Identification of key depressive symptoms and their comorbidity with physical and psychological illness in Australian Gulf War Veterans

Summary Report

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1 Introduction

Military service, particularly when involving deployment, can have major effects on the physical and psychological health of veterans. Major depression is one of the most common psychological illnesses in veterans. Mood disorder, including major depression, was found to be the second most common post-war psychological condition in Australian 1990/91 Gulf War veterans after alcohol use disorders (1). Depression is associated with co-occurring, or 'comorbid' physical illness such as back or neck problems, high blood pressure and asthma, and poorer quality of life. Unfortunately, depression can be hard to recognise, particularly within general settings such as medical clinics, while veterans or active duty military personnel may be unwilling to report psychological symptoms or deterioration in their wellbeing or function.

The development of a brief screening instrument for depression may facilitate the identification of possible cases of this disorder.

The study was conducted by the Monash Centre for Occupational and Environmental Health (MonCOEH), Monash University as part of our ongoing research into the physical and psychological health of the Australian Gulf War veterans and military comparison group, utilising the comprehensive dataset collected in the Australian Gulf War Veterans' Health Study. The current study was funded by the Department of Veterans' Affairs through its Applied Research Program.

The study objectives were two-fold:

- to develop a brief screening test for depression which could be used by veterans, their families and medical practitioners (2).
- to examine the association between the depression screen and physical illness and psychological illness such as anxiety, as well as health-related quality of life.

2 Study methods and design

We analysed the data of the Australian Gulf War Veterans' Health Study, a study of 1456 Australian veterans of the 1990/91 Gulf War (80.5% of the deployed veterans completed the study), as well as a randomly sampled military comparison group who were in the Australian Defence Force (ADF) on active duty at the time but did not deploy.

Information, including on physical and psychological health, was collected by postal questionnaire, as well as by face to face interviews with medical practitioners and psychologists, in 2000-2002 (1).

Our present study on developing a brief depression screen focuses on the Gulf War veterans themselves. Due to the small number of female, male Australian Army and male Royal Australian Air Force (RAAF) Gulf War veterans, we analysed those 1204 of the 1232 male Royal Australian Navy (RAN) Gulf War veterans who were assessed as to the presence or absence of major depression.

Symptoms of depression were examined using the self-report twelve item General Health Questionnaire (GHQ-12), which has been applied to a large number of populations, including Australian Gulf War veterans (3).The GHQ-12 consists of items such as "have you recently been feeling unhappy and depressed".

Diagnosis of major depression was obtained using the Diagnostic and Statistical Manual, version four (DSM-IV) criteria (4).

The study examined the comorbid physical health conditions of medically unexplained chronic fatigue, multisymptom illness, high blood pressure, asthma, and any musculoskeletal disorder, such as arthritis or back problems (5). Comorbid psychological health conditions were any anxiety disorder (including PTSD), PTSD alone and alcohol disorders, diagnosed using standard DSM-IV criteria (4).

We assessed health-related quality of life using the twelve item Short-Form Health Survey (SF-12), which measures both physical and mental health and well-being (3). The SF-12 includes questions about pain and daily activities.

Several statistical techniques were used to identify a small number of self-reported depressive symptoms that were highly associated with a more formal diagnosis of major depression.

3 Results

A brief screen consisting of three key self-reported depressive symptoms was identified. This brief screen did around as well as instruments based upon a larger number of twelve items, in terms of its association with CIDI-defined depression diagnosis.

The three item brief depression screen classified possible depression as being present if the veteran was feeling “unhappy and depressed”, or, in the absence of this symptom, if the veteran had both “lost much sleep over worry” and “felt constantly under strain”.

A commonly-used ‘cut-off’ or threshold approach classified possible depression as being present if the total GHQ-12 score, involving all twelve items, exceeded a “cut-off” of three or more.

Having possible depression on the brief depression screen was significantly associated with having medically unexplained chronic fatigue, multisymptom illness, high asthma, any musculoskeletal disorder, any anxiety disorder (including PTSD), PTSD alone and alcohol disorders, but not high blood pressure.

Veterans with possible depression according to the brief depression screen were over four times more likely to have multisymptom illness, chronic fatigue or PTSD than those scoring absent on the depression screen. Scoring present on the depression screen, as well as having at least one physical or other psychological condition, was associated with significantly poorer mental and physical health-related quality of life.

Similar results were obtained for the cut-off approach, based on all twelve GHQ-12 items.

4 Conclusion

Depression is a major and debilitating health condition that commonly occurs yet can be difficult to identify. Although intended as a screening test rather than a diagnostic instrument, a three item brief depression screen performed similarly to the total GHQ-12 score in terms of

association with depression diagnosis. The brief screen also performed similarly to the total score in terms of its association with physical and psychological co-occurrence or comorbidity, and health-related quality of life.

The brief depression screen should be further tested on other veteran and military populations to ascertain its generality, but could readily be used by veterans, their families and medical practitioners in order to help identify the early stages of depression.

5 References

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