One Hundred Years Of Lessons About The Impact Of War On Mental Health; Two Steps Forward, One Step Back.

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The centenary of World War I brings with it the question as to what is its enduring legacy in the field of mental health, particularly in the context of the prolonged war in Iraq and Afghanistan where there has been considerable effort to investigate the psychiatric impact. There are two recurring themes that frame how the psychiatric consequences of war have been considered over the last century. The first question in war is whether psychiatric wounds should been seen as matter of moral duty rather than illness, as argued by Shephard¹. The second issue is the struggle that the psychiatric profession has had in understanding the long-term consequences of cumulative combat exposures. These questions are explored against the historical background of the controversies that plagued the management of the psychiatric casualties of World War I.

The Baptism of Fire at Gallipoli

The proximity of the threat that drew Australia into World War I is often not recognized due to the historical preoccupation with the Gallipoli campaign⁴. Flanking the east coast of Australia and to the north were a series of German colonies including New Guinea, Nauru and the Samoa^{3,4}. The Australian deaths and casualties were some of the heaviest amongst combatant nations. The 58,961 deaths represented of the 14% of those who enlisted^{3,4}, and on repatatriation 113,370 were unfit ^{6,7}. Those who survived were considered the lucky ones and hence psychological injuries were not the predominant focus of concern in the face this physical cost.

A fundamental question that confronted the medical officers at the beginning of the War, was the issue of whether the inability to function in battle was a moral or mental problem³. Was the medical officer's role to maintain the fighting force or was his primary ethical and professional responsibility to the individual soldier? Butler³ stated this was "the psychic no-mans land that separates malingering from hysteria and which links free will with determinism (p79)". Given the overwhelming demand in maintaining a fighting force, the question of individual welfare was subsidiary to the question of national survival.

The military campaign at Gallipoli was a strategic failure⁴. Once soldiers were landed at Gallipoli, unless evacuated for medical reasons they remained pinned down on the escarpments rising from Anzac Cove until the final withdrawal. The consequence was that there was no respite from the intolerable strain of battle.

"Such measures on the Western Front were found by far the most effective prophylaxis to avoidable nervous breakdown were probably improbably impossible on Gallipoli".

"This has two results. First, a large evacuation from psychophysical and psychosomatic breakdown, debility, ingestion and functional disorder. Second, repeated epidemics of self-inflicted wounds(p80)".3

This wave of mental casualties presented many challenges to the medical corp who were totally unprepared. The absence of a diagnostic framework was fertile ground for the acceptance of the emerging concept of shellshock⁸, more driven by sentiment among the soldiers than medical knowledge. The medical officers were faced with a dilemma of how to deal with men who had fought with bravery but then progressively had been unable to continue to function in the face of battle. An important observation was that the individuals who "reach the base hospitals were useless for further fighting (p85)"³. While many recovered from their immediate disability and could form a variety of functions in logistics and communications, they were generally unfit for further fighting.

The Experience on the Western Front and the Question of Shell Shock

Despite the enormity of the exposures and the losses, a continued debate existed around the cause for psychiatric disorders. At the end of the war, debate continued as to whether it was the "Seed" rather then the "Soil". Butler concluded, "the nervous and moral constitution of the force and of the individuals comprising it rather then that particular kind of strain to which they were subjected – was the essential element in determining the total amount of nervous breakdowns (p89)".³ The view impacted greatly on how the medical establishment viewed veterans following repatriation.

The name shellshock attributed the various symptoms to the concussive effects of exploding shells³, and hence an external agent was the cause rather than vulnerability, an attractive idea for the soldiers. This provoked considerable concern; "The consequences seen in the inability of the medical service and profession to check the spread of a concept of war neurosis – the idea and the name of [Shellshock] – through military and social exploitation and mass suggestion – a devastating menace (p93)".³ Despite the public appeal of shell shock, the medical establishment was concerned that it provide an honorable escape from combat into illness.

A further battle emerged between neurologists and psychiatrists about "the nomans land between neurology, the medicine of the brain, and psychiatry, the medicine of the mind(p93)".³ This rivalry distracted from confronting the military command's contention that this was an urgent disciplinary problem about soldier's failure to manage the fear of battle. The problem was ultimately resolved with the 1922 enquiry into Shellshock by the War Office¹¹, finding little evidence for the role of concussive injury. The problem of secondary gain was deemed to be a consequence of accepting this as a wound that allowed removal from duty and it became a matter of increasing focus³. The response to this dilemma was to delay the diagnosis of soldiers by the use of the category "Not Yet Diagnosed; Nervous NYDN". The aim was to have early convalescence and a rapid return to duties. This approach was the beginning of the model of crisis intervention or "PIES" (Proximity, Immediacy, Expectancy and Simplicity)¹⁴. Diagnosis was seen to lead to an unnecessary adoption of a position of disability. To this end, the medical profession was, in part, taking on the covenant of

inculcating a devotion of duty rather than withdrawal because of the risks of future injury¹⁵.

Ultimately it was accepted that war neurosis was generally of a gradual onset, rather then being a consequence of some immediate physical "shock to the brain that had led to microscopic brain tissue (p99)".³ In retrospect, what the historical literature failed to contemplate is that there were undetected neurobiological processes and that these underpinned¹² psychological symptoms in the horrors of trench warfare. There was an over simplification of the question as to whether a biological/neurological mechanisms were at play or whether mental mechanisms were of central relevance. One striking aspect of the literature is that there was almost little consideration that the cumulative exposure to years of fighting led to an increasing probability of breakdown¹, particularly as even many of the finest men broke down after prolonged intense combat. It was also assumed that individuals, if they were going to become unwell as a consequence of the trauma of battle, that this would happen immediately rather than being a delayed effect.

Clinicians were at a loss to explain this delayed emergence of psychopathology and an alternative discourse drove the management of pension claims. Exaggerated disability and compensation neurosis were dominant rubrics that were used to dismiss emerging symptoms¹⁶, attitudes that continue to permeate modern workers compensation systems despite evidence to the contrary¹⁷. Veterans were stigmatized as being poor "seed" rather than have been injured by the horror of war.

Subsequent Lessons

When the Second World War broke out it took months before the knowledge of the First World War was relearned. Major screening programs did not stop the problem of acute combat breakdowns¹⁸. Despite the telling lessons that had been documented, in peacetime these had drifted out of awareness. However, the imperative the PIES system of the management of battle casualties was quickly rediscovered¹⁷. However, the evidence suggests its effectiveness was overstated, in part as psychiatrists attempted to justify their contribution to the armed forces¹⁸. Advances in understanding included acknowledging the importance of interpersonal relationships including leadership to functioning, as well as the role personality and individual vulnerabilities ¹⁷. Again, in the aftermath of World War II, the lessons of wartime were quickly forgotten and practice slipped back into the formulation of cases using psychoanalytic concepts and the role of personality¹⁷.

It was only with the Vietnam War that the lessons of the long-term morbidity were finally accepted in the relative absence of substantial rates of acute combat stress casualties¹⁸. The Vietnam Veterans Readjustment Study demonstrated 18.7% of US veterans had a life-time history of war-related PTSD. The observation the most of these men had not presented while on duty but later became unwell had proved the hardest concept to grasp. This presentation was

that delayed onset PTSD and this was a common entity and not simply driven by secondary gain.

The relevance of these lessons to modern war

This history has particular relevance to the challenges that military psychiatry has faced with the wars in Iraq and Afghanistan. The question has again emerged about the importance of minor neurological injury and its relationship to PTSD²⁰. The major scientific challenge is to determine the significance and severity of brain injury at the lower ends of the spectrum of severity following blast injury. It is critical that we do not re-create the medical turf war between neurology and psychiatry in the exploration of this question.

A second dilemma is the apparent difference between the rates of disorder in the US and the UK. A US report²¹ highlighted the enormity of the potential costs of PTSD, depression and traumatic brain injury in Iraq and Afghanistan veterans. In contrast, "in the UK armed forces, deployment to the Iraq war has not so far been associated with significantly worse health outcomes, about from a modest effect on multiple physical symptoms"²² This dilemma appears to have been largely resolved when the differences in combat exposure and duration of employment were controlled. It may be the case that Britain remains, under the influence of the lingering attitudes, from the First World War that had not been tempered by the Vietnam antiwar movement. In this environment, Shephard¹ argues that the psychiatric consequences of war in the post-Vietnam literature have exaggerated. Hence, a reflection on history suggests that the trauma field and particularly military psychiatry remains an area vulnerable to distortion in public debate and beliefs. Modern scientific endeavour plays a critical role in correcting these distortions.

A body of research has demonstrated the reality of delayed onset posttraumatic stress disorder^{24,25,26} using longitudinal designs that show individuals who have coped at the time of stress exposure can become unwell many years later. A large body of evidence demonstrates that multiple biological systems are prone to deregulation and sensitization and that PTSD is not simply to do the vagaries of unconscious mechanisms.

History demonstrates the slowness of the understanding of the long-term consequences of combat. It remains the case that the period following deployment remains a critical period of vulnerability. Issues of secondary gain and suggestibility must not be over emphasised at the risks of stigmatizing those who are unwell and ignoring the reality of neurobiological underpinnings of PTSD. Equally, the complex environment of compensation schemes have a particular ability to distort the objectivity of clinician's judgments and the veteran community's acceptance of medical opinion. These are the dominant lesson to be remembered from the First World War.

References:

1. Shephard, B. (2002). A war of nerves. Random House.

- 2. McFARLANE, A. C. (2010). The long-term costs of traumatic stress: intertwined physical and psychological consequences. *World Psychiatry*, *9*(1), 3-10.
- 3. Butler, A. G. (Ed.). (1943). *The Australian army medical services in the war of 1914-1918* (Vol. 3). Australian War Memorial.
- 4. Bean, C. E. W. (1934). *The official history of Australia in the war of 1914-1918*. Angus & Robertson.
- 5. Adam-Smith P., *The ANZACS* (West Melbourne, Vic.: Thomas Nelson, 1978).
- 6. Pitman RK, Rasmusson AM, Koenen KC, et al. Biological studies of post-traumatic stress disorder. *Nat Rev Neurosci* 2012; 13(11): 769-787.
- 7. Southborough, L. (1922). Report of the War Office Committee of Enquiry Into "Shell-Shock.". *London, His Majesty's Stationery Office*.
- 8. Salmon, T. W. (1917). *The Care and Treatment of Mental Diseases and War Neuroses: (" shell Shock") in the British Army*. War Work Committee of the National Committee for Mental Hygiene, Incorporated.
- 9. Strous RD. Ethical considerations during times of conflict: challenges and pitfalls for the psychiatrist. Isr J Psychiatry Relat Sci. 2013;50(2):122-9.
- 10. Jones E, Palmer I, Wessely S. War pensions (1900-1945): changing models of psychological understanding. Br J Psychiatry. 2002 Apr;180:374-9.
- 11. Jones E, Thomas A, Ironside S. Shell shock: an outcome study of a First World War 'PIE' unit. Psychol Med. 2007 Feb;37(2):215-23.
- 12. Glass, AJ. (1974), Mental health programs in the armed forces. In Arieti, S (ed.) American Handbook Psychiatry (2nd ed). New York: Basic Books.
- 13. Dohrenwend, B. P., Turner, J. B., Turse, N. A., Adams, B. G., Koenen, K. C., & Marshall, R. (2006). The psychological risks of Vietnam for US veterans: a revisit with new data and methods. *Science*, *313*(5789), 979-982.
- 14. Rosenfeld, J. V., McFarlane, A. C., Bragge, P., Armonda, R. A., Grimes, J. B., & Ling, G. S. (2013). Blast-related traumatic brain injury. *The Lancet Neurology*, 12(9), 882-893.

- 15. Tanielian, T. L., & Jaycox, L. (Eds.). (2008). *Invisible wounds of war: Psychological and cognitive injuries, their consequences, and services to assist recovery* (Vol. 1). Rand Corporation.
- 16. Hotopf, M., Hull, L., Fear, N. T., Browne, T., Horn, O., Iversen, A., ... & Wessely, S. (2006). The health of UK military personnel who deployed to the 2003 Iraq war: a cohort study. *The Lancet*, *367*(9524), 1731-1741.
- 17. Sundin, J., Herrell, R. K., Hoge, C. W., Fear, N. T., Adler, A. B., Greenberg, N., ... & Bliese, P. D. (2014). Mental health outcomes in US and UK military personnel returning from Iraq. *The British Journal of Psychiatry*, 204(3), 200-207.
- 18. Solomon, Z., & Mikulincer, M. (2006). Trajectories of PTSD: a 20-year longitudinal study. *American Journal of Psychiatry*, 163(4), 659-666.