

Self-reported resiliency in military healthcare beneficiaries with cognitive complaints: Exploring strategies for coping with adversity

Tsui, Megan M.^{1,2,4}, Hartman, Madeline, H.^{1,2,5}, Law, Wendy A.², Sullivan, Katherine W.², & French, Louis M.^{1,2,3,5}

Henry M. Jackson Foundation for the Advancement of Military Medicine¹; National Intrepid Center of Excellence, Walter Reed National Military Medical Center²; Defense Veterans and Brain Injury Center³; The Center for Rehabilitation Sciences Research, Uniformed Services University of the Health Sciences, Bethesda, MD⁴; Center for Neuroscience and Regenerative Medicine⁵

BACKGROUND

- Resilience has been operationally defined as the absence of clinically significant symptoms in trauma-exposed individuals.⁴
- Self-reported resilience has been associated with lower psychological symptom reporting and improved post-injury outcomes in non-military patients with traumatic brain injury (TBI).^{2,3}
- The Response to Stressful Experiences Scale (RSES) self-report measure was originally developed and validated in a general (nonclinical) military personnel sample to evaluate individual differences in cognitive, emotional, and behavioral responses to stressful life events.¹
- This project is a descriptive study examining resiliency in relation to TBI status (TBI+/-) and sex (male/female) in a mixed clinical sample.

STUDY DESIGN



90%
Service Members



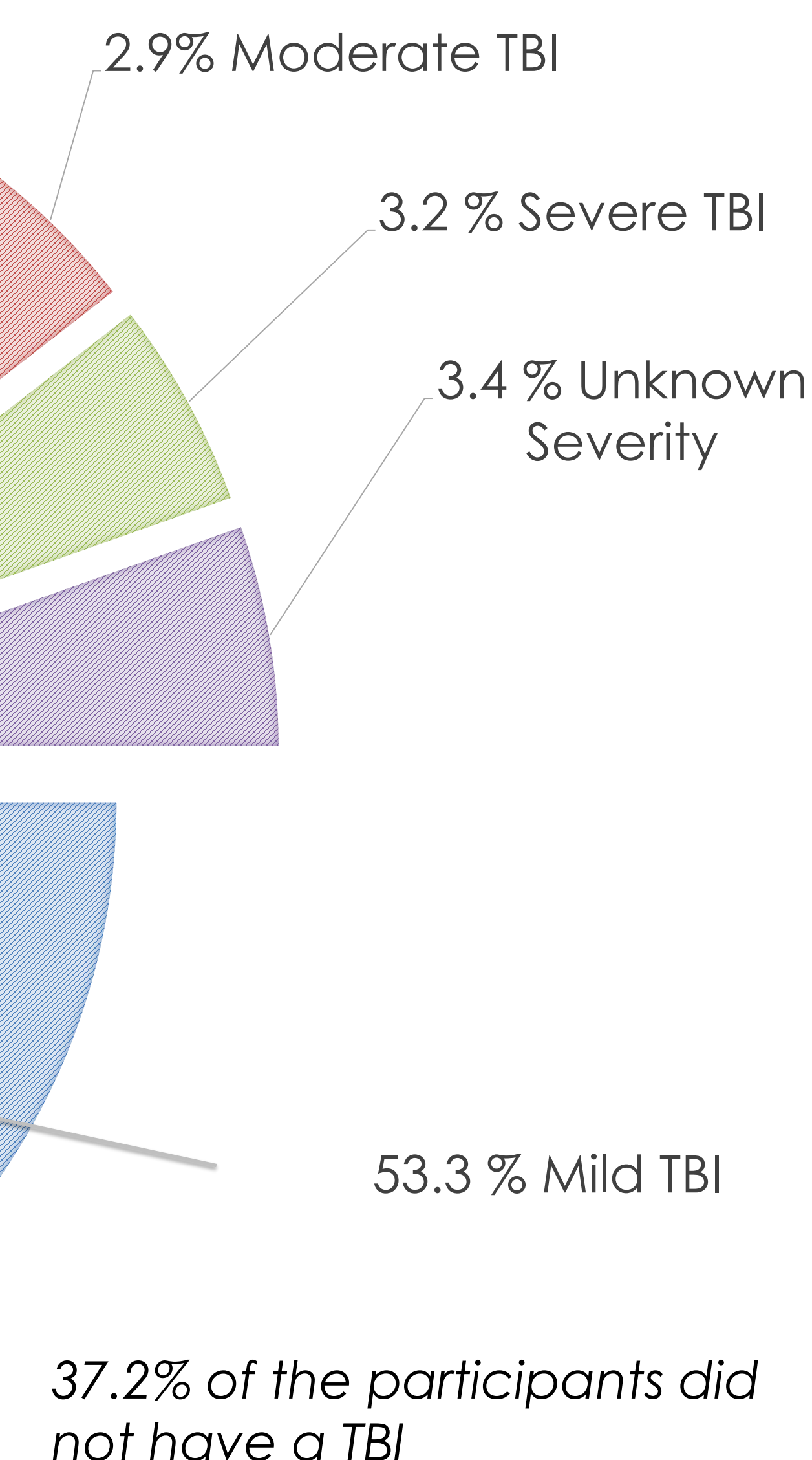
74.3%
Males



62.8%
TBI +

411 Participants:

- Completed the RSES
- <60 years of age
- Military healthcare beneficiaries reporting cognitive complaints and receiving care in a rehabilitation clinic at National Intrepid Center of Excellence (NICoE) Brain Fitness Center at Walter Reed National Military Medical Center.



THE RESPONSE TO STRESSFUL EXPERIENCES SCALE (RSES)

- An exploratory analysis was conducted using Maximum Likelihood Factor Analysis with Promax rotation (ML/Pro) to examine the underlying RSES components associated with a mixed military clinical sample reporting subjective cognitive concerns. Between group differences in overall RSES and ML/Pro results were examined.
- ML/Pro analysis produced a three-factor solution (eigenvalues>1.0), respectively explaining 45.43%, 9.24%, and 6.44% of the variance.
- The resultant Pattern Matrix was interpreted as reflecting three conceptual approaches to coping with adversity.

LEARNING ACTIVE COPING FAITH

LEARNING	ACTIVE COPING	FAITH
understanding adversity	problem-solving actions and coping skills	spiritual engagement to overcome stressors

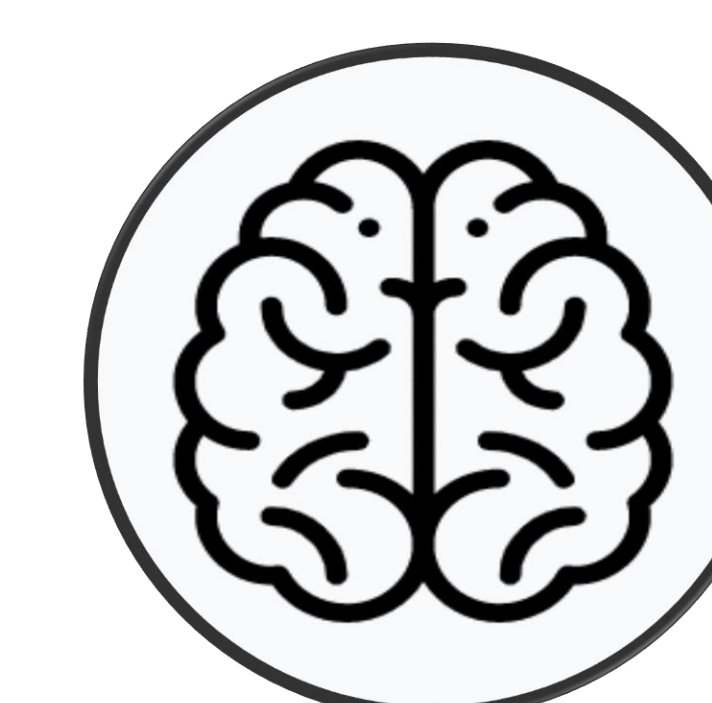
- | | | |
|--|--|--|
| 1. ...take action to fix things. | 7. calm and comfort myself. | |
| 2. not give up trying to solve problems I think I can solve. | 8. try to "recharge" myself before I have to face the next challenge. | |
| 3. ...find a way to do what's necessary to carry on. | 12. put things in perspective and realize I will have times of joy and times of sadness. | |
| 5. face my fears. | 13. be good at determining which situations are changeable and which are not. | |
| 6. find opportunity for growth. | 14. find meaning from the experience. | 4. pray or meditate. |
| 9. see it as a challenge that will make me better. | 15. find strength in the meaning, purpose, or mission of my life. | 20. lean on my faith in God or a higher power. |
| 10. ...look at the problem in a number of ways. | 16. know I will bounce back. | |
| 11. ...look for creative solutions to the problem. | 18. learn important and useful life lessons. | |
| 17. expect that I can handle it. | 19. understand that bad things can happen to anyone, not just me. | |
| | 21. draw upon lessons learned from failures and past mistakes. | |
| | 22. practice ways to handle it better next time | |

- A 22-item, 5-point Likert scale from *Not at all like me (0)* to *Exactly like me (4)*
- Subjects rated how well each of the statements best described them during and after life's most stressful events.
- Higher scores reflect greater overall resiliency, and levels of resiliency are as follows: 71-88=high resiliency, 50-70=moderate resiliency, 0-49=low resiliency.

RESULTS

- Between-group comparisons on the RSES were evaluated with GLM Univariate analyses using SPSS v24.
- All groups endorsed moderate overall resilience (RSES Total score: TBI+ = 61, TBI- = 60; male = 61, female = 58), with no significant differences for TBI status ($F_{3,1} = .054, p>.05$), sex ($F_{3,1} = 2.837, p>.05$), or their interaction ($F_{3,1} = 1.47, P>.05$).
- Between group differences were obtained on the three factors.

Figure 2. TBI & RSES Factor Component Scores



	TBI +	TBI -
Faith (n.s.)	1.89	2.15
Active (TBI+ > TBI-)	3.16	2.9
Learning (n.s.)	2.85	2.91

Figure 3. Gender & RSES Factor Component Scores



	Females	Males
Faith (F > M)	2.29	1.87
Active (M > F)	2.79	3.08
Learning (n.s.)	2.75	2.91

SIGNIFICANCE

- Examination of RSES subcomponents identified different approaches for coping with adversity:
 - Those with TBI utilized greater active coping strategies versus those without TBI.
 - Men utilized greater active coping strategies versus women.
 - Women utilized greater faith-based coping skills versus men.
- Interventions designed to increase preferred resiliency approaches may bolster outcomes in this patient population.

References

- Johnson, D. C., Polusny, M. A., Erbes, C. R., King, D., King, L., Litz, B. T., ... Southwick, S. M. (2011). Development and Initial Validation of the Response to Stressful Experiences Scale. *Military Medicine*, 176(2), 161-169.
- Sima, A. P., Yu, H., Marwitz, J. H., Kolakowsky-Hayner, S. A., Felix, E., Bergquist, T. F., ... Johnson-Greene, D. E. (2019). Outcome Prediction From Post-Injury Resilience in Patients With TBI. *Rehabilitation Psychology*, 64(3), 320-326.
- Vos, L., Poritz, J. M., Ngan, E., Leon-Novelo, L., & Sherer, M. (2019). The relationship between resilience, emotional distress, and community participation outcomes following traumatic brain injury. *Brain Injury*.
- Wingo, A. P., Wrenn, G., Pelletier, T., Gutman, A. R., Bradley, B., & Ressler, K. J. (2010). Moderating effects of resilience on depression in individuals with a history of childhood abuse or trauma exposure. *Journal of affective disorders*, 126(3), 411-414.