Hyperarousal: the Critical Determinant of Post-Trauma Sequelae

Thesis submitted for the degree of

Doctor of Philosophy

By

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iv. Abstract

Background

Recent literature has revealed the prognostic role of the hyperarousal criteria as a predictor of further PTSD symptom onset, maintenance, and severity. Despite this, there is a distinct gap in the literature as to the aetiology of hyperarousal, and the impact of these symptoms on an individual's post-trauma sequelae outside of the PTSD paradigm.

Aims

This thesis examined hyperarousal in the context of post-trauma sequelae. Specifically, the chapters of this thesis focus on which trauma-related factors predicted this criterion following a traumatic experience; the role of hyperarousal in the development of psychological disorders other than PTSD; how hyperarousal affects an individual's quality of life and disability level following a trauma; and finally, delineating the relationships between the individual symptoms of hyperarousal as they manifest longitudinally following a traumatic event.

Method

Such a breadth of analysis required the use of data from three very distinct epidemiological data sets. The Military Health Outcomes Program (MILHOP) of research, designed to establish the prevalence of mental disorder and psychological distress in currently serving Australian Defence Force (ADF) personnel, was utilised to assess how different aspects of trauma (i.e. the nature and number of traumas) predict the onset of hyperarousal. The South East Lifetime Impact of Fire Exposure Study (SE LIFE) a longitudinal study of individuals exposed to the Ash Wednesday Bushfires of February 16th, 1983, was utilised to assess whether hyperarousal significantly predicted novel episodes of disorder other than PTSD. Finally, the Injury Vulnerability Study (IVS), a

large-scale national multisite study of psychopathology following traumatic injury, was utilised to assess both the impact of hyperarousal on quality of life and disability following trauma and how the symptoms of hyperarousal manifest longitudinally following a traumatic event.

Results

Highlighting the significant association between cumulative trauma and the development of hyperarousal, the results presented in this thesis also emphasise the role of hyperarousal criterion in the prediction of both future episodes of PTSD and other anxiety and affective disorders. An examination of the contributions of the different symptom criteria of PTSD in predicting quality of life and disability following trauma highlighted the role of hyperarousal in particular predicting poorer physical and environmental self-reported quality of life and increased disability. A closer examination of the relationships between the symptoms of hyperarousal following a traumatic experience illustrated the significant role that hypervigilance plays in promoting further symptom recruitment within this criteria and perhaps the disorder.

Conclusion

The results presented in this thesis highlight the significant role of the hyperarousal criteria post-trauma. Significantly influenced by both the nature and number of traumas experienced, hyperarousal has a prominent role in post-trauma sequelae, predicting future novel episodes of disorder, poorer quality life and an increased level of disability. Suggestions for trauma interventions include early-targeted treatment of hyperarousal symptoms, particularly hypervigilance, which was shown to predict the onset of further hyperarousal symptoms. Future research should focus on expanding the paradigm of hyperarousal and providing a better understanding of the neurological and biological

underpinnings of these symptoms, which play a critical role in critical determining post-trauma sequelae.

v. Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Jason Blunt

I believe that this thesis is properly presented and conforms to the specifications for the degree of sufficient standard to be, prima facie, worthy of examination

Professor Alexander Cowell McFarlane

Principal Supervisor

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