THE MENTAL HEALTH OF UK ARMED FORCES PERSONNEL

THE IMPACT OF IRAQ AND AFGHANISTAN

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The legacy of Gulf War Syndrome led to fears that the deployments to Iraq and Afghanistan since 2003 would have an effect on the mental health of the UK armed forces. Contrary to many people’s expectations, deployment to Iraq and Afghanistan has not led to an increase in mental health problems and the overall number of personnel with symptoms of post-traumatic stress disorder is low. But there have been some costs: reservists and combat personnel are more at risk of mental health problems, and alcohol misuse continues to be rife amongst regulars.
Concerns have been raised since the start of the Iraq and Afghanistan conflicts about the mental health of armed forces personnel returning from these areas. It is indisputable that deployment exposes servicemen and women to stressful and traumatic events that will not be encountered by the majority of the general UK population. Military personnel, particularly those in combat roles, are a high-risk group for developing post-traumatic stress disorder (PTSD). They are also at a high risk of co-morbid mental health problems such as depression, alcohol misuse and poor physical health.

In addition to recognising that deployment increases the risk of mental health problems, concerns about the mental health of troops returning from Iraq and Afghanistan were very likely to have been exacerbated by the legacy of the 1990–91 Gulf War. It has been estimated that 25 per cent of military personnel returning from the Gulf War reported symptoms of severe physical ill-health, which became colloquially known as ‘Gulf War Syndrome’. With the 2003 Iraq conflict situated once again in the Gulf, and UK forces fighting in a similar theatre, it was feared that the conflict would lead to a similar set of symptoms among deployed troops.

Research on UK armed forces deployed to the 1990–91 Gulf War did not begin until five years after the conflict ended and the Ministry of Defence (MoD) and the British government were heavily criticised for doing too little, too late. Therefore, at the beginning of the Iraq conflict in 2003, the MoD commissioned the King’s Centre for Military Health Research (KCMHR) at King’s College London to conduct the first ever long-term, large-scale cohort study in order to explore the impact of the new conflict on the health of armed forces personnel. By collecting data during, rather than many years after, the conflict, the researchers were able to gain a better understanding of the mental health consequences of deployment, as well as to intervene earlier to produce research to inform policies to protect the mental health of deploying troops.

There were two main phases of the KCMHR cohort study. The first was conducted between 2004 and 2006 and looked specifically at the health effects of deployment to the Iraq conflict (Operation Telic). The second phase was conducted between 2007 and 2009 and looked at the effects of deployment to both the Iraq conflict and the Afghanistan conflict (Operation Herrick).

This paper presents the findings from the KCMHR cohort study, sub-studies which used data from the KCMHR cohort study and a number of other academic publications which have addressed the issue of the mental health of UK armed forces personnel. The paper then gives the overall rate of mental health problems since 2003. As the effects of deploying to these conflicts on mental health have not been uniform across all occupational sub-groups within the armed forces, the mental health of regular personnel, combat troops and reservists are each discussed separately. The paper discusses the impact of multiple and lengthy deployments to these conflicts, as well as differences in the mental health of UK and US troops deployed to them. Finally, the paper concludes with thoughts on the legacy of the Iraq and Afghanistan conflicts and implications for the future of mental health in the UK armed forces.

Mental Health Problems Since 2003

Since 2003, the pace of military operations in Iraq and Afghanistan has increased. In Iraq a difficult counter-insurgency and reconstruction phase followed on from the initial combat operations of 2003. As a result, the period of troop deployment and the number of casualties were both greater than had been anticipated. Furthermore, over this same period the intensity and scope of the conflict in Afghanistan increased: UK troops encountered a violent and protracted counter-insurgency, especially in Helmand province, along with the challenges of dealing with the widespread use of improvised explosive devices (IEDs), as well as other forms of attack such as snipers. Regrettably, the military activity in these two theatres resulted in the deaths of 524 UK service personnel between 2003–10. Since 2003, however, the overall rates of mental health problems in UK personnel deployed to Iraq or Afghanistan have been stable.

Mental Health of Regulars

Given the legacy of ‘Gulf War Syndrome’, the question of whether there was an ‘Iraq War Syndrome’ was addressed as a priority by the KCMHR research team. The first phase of the KCMHR cohort study did not demonstrate any evidence of a new ‘Iraq War Syndrome’ in regulars. However, evidence from the US that American troops deployed to Iraq had a high and rising prevalence of mental disorders made it pertinent to systematically examine whether the same was happening among UK military personnel.

The rate of symptoms of PTSD remains low

The KCMHR cohort study has found no increase in mental health problems in regular personnel serving in Iraq or Afghanistan, compared to regular personnel not deployed to Iraq or Afghanistan. The rate of symptoms of PTSD remains low among troops deployed to Iraq or Afghanistan; estimates have ranged between 1.3 and 4.8 per cent among regulars following deployment. A study of mental health among regulars during deployment found 3.8 per cent had symptoms of PTSD. This is a relatively low figure, especially considering that PTSD rates in the UK general population are approximately 3 per cent. Between 16–20 per cent of regular personnel report common mental disorders, such as depression and anxiety; but similar rates of common mental disorders are found in the general UK population.

Alcohol Misuse in Regulars

Alcohol misuse is a common problem among regular personnel deployed to Iraq and Afghanistan; the latest figures suggest that between 16–20 per cent of regulars misuse alcohol on a regular basis.
and are deemed to drink hazardous according to World Health Organization (WHO) guidelines. In the first phase of the KCMHR cohort study, only combat troops were found to have a higher prevalence of alcohol misuse following deployment to Iraq. However, more recent data show a higher prevalence among all regular military personnel who were deployed to Iraq or Afghanistan – regardless of their role on deployment. Although a significant proportion of deployed regular personnel are young men – who are known to have high levels of alcohol use in the general population – this factor alone is not an adequate explanation. Nicola T Fear et al report that the prevalence of alcohol misuse is higher within the military than in the age-matched general population, particularly among younger service personnel (aged 16–24). Furthermore, the prevalence of alcohol misuse among servicewomen is equivalent to that of men the same age in the general population.

Alcohol has always been at the heart of social activities in the military, and there is even some evidence to suggest that it is an important element in the development of comradeship, bonding and cohesion of units. However, media reports of the problems caused by alcohol excess, implicating it in instances of domestic and other forms of violence and suicide, serve to highlight the serious consequences of alcohol misuse within a military environment. This culture of excessive alcohol that is portrayed in the media, if accurate, could be detrimental to the health of personnel and the operational effectiveness of the military.

The MoD has fully recognised that this culture of alcohol-drinking among regulars must be addressed and discouraged, and all three services are proactively encouraging sensible drinking. However, with alcohol so deeply entrenched within military culture, tackling the issue will be a challenge.

Mental Health of Combat Troops

Combat exposure has been consistently identified as a risk factor for PTSD, and the risk increases with more intense combat experiences. The intensity of the traumatic exposures endured in theatre has a greater effect than most pre-trauma risk factors, such as a history of childhood adversity. Therefore, when analysing data from the KCMHR cohort study, the effect on subsequent mental health of the participants’ particular role on deployment was taken into account. Unsurprisingly, combat troops deployed to Iraq and Afghanistan show a small but significant increase in the risk of symptoms of PTSD compared to non-combat troops. Approximately 7 per cent of combat troops have symptoms of PTSD following deployment to Iraq and Afghanistan.

Royal Marines report fewer mental health problems

However, not all combat troops are at increased risk of PTSD. Royal Marines report fewer mental health problems compared to other infantry after deployment to Iraq. The exact reasons for this reduced risk are not fully understood. It might be that differences in the selection and training are contributing factors; compared to other infantry, Royal Marines have been found to have fewer pre-deployment risk factors, such as a history of childhood adversity, as well as higher levels of unit cohesion, which has been found to protect against mental health problems.

Mental Health of Reservists

Particular concerns were raised about the mental health consequences of deployment on reservists at the start of the Iraq conflict. Operation Telic and later Operation Herrick drew greatly on the involvement of reservists, with more than 17,000 UK reservists being deployed worldwide since 2003. In socio-demographic terms, reservists differ from regulars: they are generally older, hold higher rank and have higher educational attainment.

Studies of the mental health of reservists deployed to Iraq or Afghanistan deliver a clear message: deployment to these conflicts has put reservists at a higher risk of reporting symptoms of PTSD, when compared to reservists not deployed to Iraq or Afghanistan. However, it should be kept in mind that the absolute rates of symptoms of PTSD among reservists returning from these conflicts are still relatively low; figures from the second phase of the KCMHR cohort study show that around 5 per cent have symptoms of PTSD, compared to 4.2 per cent of regulars.

Many factors contribute to the excess of mental ill-health observed in deployed reservists. For example, reservists self-reported higher levels of trauma exposure and feelings of ‘threat to life’ than their regular counterparts. It is unlikely that reservists had more exposure to traumatic events during deployment; indeed most reservists will have been exposed to less direct combat than their regular counterparts due to the nature of their roles in theatre. Self-reporting higher levels of exposure to traumatic incidents is, perhaps, instead a consequence of their relative inexperience and the unfamiliarity of the theatre; 31 per cent of reservists had previous experience of deployment in Iraq, a much lower proportion than regulars, 73 per cent of whom had already served in Iraq on a previous deployment.

Within combat support units, lower unit cohesion has been shown to put people at greater risk of mental health problems. Reservists are commonly deployed as individual reinforcements within a unit of regulars and thus have little or no prior knowledge of their new comrades. This may partially account for the increased risk of PTSD, as it leads to reported feelings of isolation and lack of unit cohesion. A review of perceptions among UK reservist personnel who deployed to Iraq in 2005 did report better integration with and treatment by regulars compared with previous reports from 2003. Some reports suggest that the risk of developing mental health problems may therefore be connected to factors outside deployment.

A study of reservists by Tess Browne et al reveals that the most commonly associated factor contributing to higher levels of PTSD in this group was problems in the home environment during or after deployment. Reservists reported more problems at home during deployment,
more negative homecoming experiences and poorer marital satisfaction. Many reservists commented on the difficulties they face in leaving their families whilst on active service and expressed concerns that their families lack adequate welfare support. Furthermore, work colleagues, employers and spouses often appeared to have little comprehension of the challenges of deployment. This leads to poorer social interaction and re-integration on return, and in turn to a greater susceptibility to mental health problems.

When the excess of mental health problems among reservists first became apparent in 2006, the MoD responded with initiatives to provide better support for reservists. A bespoke Reserves Mental Health Programme (RMHP) was introduced, providing assessment for all current and ex-service reservists who feel that their mental health has suffered as a result of deployment. The RMHP is an effective method of treatment for those who access it. Prior to this, reservists had no entitlement to military health care after they returned to civilian life. In addition, reservists are now given a minimum of twenty-one days’ notice before mobilisation (during the first six months of Operation Telic, only fourteen days’ notice was given) and there is greater support for families of reservists. A cultural shift has also taken place within the armed forces, with an emphasis on regulars and reservists working together. This is exemplified by the change to army recruitment, with the launch of ‘One Army’ recruiting campaign in 2007. Nevertheless, despite the introduction of measures focused on helping reservists, the excess of mental health problems (specifically PTSD) observed among reservists deployed to Iraq and Afghanistan is disappointingly persistent.

Impact of Multiple and Lengthy Deployments
During the UK military’s contemporary involvement in both Iraq and Afghanistan, concerns were raised by UK commanders over their ability to cope with these operations simultaneously. Personnel were being deployed more often than before and, in 2006, the frequency of deployments was highlighted by the National Audit Office as an important reason for personnel leaving the armed forces. However, the exact effects of multiple deployments on mental health had not been fully explored. Furthermore, US research indicates that longer deployments are associated with greater risk of mental health problems. Thus, a key question needing scientific analysis is whether multiple and lengthy deployments within the armed forces were increasing the risk of mental health problems.

The duration of deployments has been found to affect mental health

Multiple deployments are not consistently associated with an increased risk of mental health problems. However, the cumulative duration of deployments has been found to affect mental health; if troops are deployed for more than thirteen months over a three-year period they are at increased risk of mental health problems, particularly an increased risk of PTSD symptoms. This finding supports the MoD’s Harmony Guidelines for army personnel, which stipulate that personnel should not be deployed in excess of the thirteen-month threshold within a three-year period. Ensuring that these guidelines are not exceeded could help to reduce the risk of mental health problems in the UK’s regular forces.

It was also found that regular personnel were at increased risk of alcohol misuse and PTSD symptoms where the tour length was extended during the deployment itself. This suggests it is important to manage expectations regarding deployment length.

Differences Between UK and US Troops
One might think that the impact of serving in Iraq or Afghanistan on mental health would be similar among UK and US forces: both have been deployed to the same theatres of operation since 2003, have been fighting the same enemy and are likely to have comparable deployment experiences. Findings from UK armed forces personnel, however, contrast sharply with US data.

First, US data showed that American soldiers returning from Iraq and Afghanistan were at greater risk of mental health problems after deployment, particularly PTSD. Second, research has repeatedly demonstrated higher levels of PTSD among UK military personnel compared with members of the UK armed forces, with US rates ranging between 4 and 15 per cent. Third, US data revealed that the rates of PTSD symptoms increase with each month following return from deployment. This ‘delayed onset’ of PTSD raised concerns that a similar pattern would emerge among UK personnel. Was there, as some commentators have suspected, a potential ‘tidal wave’ of currently undiagnosed mental health problems on the horizon? Fear et al’s study of the KCMHR cohort shows a small but significant increase in the rate of PTSD over time, with a peak in the rate at four years post-deployment of 5.8 per cent. The increase is not nearly as high as that observed in US troops, suggesting that the UK is unlikely to see a huge increase in PTSD prevalence among its troops as time goes on.

Several reasons for the differences between the impact of serving in Iraq and Afghanistan on UK compared to US forces have been proposed. First, US troops deployed to these theatres are made up of younger and lower-ranking service personnel, who are more susceptible to mental health problems. Second, US troops are typically deployed for twelve months, whereas the guidelines stipulate that UK personnel are deployed for no longer than six months at a time. Additionally, one third of US forces consists of reservists, who are known to be at greater risk of mental health problems after deployment. It should also be mentioned that post-deployment health care provision is different in the US compared to the UK. Since 2008, US ex-service personnel have had their health care provision extended to five years after leaving service for any disorders deemed to have resulted

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from deployment; prior to this provision was for two years only.64 UK ex-service personnel instead have access to the National Health Service for the rest of their lives. In the US there may, therefore, be greater incentive to report symptoms in order to take advantage of health care provision whilst it is available.

Furthermore, whether PTSD is a more acceptable way of framing health issues in the US compared to the UK is also worthy of further study; PTSD and other mental health conditions may have a wider currency and legitimacy in the US where, perhaps for cultural reasons, reporting symptoms is easier. Finally, there is evidence that US residents are much less healthy than their UK counterparts, right across the socio-economic spectrum, with regard to chronic diseases, such as diabetes and heart disease;65 this may also be true for mental health problems such as PTSD.

The Legacy of Iraq and Afghanistan

Despite extended campaigns in Iraq and Afghanistan, the prevalence of mental disorders in the UK’s armed forces remains low.66 PTSD is in fact an issue for a relatively small proportion of military personnel. Of particular concern, however, are the high levels of alcohol misuse in regulars, the mental health of combat troops and also the mental health of reservists. These three issues require attention over the coming years. The actual numbers of active and ex-service personnel with mental health problems will, however, increase in the short term. This is not because of an increased rate of mental health disorders, but simply because, as more of the armed forces are deployed to Afghanistan, the absolute numbers of personnel returning with mental health problems will increase. The NHS and service charities should therefore anticipate an increased demand for mental health services.

Whether cuts to the defence budget, scheduled to be implemented by 2015, will have an impact on the mental health of those serving is unknown. Reductions in military spending have already led to reports of a ‘morale crisis’ in the armed forces,67 with particular concerns over military allowances.68 Although the Strategic Defence and Security Review (SDSR) has pledged that the budget for mental health care will increase, the cuts may still have repercussions on the mental health of the armed forces. In this regard, the effects of cuts to manpower set out in the SDSR are unknown; job pressures may increase over the coming years as posts may become more competitive to acquire and keep and, for those who lose their jobs, the effects of unemployment may have an impact on mental health. Reductions in personnel numbers – of around 7,000 for the army and 5,000 for the navy and RAF each69 – also pose the question of whether compromises will be made in the Harmony Guidelines for military deployments (at least as long as the commitment to Afghanistan continues; and even then further personnel cuts of up to 20,000 in the army cannot be discounted), which have been shown to have an impact on mental health of armed forces personnel.70

The impact of the UK public’s attitude toward the conflicts in Iraq and Afghanistan on those deployed there is not yet known. Both the campaigns have lacked sustained public support71 and are under increasing criticism in the UK press even though public support for military personnel on those campaigns, paradoxically, appears to be very strong; some military personnel argue that it is the highest it has been for a generation.72 But some analysts have argued that the public’s attitudes toward the armed forces have altered as a result of these contemporary conflicts. Anthony King, for example, argues that fallen soldiers are increasingly personalised in their commemorations (for instance, as husbands or fathers), rather than as in previous conflicts where they were regarded as anonymous individuals who died for their nation and a wider cause.73 King argues that this is indicative of the declining authority of the state, with soldiers killed in action no longer being identified primarily as a member of the nation, but instead as an individual. Senior UK commanders have expressed concern that as public support for the campaign in Afghanistan dwindles, support for service personnel – while remaining strong – changes its character: they are at risk of being pitied by the public for their participation.74 If those deployed to Iraq and Afghanistan question the value of their involvement in these conflicts, just as the UK public have, this may have implications for their mental health. This is an area which requires attention over the coming years.

Support for service personnel may change its character

But it is clear that one of the legacies is an improved understanding of mental health. Whatever the armed forces face over the coming years, rigorous research conducted on the mental health of troops deployed to Iraq and Afghanistan should be utilised to prevent and mitigate the effects of future deployments. And we must continue to provide for those at risk of, or suffering from, the mental health problems that are, for some, the inevitable consequence of armed conflict.

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5 This study is referred to as the ‘KCMHR cohort study’ in this article.


8 Hotopf et al, op. cit.; Fear et al, op. cit.


12 Fear et al, op. cit. in note 7.


15 Hotopf et al, op. cit; Fear et al, op. cit. in note 7.

16 Ibid.; Iversen et al, op. cit. in note 9 (Lancet), Rona et al, op. cit. in note 9.

17 Mulligan et al, op. cit.


19 Hotopf et al, op. cit.; Fear et al, op. cit. in note 7; Rona et al, op. cit. in note 10 (British Medical Journal).

20 NHS Report, op. cit.

21 Hotopf et al, op. cit.

22 Fear et al, op. cit. in note 7.

23 Fear et al, op. cit. in note 9.

24 Browne et al, op. cit. in note 9 (Occupational and Environmental Medicine).

25 Fear et al, op. cit. in note 9.


27 Iversen et al, op. cit. in note 9 (Psychological Medicine).


29 Hotopf et al, op. cit.; Fear et al, op. cit. in note 7.

30 Fear et al, op. cit. in note 7.

31 Iversen et al, op. cit. in note 9 (Psychological Medicine); Sundin et al, op. cit.
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32 Sundin et al, op. cit.
33 Hotopf et al, op. cit.
35 Browne et al, op. cit. in note 9 (British Journal of Psychiatry).
36 Hotopf et al, op. cit.; Fear et al, op. cit. in note 7; Iversen et al, op. cit. in note 9 (BMC Psychiatry).
37 Fear et al, op. cit. in note 7.
38 Browne et al, op. cit. in note 9 (British Journal of Psychiatry).
39 Ibid.
41 Dandeker et al, op. cit. in note 10.
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43 Browne et al, op. cit. in note 9 (British Journal of Psychiatry).
45 Dandeker et al, op. cit. in note 10.
48 Dandeker et al, op. cit. in note 10.
50 Rona et al, op. cit. in note 9 (British Medical Journal).
53 Fear et al, op. cit. in note 7; Rona, op. cit. in note 9 (British Medical Journal).
54 Rona et al, op. cit. in note 9 (British Medical Journal).
55 National Audit Office, op. cit.
56 Rona et al, op. cit. in note 9 (British Medical Journal).
57 Fear et al, op. cit. in note 7.
58 Hoge et al, op. cit. in note 14.
61 Fear et al, op. cit. in note 7.
62 Ibid.
63 National Audit Office, op. cit.
66 Fear et al, op. cit. in note 7.
70 Rona et al, op. cit. in note 9 (British Medical Journal).
72 Private conversations with senior army officers, late 2010.

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