



THE MENTAL HEALTH OF THE UK ARMED FORCES (June 2021 version)

This briefing note provides an outline of the current evidence on UK military mental health, including prevalence rates of mental health problems in serving regulars, serving reserves and those who have left service¹. Findings relating to suicide, help-seeking, risk-taking, violence, offending and deployment mental health support are also addressed.

Main Findings:

1. MENTAL HEALTH (REGULARS)

- a. The PTSD rate, in a combined sample of veterans and still serving personnel, was 4% in 2004/6 and 2009/10, but had risen to 6% in 2014/16². This compares to a rate of 4.4% within the civilian population.
- b. Potentially harmful alcohol misuse remains a common behavioural problem but has declined steadily from 16% in 2004/6 to 10% in 2014/16.
- c. The rate of common mental disorders (CMD) has remained stable at around 20% from 2004/6 to 2014/16.
- d. The prevalence of PTSD is not uniform across groups. In still serving regular personnel, the overall prevalence is 4.8%. Amongst ex-regular veterans the rate is significantly higher at 7.4%.

Combat Role

- e. Being in a combat role during one's last deployment is consistently associated with an increase in PTSD. In 2014/16, PTSD in serving regular combat personnel was 6% whereas in serving combat service support personnel it was 4%. Among ex-service regulars who had not deployed the rate of PTSD was 5% and for those who had deployed the rate of PTSD was 9.4%. We found considerable differences in the rates of PTSD dependent on the role troops had in their last deployment before leaving service. **For those whose last deployment had been in a combat role the rate of PTSD was 17%³ compared to 6% among veterans whose last deployment was in a service support role.**

¹ The main data source for this briefing is the KCMHR cohort study. KCMHR completed three waves of questionnaire-based data collection from serving UK Armed Forces personnel in 2004-6 (phase 1), 2007-9 (phase 2) and 2014-16 (phase 3), with phase 2 surveying recent Service leavers who constituted approximately 50% of the cohort in phase 3. These findings are supplemented with data from a range of other KCMHR research projects, research from Defence Statistics (Health) and US military health research, as well as open sources. The publications produced by KCMHR, ADMMH and associates can be found at www.kcl.ac.uk/research/archive/kcmhr/index1.html

² All reported percentages are rounded up or down.

³ This figure should not be misinterpreted; this does NOT mean that 17% of all personnel who last deployed in a combat role developed PTSD. Factors other than just combat may well explain the PTSD rate in this specific group; we also know that mental health problems are associated with discharge from Service.

Deployment

f. In 2014/16, PTSD was lower among regulars with a history of deployment⁴ (6% non-deployed, 4.4% deployed). This is probably because personnel diagnosed with a mental health problem were then less likely to deploy [known as the healthy worker or healthy warrior effect]. The rate of PTSD in ex-serving regulars was 9%.

Number of deployments

h. Among serving regular Army personnel and Royal Marines there was no evidence that greater number of deployments was associated with any mental health outcomes. This is in contrast to US data which shows worse mental health in those who have deployed more often. US deployments are longer.

2. MENTAL HEALTH (RESERVES)

a. **From the start of the study deployed reservists have had higher rates of PTSD compared to deployed regulars**, these differences have persisted over time. This is most likely due to differences in homecoming experiences. What is more, PTSD has been consistently higher in deployed reserves versus non-deployed reserves. However, by 2014/16 the prevalence of PTSD in deployed regulars and reserves was the same (7% in each), whilst non-deployed reserves had lower PTSD rates (3%) than non-deployed regulars (5%).

b. **Alcohol misuse was lower in reserves than in regulars across all time points**, but the prevalence in deployed reserves did not decline over time as we have found in regulars. In 2014/16 alcohol misuse was significantly higher among deployed reserves than non-deployed reserves.

c. The increase in mental health problems, and associated difficulties, in deployed reserves compared to non-deployed reserves persisted over five years between 2009/10 and 2014/16 although the nature of the difficulties experienced varied a little. In 2004/6, compared to non-deployed reserves, deployed reserves were more likely to report higher rates of CMD; in 2009/10 they reported higher rates of PTSD and in 2014/16 they reported higher rates of PTSD, CMD and alcohol misuse.

3. SUICIDE AND SELF-HARM

a. **Overall, rates of suicide are lower in the Armed Forces than they are in the general population.** However, in the last five years there was an increase in the rate of suicide among Army males from six per 100,000 in 2014 to 15 per 100,000 in 2018. Whilst the rates of suicide in the Naval service and RAF remain below the UK general population rate, since 2017 the rate in Army men is the same as the UK general rate⁵. Young veterans (aged 16-24) or those classified as early service leavers are also at an increased risk of suicide although this data is now more than 10 years old. This increase is influenced mainly by pre-Service vulnerabilities, such as childhood adversity^{6,7}. Self-harm in Service personnel appears mainly impulsive, is not associated with deployment and is a poor predictor of subsequent increased suicide risk. The longer

⁴ Deployment here refers to a history of any deployment to Iraq or Afghanistan since 2003.

⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972333/20210325_UK_AF_Suicide_National_Statistic_Accessible_Web_ready_2021_O.pdf [MOD official statistics]

⁶ Kapur, N., While, D., Blatchley, N., Bray, I., & Harrison, K. (2009). Suicide after leaving the UK Armed Forces—A cohort study. *PLoS medicine*, 6(3), e1000026.

⁷ Pinder, R. J., Iversen, A. C., Kapur, N., Wessely, S., & Fear, N. T. (2012). Self-harm and attempted suicide among UK Armed Forces personnel: Results of a cross-sectional survey. *International journal of social psychiatry*, 58(4), 433-439.

an individual stays in the military, the lower the suicide risk: **long-serving personnel appear to be an increasingly select and resilient group.**

b. It is not true that “*more Falklands Veterans died of suicide than in conflict*”. But regardless of absolute numbers, what matters is whether the suicide rate is higher among Falkland veterans compared to members of the Armed Forces who did not deploy to the Falklands, or the general population. Defence Statistics (Health) has shown that neither is true.

c. Findings from our cohort study data show that the rates of self-harm have significantly increased from 1.9% among serving personnel and 4.5% among veterans in 2007/09 and to 4.2% and 6.6% in 2014/16 in the two groups respectively. Veterans were more likely to report self-harm than serving personnel. Current mental disorder symptoms, stigmatization, poor social support, suicidal ideation and seeking help from medical sources were all significant determinants of lifetime self-harm.⁸

4. SCREENING

a. KCMHR completed the first ever randomised controlled trial of post-deployment mental health screening. This showed that mental health screening and the provision of tailored advice carried out with around 9000 personnel within 6 to 12 weeks since the end of deployment had no impact on either mental health or help seeking; at present **post deployment screening cannot be recommended.**⁹

b. Pre-deployment mental health screening does not reduce the rate of post deployment mental health problems and fails to accurately detect those at risk of poorer post-deployment mental health. The simplest way of remembering is that for every person that is correctly identified as being at risk, five are incorrectly identified, with unacceptable consequences for the person, family and the Armed Forces themselves. Conversely screening may lead to false reassurance of psychological robustness and be discriminatory.

5. HELP-SEEKING

a. The most recent KCMHR interview study (2015/16) suggested that **help-seeking was increasing** among both serving personnel and those that have left service. One third of those with recent mental health problems had accessed a mental health specialist and half had consulted a GP or Medical Officer¹⁰.

b. Those who misused alcohol were the least likely to seek help and only 7% had not sought any help at all.

c. Ex-serving personnel were less likely to speak to friends and colleagues and other non-medical professionals and serving personnel, but were more likely to visit the GP or Medical Officer than serving personnel.

⁸ Jones, N., Sharp, M-L., Phillips, A., Stevelink, S.A.M. (2019). Suicidal Ideation, Suicidal Attempts, and Self-Harm in the UK Armed Forces. *Suicide and Life Threatening Behaviour: The Official Journal of the American Association of Suicidology*

⁹ Rona, R.J., Burdett, H., Khondoker, M., Chesnokov, M., Green, K., Pernet, D., Jones, N., Greenberg, N., Wessely, S. & Fear, N.T. (2017). Post-deployment screening for mental disorders and tailored advice about help-seeking in the UK military: a cluster randomised controlled trial. *The Lancet*, 389, 1410-1423.

¹⁰ Stevelink, S. A., Jones, N., Jones, M., Dyball, D., Khera, C. K., Pernet, D., ... MacManus, D. (2019). Do serving and ex-serving personnel of the UK armed forces seek help for perceived stress, emotional or mental health problems?. *European Journal of Psychotraumatology*, 10 (1), 1556552.

d. One paradox is that nearly everybody said that they would be willing to use mental health services for their mental health problems, while in practice only about a third actually did so. The commonest reasons for not seeking help are the belief that their emotional problem is not sufficiently serious to warrant support, they wish to deal with the problem themselves or question the quality of mental health services.

e. Although mental health-related stigmatisation prevents help-seeking, military personnel's preference to deal with problems oneself is a bigger barrier to care. We found that levels of stigma in the UK military have been declining since 2008 and also that recent service leavers are seeking help more rapidly than ever before. Stigma appears to be particularly problematic for those who have not accessed mental healthcare before.

f. Unwillingness to use mental health services is a general problem across society and is not specific to the UK Armed Forces. The same pattern of help-seeking and reluctance to seek care has been found in the US and Canadian militaries and the Australian Defence Force.

6. VIOLENCE AND OFFENDING

a. Defence Statistics (Health) estimates that 3.5 % of the current prison population have served in the UK military. This is lower than expected statistically, and contrasts with a common press narratives.

b. Although they are not more likely to be in prison, in absolute terms ex-service males still constitute a significant subset of the adult male prison population and are the largest occupational group. They are also more likely to be in prison for a sexual offence or violence against the person than the general population. Rates of acquisitive offending are, however, lower than in the general population.

c. Self-reported violence increases after deployment and is associated with pre-Service adversity, alcohol misuse and PTSD. Personnel who deployed in a combat role are twice as likely to report violence on return from deployment as other troops. However, higher levels of pre-enlistment adversity and deployment related mental health problems account for much of this increased risk.

d. **Those who have served have a lower lifetime rate of criminal convictions than those who have not.** However, this is not true for violent convictions, which are increased. The main associations of offending are age, gender and previous convictions. Violent offending is not associated with deployment *per se*, but is associated with experiencing combat and the link is mediated by alcohol, traumatic exposures and PTSD.

e. National data from Liaison and Diversion services collected in 2015-2016 found that among veterans, the presence of an anxiety disorder [which might include PTSD] was associated with interpersonal violence. Alcohol misuse was associated with increased motoring offences and substance use was associated with increased acquisitive offending.¹¹

¹¹ Short, R., Dickson, H., Greenberg, N., MacManus, D. (2018) Offending behaviour, health and wellbeing of military veterans in the criminal justice system. PloS one, 13(11), e0207282.

7. RELEVANT IN-SERVICE POLICY INITIATIVES

Reserves Support

a. The Veterans and Reservists' Mental Health Programme (now incorporating the medical assessment programme) was set up in response to KCMHR findings on Reservists' mental health. Uptake has been low, but the service appears to be clinically and occupationally effective.

Trauma Risk Management

b. The peer support programme TRiM (Trauma Risk Management) aims to help trauma-exposed troops get good support and to encourage seeking professional care where that is needed. A randomised controlled trial found that TRiM was a safe and acceptable approach; it is now being used across the UK military. TRiM may help people access social support and mental healthcare following deployment and in non-military studies its use is associated with a reduction in traumatic-event related sickness absence and an increase in seeking professional help.

Leadership, Morale and Cohesion

c. Our deployment studies confirm that good leadership, morale and cohesion are the main determinants of good mental health when deployed, rather than traumatic incidents. Events at home, including relationship problems and lack of family support are as important as combat exposure in impacting troop's mental health.

Deployment Clinical Care

d. Our evaluations of clinical support provided during operations suggest that the provision of mental healthcare in the operational setting is associated with good occupational outcomes both in the short and longer-term.

Third Location Decompression

e. Decompression is popular, although personnel are initially reluctant to engage with it. Our research suggests that it has a modest positive impact upon mental health and alcohol misuse, but not post-deployment readjustment and is less helpful for troops with the highest levels of combat exposure. It is equally useful for individual augmentees and personnel in formed units.

UK Battlemind

f. In a large randomised controlled trial, a UK version of the US post-deployment Battlemind training system did not reduce rates of PTSD, but led to a modest decrease in problem drinking.

Physical Ill-health

g. Mental health problems are increased in severely physically injured service personnel, but there is an even greater impact on personnel who develop severe general medical conditions whilst deployed.

h. Older (aged >65) veterans reported having ongoing physical health difficulties, such as deafness, which were perceived to be due to exposure to workplace hazards. These problems appear more common in veterans compared with non-veterans.

8. RISK-TAKING

a. Our previous studies have shown that risk-taking behaviour such as unsafe driving or alcohol misuse was more common among regulars and reserves who deployed to Iraq or Afghanistan. This had declined in 2009/10 and continued to do so up to 2014/16. A number of factors including increasing age of many cohort participants, the introduction of a hard-hitting in-service road safety campaign and changes in driving practices on deployment may have contributed to the decline. However, for deployed reserves, but not regulars, the rate of risky driving remained elevated following deployment.

b. Our study showed that younger age, being in a relationship, probable PTSD, common mental health difficulties and traumatic brain injury were associated with risk-taking behaviours in veterans. A direct association between PTSD symptom clusters such as hyperarousal increased risk-taking.¹²

9. FAMILIES & RELATIONSHIPS

a. The majority of regulars and reserves participating in the cohort study reported satisfaction with their intimate relationships and deployment had no effect on this finding. However, divorce or relationship breakdown was higher in those deployed to Iraq or Afghanistan particularly for regulars.

b. Deployed personnel in Iraq and Afghanistan from 2009-2014 who reported negative perceived effects of deployment on intimate relationships and children were more likely to experience distress and PTSD symptoms.

10. PTSD TRAJECTORIES

a. Our study using longitudinal data collected from UK military personnel over the course of 14 years found that **90% of UK AF personnel were resilient to symptoms of PTSD**. Approximately 10% of the cohort experienced PTSD symptoms at some point over the course of 14 years.

b. Vulnerability factors for PTSD include childhood adversity and childhood antisocial behaviour, alcohol misuse and time since leaving service. Younger age and having a combat role were associated with a worse prognosis of PTSD.¹³

11. MILD TRAUMATIC BRAIN INJURY (mTBI)

a. Our studies have found that mTBI is associated with PTSD symptoms among personnel deployed to Afghanistan in 2011.

b. Longitudinal study data showed that mTBI reported by personnel deployed to either Iraq or Afghanistan in 2007-2008 was associated with dizziness and loss of concentration 7 years later, but not with other post-concussion symptoms. The prevalence of most post-concussion symptoms increased over time independently of mTBI.

12. JUNIOR ENTRANTS

a. Findings from our cohort study data collected between 2014 and 2016 found that there was no evidence of an increase in symptoms of CMD and PTSD in junior entrants (recruited aged 16-17 years old)

¹² Ashwick, R., Syed, S., Murphy, D. (2018) Exploring demographics and health as predictors of risk-taking in UK help-seeking veterans. *Healthcare*, 6 (2), e6020058.

¹³ Palmer, L., Thandi, G., Norton, S., Jones, M., Fear, N. T., Wessely, S., Rona, R. J. (2019). Fourteen-year trajectories of posttraumatic stress disorder (PTSD) symptoms in UK military personnel, and associated risk factors. *Journal of psychiatric research*, 109, 156-163.

relative to standard entrants in the full sample. However, there was an increase in alcohol misuse, multiple somatic symptoms and self-harm in junior entrants who commenced adult service after April 2003. Monitoring these concerns in new joiners is advisable.¹⁴

b. **Junior entrants remain in adult service for longer and do not report more difficulties than standard entrants when they leave.**

13. MORAL INJURY

a. Our studies are the first to show that moral injury, or the psychological distress that can be experienced after events which violate one's moral or ethical code, is experienced by UK AF veterans. Moral injury was found to result following acts of commission, omission and betrayal during military service. Exposure to potentially morally injurious events was significantly associated with likely PTSD, CMD and suicidal ideation.^{15,16}

b. No validated treatment for moral injury-related distress exists and clinicians often report difficulty providing care to veterans with moral injury. We are collaborating with Combat Stress on a leading a feasibility study to develop a treatment manual for moral injury related mental health difficulties.

14. VETERANS

a. Veteran hardship can include both mental health issues such as PTSD, CMD and alcohol misuse and socioeconomic issues, such as unemployment and financial difficulties. Our research has found that veteran hardship is more related to underlying socioeconomic factors (e.g. education, childhood adversity) than military factors.

b. Those with medical and unplanned discharges are more at risk of veteran hardship.

c. Around 20% of Service leavers take unemployment benefits at some point after leaving; however this is largely concentrated into the first few months after leaving, and drops to around 2% of veterans by two years after leaving.

d. Disability benefits are less frequently claimed (around 1.5% of veterans at any given time), but are more persistent and the proportion does not decrease over time.

15. IMPACT of COVID-19 PANDEMIC ON VETERANS HEALTH AND WELLBEING – VETERANS-CHECK

a. Compared to our most recent cohort study sample (2014-2016), during the pandemic (June-September 2020), veterans reported a decrease in hazardous drinking of 48.5% to 27.6%, and levels of CMD remained stable.

b. Veterans reported similar levels of loneliness (27.4%) compared to the general population during the pandemic, with loneliness associated wellbeing and health, having children, and having caring responsibilities.

¹⁴ Jones, M., Jones, N., Burdett H, Bergman B.P., Fear, N.T., Wessely, S. & Rona, R.J. (2021). Do Junior Entrants to the UK Armed Forces have worse outcomes than Standard Entrants? *BMJ Mil Health* doi: 10.1136/bmjmilitary-2021-001787

¹⁵ Williamson V., Murphy, D., Stevelink, S.A.M., Allen, S., Jones, E., & Greenberg, N. (2020). The impact of trauma exposure and moral injury on UK military veterans: a qualitative study. *European Journal of Psychotraumatology*, 11:1.

¹⁶ Williamson, V., Murphy, D., Stevelink, S.A.M. et al. (2021). The impact of moral injury on the wellbeing of UK military veterans. *BMC Psychol* 9, 73.

c. The COVID-19 stressors of reporting difficulties with family or social relationships, boredom, and difficulties with health, were statistically significantly associated with higher rates of CMD, hazardous drinking and loneliness, even after adjustment for previous mental health/hazardous alcohol use, suggesting a COVID-19 impact.

d. Overall, it appears that veterans have experienced the pandemic in similar ways to the general population. Whilst stable levels of CMD and reduction in alcohol use are welcome, alcohol use remains at higher levels than the general population. Additionally, there remains a substantial number of veterans who would benefit from accessing mental health and alcohol treatment/support services.

16. OLDER ADULTS

a. We did not identify any significant relationship between mental ill-health and dementia in UK military veterans over 65. The results also show no difference between those veterans with a diagnosis of dementia and those without a diagnosis of dementia for most of the dementia risk factors explored.

CONCLUSIONS

a. In general terms, there have been modest, but important changes in the overall mental health of UK Armed Forces personnel throughout our period of study (2004-2021). There has been a moderate increase in PTSD in recent years, largely accounted for by increases among ex-service cohort members.

b. In still serving regulars with a combat role, PTSD increased from 6% in 2004/6 to 7% in 2009/10 and remained stable at 7% in 2014/16; amongst regulars in a non-combat or support role, PTSD increased from 3% in 2004/6 to 4% in 2014/16. There is little evidence of a “tidal wave” or “tsunami” of mental ill-health. However, rates of PTSD in those who have left service (overall 7.4%), especially those who have deployed in a combat role (17%), do appear to be elevated. This is a different picture to that reported from the USA.

c. Harmful alcohol use has decreased over the years, as it has in the general population, but still remains high and is now significantly increased in deployed reserves. Higher rates of PTSD and CMD continue in deployed reserve personnel .

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