

IN THIS ISSUE



RESEARCH SPOTLIGHT

Thriving after service

Veteran and Veteran Family
sleep health

Latest publications in
clinical research

Research funding
recipients announcement

IN CASE YOU MISSED IT

Warrior Care Conference

CIMVHR Forum 2024

Study Notes:

Treating posttraumatic stress
disorder with brain training:
Exploring the optimal approach

**GET INVOLVED IN RESEARCH
AT THE ATLAS INSTITUTE**

LATEST PUBLICATIONS

Welcome to *Research Compass*, the Atlas Institute's newsletter highlighting new developments in Veteran and Family well-being and mental health research. In each issue, you'll find updates on studies in which you can participate, opportunities to get involved as a research advisor, and links to our latest publications.

RESEARCH SPOTLIGHT

**NEW
STUDY**

What helps Canadian Veterans flourish after service?

What helps Canadians Veterans thrive — or flourish — in all aspects of their lives, and what helps them feel they are doing well and have a sense of meaning and purpose? The Atlas Institute has launched a new study on thriving after service that seeks to understand the factors associated with flourishing and positive mental health in Veterans. We are currently looking for Veterans of the Royal Canadian Mounted Police (RCMP) or Canadian Armed Forces (CAF) to participate in this study. We are also looking for participation from people in Canada who haven't served in order to explore similarities and differences between these groups.

You don't need to feel like you are thriving to be eligible to participate. This study is open to people with all kinds of experiences with mental health and well-being.

Our goal is to gather insights into factors that promote Veteran health and well-being and to inform how existing programs and services can better support positive, lasting change for Veterans. The study results will support the development of resources to foster flourishing and thriving among Veterans in all aspects of their lives.



The study consists of filling out a one-time survey that should take about 60 minutes to complete.

IF YOU ARE
INTERESTED IN
PARTICIPATING IN
THIS STUDY, VISIT

atlasveterans.ca/thriving-study



NEW STUDY

Veteran and Veteran Family sleep health

Atlas has launched a new study to learn about sleep health in Veterans and Family members of Veterans. Getting good, quality sleep is critical for so many different parts of health and well-being. Many people experience issues related to sleep and Veterans and their Family members may be particularly susceptible to sleep challenges. Both mental and physical health can influence and be influenced by sleep patterns and behaviours. While we may know a lot about sleep in general, we don't particularly know much about Veterans' sleep health and we know even less about Family members' experiences.

Having heard from Veterans and Family members, we know that there are sleep experiences and challenges that are specific

to being a Veteran or being a Family member of a Veteran. As a first step into understanding sleep health in Veterans and Family members in Canada, Atlas is undertaking a study that aims to understand what sleep quality and behaviours and sleep health look like in the Canadian Veteran and Family member population and understand how Veterans and Family members support their sleep.

This evidence can help us design resources that support Veterans and Family members, inform policy recommendations, and lead to additional work on sleep health in the Canadian Veteran population.

IF YOU ARE INTERESTED
IN PARTICIPATING
IN THIS STUDY, VISIT

atlasveterans.ca/sleep-experiences-study



Honouring excellence in research

In recognition of outstanding contributions to research, SueEllen MacGowan from the Clinical Research Team was awarded runner-up of the Genevieve MacKinnon Master's Award, given to the top-ranked master's student within The Royal's Institute of Mental Health Research. This award was granted to SueEllen during The Royal's Research Trainee Awards Ceremony in February. Congratulations, SueEllen!

Research funding proposal submissions highlight deepening interest in Veteran and Family research

The Research Partnerships team was thrilled to receive a wealth of compelling and high-calibre submissions for the 2025-26 research request for proposal cycle. This year's proposals showcased a deep commitment to advancing knowledge in key areas critical to the well-being of Veterans and their Families. The submissions focused on three topics: the impact of Family involvement in Veteran care, the mental health status of former RCMP members, and the lived experiences of single-parent Veteran Families.

The strength and depth of these proposals highlight the growing dedication within the research community to exploring the unique challenges faced by Veterans and their support networks. After a rigorous review process, which includes an external scientific review committee, we are pleased to announce the projects that have been selected to receive funding.

Integrating Families into Veteran care pathways: Enhancing support for improved Veteran well-being

Dr. Jenny Liu, Head of Scientific Development and Knowledge Mobilization at the MacDonald Franklin OSI Research Centre and Adjunct Research Professor in the Department of Psychiatry, Schulich School of Medicine, Western University, aims to address critical gaps in Family-inclusive care pathways for Veterans by examining barriers, engaging stakeholders and developing evidence-based solutions.



Post-service life: Mental health and well-being of Royal Canadian Mounted Police Veterans

Dr. R. Nicholas Carleton, Professor at the University of Regina, within the Department of Psychology, will collect self-reported mental health data from former or retired RCMP members through a detailed online survey assessing the prevalence of mental health disorders, exposures to potentially psychologically traumatic events, social supports and access to care. The aim is to examine sociodemographic differences and compare results with data from current and new RCMP members and other public safety personnel to better understand mental health across the RCMP service continuum.

Experiences of single-parent Veteran Families

Dr. Deborah Norris, Professor at Mount Saint Vincent University within the department of Family Studies and Gerontology, aims to synthesize existing research and describe the experiences of single-parent CAF Veterans, with a focus on how military life, resilience, mental health and diverse identities shape their post-service Family experiences. The project also seeks to identify gaps in support systems during reintegration and develop recommendations to inform relevant policies and programs.

New research publications from the Clinical Research team

Exploring the impact of biological sex on intrinsic connectivity networks in PTSD: A data-driven approach

Progress in Neuro-Psychopharmacology & Biological Psychiatry

Jonathan Lieberman, BSc, PhD student in Neuroscience, and Dr. Andrew Nicholson, Director, Clinical Research at Atlas, are among the co-authors for a research article highlighting various new findings:

- Differences in brain connectivity patterns tied to posttraumatic stress disorder (PTSD) and biological sex
- Machine learning models accurately predicting PTSD diagnosis and biological sex
- Identification of neurological markers unique to males and females with PTSD

Exploring the dissociative subtype of PTSD: The role of early life trauma, cortisol, and inflammatory profiles

Psychoneuroendocrinology

This publication was a collaboration between Dr. Andrew Nicholson and various scientists at The Royal's Institute of Mental Health Research, including Drs. Rébecca Robillard, Natalia Jaworska, Clifford Cassidy, Jakov Shlik, Zachary Kaminsky and Robyn McQuaid.

The research found:

- Individuals with dissociative PTSD had more severe symptoms.
- They also have higher levels of cortisol (a stress hormone) in both the morning and evening.
- Worse symptoms are linked to lower cortisol levels in individuals with non-dissociative PTSD.
- Higher depression symptoms were linked to increased inflammation levels in individuals with dissociative PTSD.
- These insights could pave the way for personalized treatments targeting dissociative PTSD.

IN CASE YOU MISSED IT

Warrior Care Conference

Atlas team members presented on February 3, 2025 at the **Warrior Care Conference 2025: Warrior Care in the 21st Century**, held virtually February 5–6, 2025.

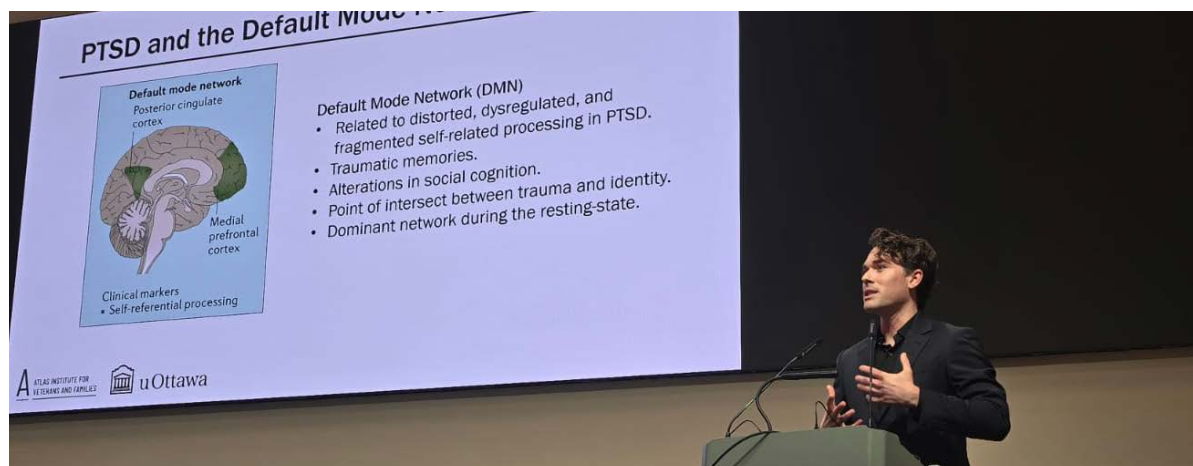
Dr. Sara Rodrigues, Director, Applied Research presented on the Atlas Institute's ongoing research program dedicated to advancing the evidence on the well-being of women Veterans.

Dr. Andrew Nicholson, Director, Clinical Research presented insights on healing the brain in the aftermath of trauma, including neurofeedback's potential in treating PTSD.

Finally, Fardous Hosseiny, President and CEO, discussed moral injury, how it is similar to PTSD, its impacts and how we can better support Veterans and Families to prevent and navigate moral injury. The Warrior Care Conference is a platform to share advancements in the care of service members who are ill or who have been injured.

This year's agenda covered diverse topics such as chronic pain, casualty care, traumatic brain injury, musculoskeletal conditions and health promotion. Atlas was honoured to have the opportunity to contribute to these important discussions alongside experts whose work supports Veteran and Family well-being.

CIMVHR Forum 2024



Atlas showcased groundbreaking research at the **Canadian Institute for Military and Veteran Health Research (CIMVHR) Forum 2024** on topics such as:

- PTSD treatment and neurobiological insights
- The impact of biological sex on intrinsic connectivity networks in PTSD
- Aging Veterans and the associations between social support and depressive symptoms
- Women Veterans research
- Lived expertise engagement within a co-Principal Investigator research model

CIMVHR Forum 2024 included presentations from Clinical Research team members on findings that could transform approaches to PTSD care and recovery. Dr. Andrew Nicholson, Director, Clinical Research, presented novel neurofeedback treatment avenues for PTSD

as part of a symposium. His research demonstrated that neurofeedback successfully regulated and restored alpha brain rhythms – patterns of brain activity associated with a relaxed or focused state – with PTSD severity significantly decreasing in the experimental group and a 60% remission rate.

In his podium presentation, Jonathan Lieberman discussed research underscoring biological sex as a key variable in PTSD treatment. Jonathan was also honoured with the Public Safety Personnel Mental Health Research Award from the Canadian Institute for Public Safety Research and Treatment. As CIMVHR is dedicated to improving the health and well-being of Veterans and active military personnel, these presentations have important implications for advancing PTSD treatment in military and Veteran populations, ultimately benefiting service members and their Families.

Study Notes

Treating PTSD with brain training: Exploring the optimal approach

We're excited to introduce our new *Study Notes* series, providing plain-language summaries of research projects led or supported by Atlas. Every *Study Notes* summary includes highlights of the research and key takeaways for Veterans, Families and those who work with them.

Our first *Study Notes* resource outlines research findings on brain regions service providers can target with neurofeedback brain training to enable people with PTSD to manage their symptoms. The study looked at using functional

MRI (fMRI)-neurofeedback to help people choose the strategies that work best for them to regulate activity in the parts of the brain associated with trauma.

READ THE
STUDY NOTES AT:

atlasveterans.ca/study-notes-tale-of-two-targets

IN CASE YOU MISSED IT

Real-time Functional Imaging and Neurofeedback Meeting

At the 2024 Real-time Functional Imaging and Neurofeedback Meeting held in Germany, Dr. Andrew Nicholson chaired a symposium addressing the neural correlates of psychiatric disorders such as major depressive disorder, substance use disorder and PTSD. Real-time functional MRI (rt-fMRI) neurofeedback was presented as a method for retraining brain activity and promoting neuroplasticity (or the brain's capacity for adaptability forming new

neural connections and strengthening existing ones). Rt-fMRI neurofeedback is a non-invasive approach that teaches patients to modify neural activity and helps with self-regulation of areas of the brain associated with PTSD symptoms. These advancements in neurofeedback and non-invasive brain retraining hold significant promise for Veterans and their Families, offering innovative treatments for PTSD and other psychiatric conditions commonly experienced in military populations, thereby improving long-term mental health and resilience.

GET INVOLVED IN RESEARCH AT THE ATLAS INSTITUTE

Recruiting studies

Interested in participating in research? Research participation helps expand our understanding of Veteran and Family mental health and well-being, and can support the improvement of treatments, programs, and services. The Atlas Institute leads and supports research projects—new opportunities to participate open up regularly. Check out a few of the studies currently looking for participants.

Led by Atlas


- Women's well-being in post-service life: Evaluating the psychological, social, and systemic factors associated with transition from the Canadian military
- Examining the association between unmet health and well-being needs and mental health for women Veterans of the CAF and RCMP

→ To find out if you're eligible to participate, please visit: atlasveterans.ca/women-veteran-research

- Thriving after service: The prevalence and predictors of flourishing among military and RCMP Veterans
- An exploratory study into the sleep health of Canadian Veterans and their Families

→ To find out if you're eligible to participate, please visit: atlasveterans.ca/get-involved

- Self-regulation of brain activity using multiple sessions of real-time fMRI neurofeedback to reduce PTSD symptoms

→ To find out if you're eligible to participate, please contact:  Jill.Horning@theroyal.ca

- The neural correlates of minority stress: Uncovering systemic oppression related to the intersectionality of identity with neuroimaging and machine learning

→ To find out if you're eligible to participate, please visit: redcap.link/minoritystresscontact

Supported by Atlas

- [Studying the effectiveness and implementation of Sudarshan Kriya Yoga for Canadian Veterans with PTSD](#)
- [Brain measures linked to hyperarousal in PTSD using MRI imaging](#)

→ [Learn more about recruiting research projects](#)

Other ways to get involved

The Atlas Institute recognizes the importance of including different experiences and perspectives in our various projects. We believe the voices of our lived experience community are vitally important to the work we do and invite you to participate in our projects, including research projects, through surveys, panels, webinars and town hall events and more.

→ [See our current opportunities](#)

Note: Bolded names indicate Atlas Institute researchers and staff.

posttraumatic stress disorder

mental health

Exploring the dissociative subtype of PTSD: The role of early-life trauma, cortisol, and inflammatory profiles

2025-02-17

Jarkas DA, Robillard R, Malenfant CR, Richards C, Lanthier M, Beaurepaire C, **Nicholson AA**, Jaworska N, Cassidy CM, Shlik J, Kaminsky Z, McQuaid RJ

Psychoneuroendocrinology

→ [Read the paper](#)

mental health

Minority stress and structural stigma predict well-being in European LGBTQ+ parents

2025-01-11

Siegel M, Steyrl D, Goldberg AE, **Nicholson AA**, Zemp M

Journal of Marriage and Family

→ [Read the paper](#)

posttraumatic stress disorder

brain imaging

Exploring the impact of biological sex on intrinsic connectivity networks in PTSD: A data-driven approach

2025-01-10

Nicholson AA, Lieberman JM, Hosseini-Kamkar N, Eckstrand K, Rabellino D, Kearney B, Steyrl D, Narikuzhy S, Densmore M, Th  berge J, **Hosseiny F**

Progress in Neuro-Psychopharmacology and Biological Psychiatry

→ [Read the paper](#)

mental health

moral injury

Exploring the association between moral injury and posttraumatic stress symptoms among Canadian public safety personnel

2024-12-16

D'Alessandro-Lowe AM, Scott AM, Patel H, Easterbrook B, Ritchie K, Brown A, Pichtikova M, Karram M, Sullo E, Mirabelli J, Schielke H, Malain A, O'Connor C, Remer S, Lanius R, McCabe RE, McKinnon MC

Journal of Traumatic Stress

→ [Read the paper](#)

mental health

Usability and agreement of the SWIFT-Active Screener systematic review support tool: Preliminary evaluation for use in clinical research

2024-11-21

Liu JJW, Ein N, Gervasio J, Easterbrook B, Nouri MS, Nazarov A, **Richardson JD**

PLoS One

→ [Read the paper](#)

mental health

Building capacity to care for Veterans and families: Results of a mental health service provider needs assessment

2024-11-21

Notarianni MA, Tracey S, Mulligan A, McFadden T, **Librado A**

Journal of Military, Veteran and Family Health

→ [Read the paper](#)

mental health

We have spent time, money, and effort making self-help digital mental health interventions: Is anyone going to come to the party?

2024-09-19

Fitzpatrick S, Crenshaw A, Donkin V, Collins A, Xiang A, Earle E, Goenka K, Varma S, Bushe J, **McFadden T**, **Librado A**, Monson C

Journal of Medical Internet Research

→ [Read the paper](#)

posttraumatic stress disorder

brain imaging

Reflecting on JMVFH's most popular article of 2020: 'Regulating posttraumatic stress disorder symptoms with neurofeedback: Regaining control of the mind'

2024-09-10

Nicholson AA, Ros T, Jetly R, **Hosseiny F**, Lanius RA

Journal of Military, Veteran and Family Health

→ [Read the paper](#)



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