Trajectories of PTSD Symptoms and Predictive Factors of Trajectory Membership: A Step Toward Identifying Veterans at Risk

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The article “Latent Trajectories of Trauma Symptoms and Resilience: The 3-Year Longitudinal Prospective USPER Study of Danish Veterans Deployed in Afghanistan” by Andersen and colleagues examines trajectories of posttraumatic stress disorder (PTSD) symptoms from predeployment to 2.5 years postdeployment and the predictive factors of trajectory membership among a sample of Danish soldiers deployed to Afghanistan. Iraq and Afghanistan veterans face a number of psychological, physical, and social challenges perdeployment and postdeployment. One of the most prevalent mental health diagnoses seen in these veterans is PTSD. As the authors note, identified heterogeneous factors are important. For instance, a recent study found that PTSD can be prevented by early provision of modified versions of prolonged exposure. Further, without knowledge of PTSD symptom trajectories, screeners may not even recommend treatment or appropriately timed follow-up screenings. Of note, Veterans Health Administration, Department of Defense guidelines recommend that veterans be reassessed for PTSD 3 to 6 months after their return from deployment; however, the assessments are still based on diagnostic screenings, and there is no process for identification of those at greatest risk and, thus, most in need of continued monitoring. Other studies have found that, if PTSD is present at 3 months posttrauma, it is likely to remain so without intervention. However, in this sample, veterans were not stable 3 months after their return home. Andersen and colleagues assessed the index trauma and discovered that, for those with PTSD 2.5 years after their return home, the index trauma was most likely postdeployment. As the authors note, the PTSD at 2.5 years may be in response to this intervening index trauma rather than deployment trauma. Again, this presents an important area for continued assessment.

Research suggests that mathematical predictive models are informative, but the field is not yet at a developmental stage to prospectively predict an individual’s likely response and trajectory given certain experiences and predispositions. Of course, identifying the probable symptom trajectories of veterans by assessing current symptom presentation alone is not feasible. The consideration of predictive factors is important. For instance, a recent study found that genetic risk predicted PTSD posttrauma and that an early intervention seemed to mitigate genetic risk. There is an urgent push to identify biomarkers of PTSD, which would help toward detecting risk factors. By assessing predeployment vulnerabilities and deployment and postdeployment stressors as possible predictors of symptom fluctuation and late-onset PTSD symptoms, Andersen and colleagues confirmed many well-identified predictors within a veteran population displaying heterogeneous PTSD symptom patterns. More specifically, predeployment exposure to traumatic events, higher neuroticism, and higher depression and perdeployment exposure to dangerous mission environments increased the risk of belonging to the symptom-fluctuation trajectory. Membership in the late-onset PTSD symptoms trajectory was predicted by predeployment emotional problems and exposure to
more traumatic events prior to deployment. Additionally, exposure to more traumatic events at postdeployment was a predictive factor specific to the late-onset PTSD symptoms. Veterans within the late-onset PTSD symptoms trajectory were exposed to a higher proportion of "accidents . . . , life threatening disease . . . , robbery involving a weapon . . ., threat of death or serious bodily harm . . ., intimate partner abuse . . ., and other life threatening or physically damaging events" than the resilient group. This information could be used to develop predictive measures of PTSD symptom trajectories. Again, if the authors had genetic information on the veterans, this might account for a large proportion of the variance.

The reported connection between exposure to additional postdeployment traumatic events and the late-onset PTSD symptoms is important when considering prevention and treatment approaches and requires further exploration. The authors discuss a fear reinstatement hypothesis put forth by Bryant et al.13 This explanation is speculative and would depend on whether the individual did indeed have a strong fear response to a deployment-related trauma that had not fully resolved or left him or her more sensitized to high fear to a subsequent trauma. Incomplete extinction has been associated with resistance to extinction,14 which probably also accounts for the difficulty some with PTSD continue to experience. In a recent study15 comparing d-cycloserine, alprazolam, or placebo combined with virtual reality exposure therapy in veterans with PTSD, those who showed good emotional learning in sessions profited more from the addition of d-cycloserine, a cognitive enhancer, and also displayed lower startle response and cortisol reactivity following treatment. If the fear reinstatement hypothesis is accurate, it implies we need to identify those at risk early and conduct effective extinction therapy to both help with the deployment-related stress response and protect for response to future stressors. Another approach is to consider clinical anecdotal evidence and research findings16 that demonstrate that a significant percentage of OIF–OEF veterans engage in PTSD or subthreshold PTSD for whom we must improve prediction.

Andersen and colleagues have produced noteworthy findings that have the potential to move the field away from the less than ideal diagnostic system in the process of determining appropriate prevention and treatment. Better assessment should include indications of pathology or distress based on not only self-report but also clinician ratings of patient-reported symptoms. Now, it is up to researchers and clinicians to translate information about trajectories of PTSD symptoms and the predictive factors of trajectory membership into useful tools to be used in clinical practice.

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REFERENCES


