generally) and help-seeking. While help-seeking can focus on deficit, disorder and disease, the military cultural emphasizes domination over one's body and the ability to override and disregard biological signals of fatigue or pain. Similarly, expressions of depression, fear or grief can be proscribed as "weakness". These differences can contribute to a cultural mismatch between military service and help-seeking and contribute to stigma.

It is also important to note that not all health service avoidance is due to stigma. During service, concerns about career advancement can lead serving personnel to suppress both mental and physical health issues due to concerns about advancement. This may contribute to mental and health issues becoming chronic or critical and delay full expression of these issues until the critical MCT period when military career advancement is no longer a conflicting concern.

A third issue that emerges from examination of the literature is that despite extensive study within professional silos, epistemological differences contribute a further barrier to an integrated understanding of the evidence with regard to military to civilian transition and effective interventions. There is a seemingly unacknowledged epistemological tug of war in the literature and in practice which lines up the research on either side of a philosophical divide; objectivist, post-positivist approaches on one side, and social constructionist explanations and approaches on the other. Depending on the epistemological perspective, research selectively prioritizes or minimizes particular aspects of the transition experience, creating further confusion in the literature, the field, and for Veterans who suffer in the clinical void. Emerging health and wellness frameworks hold promise to bridge these worlds, however, these concepts have not shown wide adoption in the research yet.

Finally, for each salient aspect of MCT that has been identified there may be multiple studies that use different designs and inclusion criteria. For clinical questions, the target population, focal issue, interventions and outcome measures often vary, making it difficult to generalize findings across studies, and attempts to aggregate (or disaggregate) data challenging or impossible. Even variations in the definition of 'Veteran' from country to country and study to study result in heterogeneous research populations that complicate comparison and generalizability.



8.4. Impact of MCT on later life and well-being

Numerous studies have found that many Veterans do not have extensive difficulty in their transition into civilian life after their military service. For example, Watkins (2011), in her review of the MCT literature, found that most releasing CAF members do not experience pervasive mental health problems after release from service, and many reported benefitting from their military experiences in a variety of ways. Results of the 2011 and 2013 Life after Service Studies showed that the majority of CAF Veterans surveyed reported an easy adjustment to civilian life (Van Til et al., 2014). Similar findings are seen in the research regarding other nations' transitioning military personnel, with large percentages adjusting successfully (for example, CSJ, 2014; IOM, 2013; Iversen et al., 2005). It is also known, however, that a significant minority will struggle in the transition and beyond, and that those who will struggle are difficult to reach and support after they leave the military and disperse into the civilian world.

Further, understanding mental health and well-being trajectories during peri-release MCT, and looking to identify determinants effecting mental health and well-being outcomes presumes that the desired outcome of military to civilian life transition is a known condition. Yet despite a common concern with "successful transition", the term is rarely explicitly defined in the independent research literature. Instead, outcome variables or descriptive statistics such as identified population rates for service or benefit access, mental health diagnosis, treatment outcomes and other outcomes such as re-employment or education enrollment, as examples, seem to be used as implicit proxies for successful (or unsuccessful) transition. Epidemiological studies are critical for establishing rates of mental health problems to understand the scope of the problems and the need for mental health resources (Adler, Zamorski, & Britt, 2011). The presence of an indicator of success in some area, or the absence of evidence of a problem, however, may not reflect transition success.

For example, although employment is a primary concern for many Veterans, was a pressing social concern for Veterans after the World Wars, and receives substantial attention in the current literature, The Forces in Mind Trust, Transition Mapping Study (2013) observed that employment— sometimes taken as a benchmark for successful transition—is only one indicator. The authors noted that, "It is a useful one, because of the things that flow from it (e.g., regular income) that stabilise other aspects of civilian life. Yet it has its own problems; for example, it can disguise issues of under-employment or over-qualification, and other aspects of post-military life that can lead to poor adjustment to civilian life in the medium to longer term, such as alcohol dependency or mental health issues" (p.16). Measuring success in single domains may result in an artificially narrow view of both transition successes and challenges (Adler et al., 2011; FiMT, 2013). This approach also contributes to conflicting conclusions about who is at risk as the same individuals may be regarded as successful or challenged depending on the domain measured. It is therefore important to define "success" and its determinants in order to inform both how to measure it, and design policies and programs to promote it.



9. Recommendations

Recommendations for future research are as follows:

1. **Coordination of Effort:** There is a significant need for coordination of a more unified research effort. The accumulation of evidence does not appear to be linked to an acknowledged international program of research that can systematically advance knowledge in the MCT area. Academic research is providing vital information that links determinants to specific outcomes, however there are significant gaps within this body of work that research coordination could begin to address. Without such coordination, efforts appear to be largely driven by the initiative, interests and resources of isolated departments and research groups. Where military allies collaborate to accomplish more together, it is recommended that a more formalized shared research agenda be actively pursued by interested nations.
2. **Coordination of language:** Different terminologies are in use across nations, service type and disciplines. The lack of consistency in defining key terms, such as ‘Veteran’, from nation to nation or from study to study, make comparisons of findings difficult. It is unclear whether populations can be assumed to be homogeneous or whether transition is being defined in the same way. This contributes to an incoherent picture of the MCT experience.
3. **Coordination of Priorities:** The sheer breadth and depth of the literature is both a strength and a significant challenge. In order to have an impact on MCT trajectories and outcomes, researchers and policy makers will need to rigorously prioritise research efforts across the many domains and determinants in MCT which have already emerged.
4. **Regular and Formalized Opportunities for International Dialogue:** National research institutes, such as the Canadian Institute for Military and Veteran Health Research (CIMVHR), have begun to provide forums for military personnel, policy makers, service providers and researchers to engage in essential dialogue and relationship building. It is recommended that these efforts be extended into the establishment of a formal international research institute that provides the opportunity, resources and infrastructure to work collaboratively on areas of shared concern in military health and MCT.
5. **Adoption of an agreed upon taxonomy or framework for organizing the literature.** Review of the previous literature reviews that have been completed suggests that there is no clear consensus on a way to organize the research output. It is recommended that the WHO ICF framework or some other agreed upon framework for organizing research in the area of MCT be adopted in order to facilitate data compilation for research planning.
6. **Agreement on MCT conceptual framework:** There is no single widely accepted conceptual framework that comprehensively captures all relevant dimensions. When theory is not coherent, or not generally agreed upon, gap analysis—the ability to identify areas of missing knowledge—is compromised. It is recommended that efforts be made to establish an international consensus statement on a MCT conceptual framework to guide work in this area.



10. Conclusion

The purpose of this Literature Review and Analysis was to catalogue published expert opinion and scientific evidence on the mental health and well-being of military Veterans, with particular consideration of the peri-release period of MCT, and the Canadian context. It has been outside of the scope of the current review to conduct a full, thematic analysis of the evidence. Instead, this report attempted to assess the scope and complexity of the literature, identify gaps and limitations in the knowledge base, and summarize conceptual frameworks for Mental health and well-being in MCT, in order to provide a reference point for further research in the area through the R2CL program.

Although this literature review was restricted to publications since 2000, the process of conducting the review inevitably brought the review team into contact with the MCT literature that has been written over the past 100 years and even before. Seventy years ago, George Pratt (1944), of the US Armed Forces Induction Center at New Haven Connecticut, issued a call to action, writing, “there are grave dangers to the man himself no less than to the future of the nation as a whole if families and others fail to understand his problems and thereby fail to help him achieve a normal civilian life”. It is incumbent on us today, to make sure that we seize upon the public and political will that exists, to coordinate our efforts to serve our Veterans as they have served, and to assist them to finally, and fully return “home” to civilian life.



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Appendix A: Canadian MCT Search Results

Literature in the Peri-Release Period (Group 1)

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Appendix B: MCT Search Results from Other Countries

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