

STUDY NOTES

THE IMPACT OF INTEGRATIVE HEALTH TREATMENTS FOR VETERANS AND THEIR FAMILIES LIVING WITH POSTTRAUMATIC STRESS DISORDER

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HIGHLIGHTS

WHAT ARE STUDY NOTES?

Study Notes provide a plain-language summary of a research project led or supported by the Atlas Institute for Veterans and Families. The aim is to ensure that Veterans and Families can better access and understand emerging research and key findings.

A single research study cannot give us all the answers, but every well-conducted study gives us a piece of the puzzle.

- The review looked at whether complementary and integrative health (CIH) treatments help improve mental health and quality of life for Veterans with posttraumatic stress disorder (PTSD) in Canada, the United States, the United Kingdom, Australia and New Zealand.
- Evidence was included from 40 studies exploring 13 types of treatments.
- Meditation has the strongest and most consistent evidence for improving PTSD and may also reduce depression and anxiety in Veterans with PTSD.
- Treatments such as Sudarshan Kriya Yoga, emotional freedom techniques (EFT) and healing touch show promising improvement in PTSD symptoms but require more research.
- Mantram repetition and mindfulness-based stress reduction (MBSR) may help reduce PTSD and depression symptoms in Veterans, even if the average improvement is below what is clinically meaningful.
- Other CIH treatments such as music therapy and service animals have weaker or uncertain evidence, so more research is needed to better understand whether they are effective.



WHY IS THE STUDY IMPORTANT?

COMPLEMENTARY AND INTEGRATIVE HEALTH TREATMENTS

Treatments such as meditation, yoga, herbal supplements or natural health products, and acupuncture that are used alongside conventional treatments to improve health and well-being.

Veterans experience posttraumatic stress disorder (PTSD) more often than civilians. PTSD in Veterans often has distinct military-related causes (e.g. combat trauma, military sexual trauma). This means that treatments may need to be adapted for them.

Many Veterans use **complementary and integrative health (CIH) treatments** such as yoga, massage or pet therapies, but there is a lack of high-quality research showing how well these types of treatments work for Veterans specifically.

Reviewing research specifically done with Veterans can help decision makers such as health care providers develop treatments that work best for Veterans and their Families.



WHAT DID THE STUDY AIM TO FIND OUT?

The study aimed to review all current evidence on CIH treatments to examine how well they work to improve mental health and quality of life for Veterans and their Families living with PTSD.



WHAT DID THE STUDY DISCOVER?

Out of 3,565 studies found, 40 were included and reviewed, including 26 **randomized controlled trials** and 14 **observational studies**.

The included studies tested 13 different CIH interventions, including meditation, mantram repetition, breathing-based interventions [e.g. Sudarshan Kriya Yoga (SKY)], mindfulness-based stress reduction (MBSR), emotional freedom techniques (EFT), music therapy, service animals and others.

All but two of the studies came from the United States. The two remaining studies were from Australia.

There were a total of 3,321 participants across the studies. Most of the participants were men older than 50 years of age and were white or Caucasian.

No studies included Family members and none specifically included Royal Canadian Mounted Police Veterans.

RANDOMIZED CONTROLLED TRIAL

A study in which participants are randomly assigned to different groups, so researchers can see if a specific treatment improves outcomes for those who received it compared to those who did not receive it.

OBSERVATIONAL STUDY

A study in which researchers collect data on participants without randomly assigning them to a treatment, to see whether a specific treatment works.

BIAS

Factors that can influence the results of a study, leading to faulty conclusions. Bias can come from many sources such as how the study was designed, how participants are chosen or how the results are measured.

RANDOMIZATION

The process of allocating participants to different groups using chance. It helps make sure that the groups being compared are similar.

BLINDING

The process of ensuring that participants in the study do not know which group they are in (for example, whether they are receiving the real treatment or the comparison one). In some studies, even the researchers themselves might not know until after the study is finished. This helps prevent people's expectations from affecting the results.

Most of the studies had a high risk of **bias**. Some of the more common reasons for bias were related to how the study was done, such as **randomization** or **blinding** processes.

The following CIH treatments show stronger or more promising evidence (i.e. meaningful clinical improvement):

- **MEDITATION:** Moderate-quality evidence shows that it can meaningfully improve PTSD symptoms and may also reduce depression and anxiety to some degree.
- **BREATHING-BASED (e.g. SKY):** Moderate-quality evidence suggests it can meaningfully improve PTSD and depression.
- **EFT:** One small moderate-quality study suggests it can meaningfully improve PTSD, depression and anxiety.
- **HEALING TOUCH:** Moderate-quality evidence from one study shows meaningful improvement in PTSD.

These CIH treatments show small improvements (i.e. not considered clinically meaningful):

- **MANTRAM REPETITION:** High- to moderate-quality evidence shows small improvements in PTSD and depression.
- **MBSR:** Moderate-quality evidence shows small improvements in PTSD symptoms and depression.
- **MUSIC THERAPY:** Moderate-quality evidence shows improvements in PTSD and depression, with low-quality evidence showing no change in quality of life.
- **SERVICE ANIMALS:** Moderate-quality evidence shows small improvements in PTSD.

There is uncertain and/or low-quality evidence for the following CIH treatments:

- **ANTIOXIDANT THERAPY (N-acetylcysteine):** Low- to moderate-quality evidence showing small improvements in PTSD and depression, depending on measures used.
- **ANIMAL-ASSISTED INTERVENTIONS (e.g. equine therapy):** Uncertain effects on PTSD, depression, anxiety or quality of life.
- **SPIRITUALITY:** Low-quality evidence from one study showing no effect on PTSD symptoms.
- **MIXED MEDITATION:** Uncertain whether treatment can improve PTSD due to very low quality of evidence.
- **MINDFUL MOVEMENT (yoga):** Uncertain whether treatment can improve depression, anxiety or quality of life in Veterans with PTSD due to very low-quality evidence.



HOW WAS THIS STUDY CONDUCTED?

RAPID SYSTEMATIC REVIEW

A type of literature review that aims to provide a quick and thorough summary of the available evidence on a practice- or policy-relevant question.

META-ANALYSIS

A type of research that combines the results of many individual studies to get a clearer, more reliable answer to a specific question.

GRADE APPROACH

A tool used by researchers to assess how trustworthy research findings are. Ratings range from high to very low based on quality (is the study well done), consistency (do other studies show similar results), directness (does the study answer the question), precision (are the results clear) and bias (could the results be skewed due to how the study was done or reported).

The authors conducted a **rapid systematic review** and **meta-analysis**.

To do this, the researchers looked at all available studies from 2013 to December 2023 that tested CIH treatments for Veterans or their Family members with PTSD in Five Eyes countries (Canada, United States, United Kingdom, Australia and New Zealand).

Studies were included if they were large enough, tested a type of CIH treatment and measured changes in PTSD, depression, anxiety, quality of life, or cost. In addition, studies were only included if they involved all Veterans, were primarily made up of Veterans or reported separate results for Veterans. The studies had to use experimental or observational methods to assess specific outcomes.

The researchers searched three major research databases and also checked references from other relevant articles.

Each study was reviewed to assess outcomes and how well it was conducted (i.e. its methodological quality). Data was combined where possible to measure the overall effect of each treatment. In addition, the researchers rated the strength of evidence using the **GRADE approach**.



WHAT ARE SOME STRENGTHS AND LIMITATIONS OF THE STUDY?

The following are strengths of the study:

- This was the first study to combine evidence on multiple CIH treatments for PTSD, depression, anxiety and quality of life for Veterans.
- The research team included a Veteran partner to ensure this perspective was accounted for during key stages of the project.
- A comprehensive search strategy was used with no language restrictions and clear criteria for which studies to include or exclude.
- The study assessed risk of bias in individual studies and used the GRADE approach to evaluate confidence in the findings.

There are also some limitations:

- Some studies may have been missed as the team restricted their search in various ways.
- The study had a broad range of CIH treatments and unclear definitions could have affected how evidence was grouped and analyzed.
- Most studies involved mostly older, white and male United States Veterans, which may limit how well the results apply to other Veteran groups.
- Studies did not generally report results on key sociodemographic variables such as sex, gender or race/ethnicity, which can further affect the application of findings to other groups.



WHAT ARE THE IMPLICATIONS OF THIS STUDY?

For Veterans

Veterans may benefit from exploring certain CIH interventions like meditation, EFT and breathing techniques, based on evidence from the United States and Australia. Any treatments should be discussed with health care providers to ensure safe and coordinated care.

For service providers

Certain CIH treatments such as meditation, EFT and SKY could be offered as part of PTSD treatment for Veterans, as evidence suggests some meaningful improvements. Mantram repetition and MBSR could also be considered. Other CIH treatments with limited evidence, like music therapy and service animals, may have potential benefits as complementary options.

For researchers

There is a need for more high-quality experimental studies like RCTs for interventions with promising but limited evidence (e.g. EFT, SKY). Future research should include diverse populations to improve generalizability. Studies should include Family members to understand broader impacts. Clearer definitions and standardized categories for CIH treatments would improve consistency across studies and strengthen future research.

For policy makers

There is little research from Canada on the topic of CIH treatments. This is worrying for a number of reasons. Canadian Veterans have high rates of mental health challenges, which can have serious impacts, and many Veterans use CIH treatments. The lack of studies may be because there is not enough research capacity or interest in Veterans' mental health, or both. More investment is needed in mental health research, especially in building the infrastructure to run high-quality clinical trials.



LIST OF CONTRIBUTORS

Please note the names listed include only those who have explicitly consented to being acknowledged as a contributor.

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APPROVAL: Vahid Ashoorionⁱ, Kieran Cooleyⁱⁱ, H. Le Scelleur, Sarah Selvaduraiⁱ, Dr. Abhimanyu Sudⁱ

EDITING: Vahid Ashoorionⁱ, Kieran Cooleyⁱⁱ, Krystle Kung, Sarah Selvaduraiⁱ, Dr. Abhimanyu Sudⁱ

RESEARCH AND ANALYTICS: Vahid Ashoorionⁱ, Kieran Cooleyⁱⁱ, H. Le Scelleur, Sarah Selvaduraiⁱ, Dr. Abhimanyu Sudⁱ

SUPERVISION: Cara Kane

WRITING: Vahid Ashoorionⁱ, Victoria Carmichael, Sarah Selvaduraiⁱ, Dr. Abhimanyu Sudⁱ

- i. *Humber River Health*
- ii. *Canadian College of Naturopathic Medicine*



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