

Putting Research to Work for Military Families



Focus:
Multiple
Branches

The Interactive Role of Exercise and Sleep on Veteran Recovery From Symptoms of PTSD

Babson, K. A., Heinz, A. J., Ramirez, G., Puckett, M., Irons, J. G., Bonn-Miller, M. O., & Woodward, S. H. (2015). The interactive role of exercise and sleep on veteran recovery from symptoms of PTSD. *Mental Health and Physical Activity*, 8, 15-20. doi:10.1016/j.mhpa.2014.12.002

SUMMARY: Veterans in a residential posttraumatic stress disorder (PTSD) treatment program were evaluated to examine the relationship between physical activity and PTSD symptoms. Among Veterans with poor sleep at the beginning of the program, higher levels of exercise were related to lower hyper-arousal symptoms at program discharge.

KEY FINDINGS:

- Veterans who participated in a cycling program reported lower depression at both intake and discharge than nonparticipants.
- Levels of physical exercise were significantly related to lower levels of hyper-arousal (e.g., anxiety, increased startle response) at discharge among Veterans.
- The relationship between exercise and lower hyper-arousal was strongest for Veterans who cycled a moderate amount.

IMPLICATIONS FOR PROGRAMS:

Programs could:

- Partner with therapeutic recreation services to support wellness, including cycling and other physical exercise options for Service members
- Encourage Service members to do wellness assessments, urging consideration of the links between physical and mental wellbeing
- Provide classes on sleep hygiene, relaxation, and physical activity for Service members and their families

IMPLICATIONS FOR POLICIES:

Policies could:

- Recommend partnerships among military-based and community-based programs to help military families feel more comfortable participating in leisure activities that are not on installations
- Encourage the implementation of routine mental health assessments that specifically address levels of physical activity and kinds of exercise activities
- Recommend integrating physical health education into existing service delivery systems for military families

This product is the result of a partnership funded by the Department of Defense between the Office of Military Community and Family Policy and the USDA's National Institute of Food and Agriculture through a grant/cooperative agreement with The University of Minnesota.



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METHODS

- Veterans completed self-report measures of depression, PTSD, and sleep quality.
- Veterans were issued a bicycle, and mileage was measured via cyclometer.
- Statistical analyses measured differences between participants and nonparticipants both at program intake and discharge.

PARTICIPANTS

- Two hundred seventeen Veterans in a 60-90 day VA residential program for PTSD participated in the study.
- All participants were men and 61% were White, 18% were Black, and 11% were Latino/Latina.
- Cyclists were categorized in three groups based on mileage completed, including 176 non-cyclists, 20 moderate mileage (1-60 total miles cycled), and 21 high mileage (60 miles or more).

LIMITATIONS

- The number of Veterans in the moderate and high mileage groups was small.
- Veterans were not randomly assigned to condition; reported benefits of exercise may be attributable to group selection effects.
- Cycling was done in groups, so the reported benefits of exercise may be partly attributable to social support.

AVENUES FOR FUTURE RESEARCH

Future research could:

- Replicate the study with larger groups and include other types of exercise
- Collect additional data from participants who are randomly assigned to instructor-led mild, moderate, and high intensity exercise groups
- Assess exercise frequency and intensity to determine the impact of intermittent vs. regular physical exercise among Service members

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