

Viewing Suicide Risk Through a New Lens: The Benefits of Examining Symptom Trajectories

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Madsen and colleagues¹ have taken good advantage of an existing longitudinal data set composed of all Danish soldiers deploying to Operation Enduring Freedom during a 7-month period in 2009. The nature of the data allowed them to answer not just the question of whether Danish soldiers show similar associations between posttraumatic stress disorder (PTSD) and suicide as other veteran samples but also the much more interesting question of whether different trajectories of symptom development are associated with differing degrees of suicide risk. The US Departments of Defense and Veterans Affairs have been actively studying suicide in military personnel and veterans, attempting to determine why the long trend of suicide rates being lower in the military than in the civilian population has reversed. The findings from the current study suggest one possible explanation—the impact of PTSD on suicide risk may be delayed, and, as a result, higher risk individuals may not be identified in time to intervene. It is premature to definitively draw such a conclusion, but the implications for future research are clear. Advances in data analysis techniques allow for a finer-grained look at the associations between variables, and, as the results of the current study illustrate, that can lead to some surprising new insights.

To some extent, Madsen and colleagues¹ were handicapped by conducting secondary analyses of existing data. As is always the case in such situations, they had to rely on the variables at hand, and, as they note in their article, this meant using a less than ideal measure of suicidal ideation (ie, 1 item from the Beck Depression Inventory) and less information regarding the soldiers' predeployment functioning than they would have liked. Despite those limitations, they still arrived at statistically significant results with real clinical implications. Even after they controlled for multiple covariates and took into consideration the limits imposed by the small percentage of participants in the 2 highest risk classes, it remains obvious that veterans who develop PTSD after a long delay following combat deployment are those most likely to also exhibit significant levels of suicidal ideation and, by extension, to be at elevated risk of self-directed violence. This finding raises the question of what factors differentiate these individuals from the other groups of veterans. As the authors suggest, the differences may lie in premilitary or at least predeployment factors. However, it is just as likely

that the difference is due to experiences after returning from deployment. A third alternative is that there are basic dispositional differences between these classes of veterans. It is therefore important to replicate the findings of the current study in research specifically designed to address these questions.

Designing a study to test these questions in a sufficiently large sample of either active duty service members or veterans of the current conflicts would be complicated and expensive. However, the USPER study is not the only large database of military members that could be tapped to try to answer these questions. The US Army and National Institute of Mental Health have jointly funded the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS), and publications² are beginning to come out, with quite interesting results. Madsen and colleagues¹ pose the question of how widespread thoughts about suicide are in those who have deployed to a combat zone. Nock et al² reported that the majority of lifetime suicidal ideation in the Army STARRS All Army Study began prior to soldiers' enlisting in the Army and that self-directed violence occurring during enlistment was most likely the result of preenlistment factors. This finding does not directly answer Madsen and colleagues' question, but it suggests that the primary factor for understanding self-directed violence in service members may not be related to their military service.

One also wonders if Army STARRS data could be used to replicate the methods employed in the current study. The vastly larger sample would address the statistical power issues raised by Madsen and colleagues,¹ and the different assessment measures used might improve modeling of risk as well as outcomes. It would be much more time-saving and cost-effective to utilize this existing and, at least in some regards, comparable data set to further explore the impact of PTSD trajectories on suicide risk than it would be to specifically design and conduct a new study.

Despite dissemination of research findings through traditional outlets, such as journal articles and conference presentations, the volume of findings generated and the capacity of researchers to stay on top of them often lead to silos of information being created. The similarities and differences between USPER and Army STARRS are but 1 illustration of this phenomenon. It is not that the 2 studies are redundant, but more that opportunities to fully leverage their findings may not be maximized. The principal investigators of these 2 studies are strongly encouraged to explore with each other ways to collaborate, share data, and answer important research questions that may not have been part of the original design of either study.

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It is hoped that leveraging existing data can lead to more rapid refinement of theories to explain suicide in the military. In turn, improvements can be made in how service members are screened, assessed, and treated. The findings of the current study provide some clues as to how clinical practice might need to change, but it seems premature to make many broad recommendations. Possible recommendations to consider are to stop conducting broad screenings of troops on return from deployment, since, at least in the USPER study, this screening did not lead to identification of either those most likely to develop PTSD or those at highest risk of suicide. Resources currently being invested in those screening efforts might be better directed to clinical assessment and intervention. The current findings also suggest that the ways in which service members respond to stress and their levels of stress prior to deployment may be more important in understanding risk of future psychological problems than knowing what traumas they are exposed to during deployment.

A major challenge faced by US military treatment facility and Veterans Health Administration providers is determining which of their patients are most likely to engage in self-directed violence at some point in the near term. While the current study addressed risk of suicidal ideation, there is a correlation between thoughts and behaviors, so it is hoped the current findings can be applied to answering the more serious question of who is likely to make a suicide attempt. Examining suicide risk through the lens of association with specific trajectories of PTSD symptom development, rather than the less granular lens of association with PTSD symptoms, has promise for improving identification of high suicide risk military personnel and veterans. The more that can be done to reduce thoughts about suicide and nonlethal

suicide attempts, the more likely suicide rates will decline. Using existing epidemiologic data to answer vexing clinical questions is difficult, but worth the effort. Leveraging those data by applying the results and data analytic techniques to other existing data sets further increases the chance of rapidly advancing knowledge about suicide risk. If nothing else, it should speed the process of designing and conducting necessary follow-up clinical studies that can test theories and derived hypotheses. For too long, epidemiologic data have been gathered to characterize those who die by suicide, engage in potentially lethal self-harm behaviors, and spend significant amounts of time thinking about suicide. It is refreshing to see such data being analyzed with an eye to direct clinical application, a trend that should continue and be increased.

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