



Key Points Summary

Bolzenius, J. D., Velez, C. S., Lewis, J. D., Bigler, E. D., Wade, B. S., Cooper, D. B., Kennedy, J. E., Reid, M. W., Ritter, J. L., York, G. E., & Tate, D. F. (2018). Diffusion imaging findings in US service members with mild traumatic brain injury and posttraumatic stress disorder. *Journal of Head Trauma Rehabilitation*, 1. doi:10.1097/htr.0000000000000378

Primary Question this Study Addresses

Can diffusion tensor imaging differentiate white matter microstructure between service members with mild traumatic brain injury (mTBI) compared to service members with posttraumatic stress disorder (PTSD), mTBI+PTSD, and an orthopedic injury comparison group?

Study Findings That Add to Our Knowledge

Service members with PTSD displayed lower white matter integrity compared to the other three groups, particularly in the right hemisphere. Service members in the mTBI group did not exhibit any notable pattern of white matter abnormalities.

Lower resolution scan sequences can successfully detect brain abnormalities associated with post-deployment PTSD.

How Study Evidence Might Be Used in Practice

Ongoing PTSD symptoms in service members are associated with differences in white matter diffusion that are better detected than mTBI abnormalities. Clinicians should be aware that lower resolution scan sequences are sensitive to post-acute abnormalities associated with PTSD, particularly in the right hemisphere.

For more information on PTSD, visit...

 [Resource](#)

To access the study abstract, click here:

 [Abstract](#)

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