Post-deployment screening for mental disorders and tailored advice about help-seeking in the UK military: a cluster randomised controlled trial

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Summary

Background The effectiveness of post-deployment screening for mental disorders has not been assessed in a randomised controlled trial. We aimed to assess whether post-deployment screening for post-traumatic stress disorder (PTSD), depression, anxiety, or alcohol misuse was effective. We defined screening as the presumptive identification of a previously unrecognised disorder using tests to distinguish those who probably had the disorder from those who probably did not so that those people with a probable disorder could be referred appropriately, and assessed effectiveness and consequences for help-seeking by the odds ratio at follow-up between those receiving tailored help-seeking advice and those who received general mental health advice.

Methods We did a cluster randomised controlled trial among Royal Marines and Army personnel in the UK military after deployment to Afghanistan. Platoons were randomly assigned (1:1 initially, then 2:1) by stratified block randomisation with randomly varying block sizes of two and four to the screening group, which received tailored help-seeking advice, or the control group, which received general mental health advice. Initial assessment took place 6–12 weeks after deployment; follow-up assessments were done 10–24 months later. Follow-up measures were the PTSD Checklist–Civilian Version, Patient Health Questionnaire-9, Generalised Anxiety Disorder-7 scale, Alcohol Use Disorder Identification Test (AUDIT), and self-reported help-seeking from clinical and welfare providers comparing those receiving tailored advice and those receiving only general advice. All participants and all investigators other than the person who analysed the data were masked to allocation. The primary outcomes were PTSD, depression or generalised anxiety disorder, and alcohol misuse at follow-up. A key secondary outcome was assessment of whether post-deployment screening followed by tailored advice would modify help-seeking behaviour. Comparisons were made between screening and control groups, with primary analyses by intention to treat. This trial is registered with the ISRCTN Registry, number ISRCTN19965528.

Findings Between Oct 24, 2011, and Oct 31, 2014, 434 platoons comprising 10 190 personnel were included: 274 (6350 personnel) in the screening group and 160 (3840 personnel) in the control group. 5577 (88%) of 6350 personnel received screening and 3996 (63%) completed follow-up, whereas 3149 (82%) of 3840 received the control questionnaire and 2369 (62%) completed follow-up. 1958 (35%) of 5577 personnel in the screening group declined to see the tailored advice, but those with PTSD (83%) or anxiety or depression (84%) were more likely than non-cases (64%) to view the advice (both p<0·0001). At follow-up, there were no significant differences in prevalence between groups for PTSD (adjusted odds ratio 0·92, 95% CI 0·75–1·14), depression or anxiety (0·91, 0·71–1·16), alcohol misuse (0·88, 0·73–1·06), or seeking support for mental disorders (0·92, 0·78–1·08).

Interpretation Post-deployment screening for mental disorders based on tailored advice was not effective at reducing prevalence of mental health disorders nor did it increase help-seeking. Countries that have implemented post-deployment screening programmes for mental disorders should consider monitoring the outcomes of their programmes.

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Introduction

The UK deployed more than 220 550 personnel to the Afghanistan and Iraq conflicts between 2001 and March 31, 2014,[1] about 37% of whom were deployed more than once.[2] 632 (0·3%) personnel died and 838 (0·4%) were seriously injured during those conflicts,[3,4] similar percentages, but not absolute numbers, to those of US forces. The intensity of operations and high proportion of the total UK Armed Forces that participated in these conflicts created an expectation that the conflict would have a substantial effect on the mental health of UK service personnel.[5] Although a higher prevalence of mental health problems was noted in personnel in direct combat roles deployed to Iraq and Afghanistan, an estimated 4% of regular UK personnel had post-traumatic stress disorder (PTSD), 20% had psychological distress, and 16% had alcohol misuse,[6] which are similar prevalences to those among personnel who did not deploy to

Research in context

Evidence before this study

On completion of the study on Jan 18, 2016, we searched MEDLINE, Embase, and PsycINFO for studies on post-deployment screening for the terms ("mental disorders" OR "psychological illness" OR "mental health" OR "posttraumatic stress disorder" OR "PTSD" OR "depression" OR "anxiety" OR "alcohol misuse" OR "alcoholism") AND "post-deployment" AND "screening" AND ("RCT" OR "randomised controlled trial") AND "effectiveness", which yielded 11 publications, five of which were duplicates, and none of which were relevant to the aim of this study. We changed the term "post-deployment" to "military", "armed forces", "army", "navy", or "air force" to make our search less restrictive. The amended search provided 68 publications, 16 of which were duplicates, and none of which were considered relevant to our study. We did a similar search, including one of the terms "help-seeking", "treatment seeking", "health service provision", or "service use" for the effects on help-seeking on June 20, 2016. We identified two additional papers from these search criteria, neither of which were relevant to this study. Post-deployment screening for mental disorders was not a consideration in the military until after the Gulf War in 1991. Post-deployment screening for mental disorders was made mandatory by US Congress in 1998, and since 2003 screening has been implemented among US forces and developed and modified during the Iraq and Afghanistan conflicts.

Added value of this study

This is, to our knowledge, the only randomised controlled trial of post-deployment screening for mental disorders. The USA, Canada, Australia, and the Netherlands have implemented post-deployment screening already and are unable to undertake a randomised controlled trial without stopping their current programmes. The disorders explored in our study are those usually assessed in screening programmes for mental disorders. The results of our study should help to develop or modify models of post-deployment screening programmes implemented in countries where screening is mandatory. Armed Forces that are considering the introduction of post-deployment screening could benefit from the findings of our study.

Implications of all the available evidence

Findings from our study suggest that post-deployment screening based on tailored advice is not effective in reducing the prevalence of mental disorders, nor does it promote help-seeking behaviour. This finding is not surprising since in most studies around half of military personnel with a mental disorder do not seek health care, many of those who seek health care do not go beyond the initial assessment, and a large percentage of those who start treatment do not finish it. We found that as many as a third of personnel who were given the opportunity to receive tailored advice chose not to view it. Screening programmes and procedures vary between countries. Each country will need to assess whether differences between their programmes and our study could make a difference to the results presented here. Countries that have implemented post-deployment screening should have a monitoring system in place to assess the psychological and financial effects of their programmes.

Iraq or Afghanistan.[6,7] Even though prevalence of PTSD was not as high as some anticipated,[8] the absolute numbers are substantial. Mental health screening might be one way to address this mental health burden. Several countries have implemented a mental health screening programme on return from deployment. Screening uses simple tests that are not intended to be diagnostic to distinguish between people who might and those who might not have a disorder to try to provide early diagnosis and appropriate treatment for those who might have the disorder and mitigate longer-term health consequences. The US Armed Forces has implemented a post-deployment screening programme for mental disorders, with repeated assessments in the 30 months after the end of deployment.[9] Canada, Australia, and the Netherlands also have post-deployment screening procedures for mental disorders.[10,11] The drive to implement mental health screening arises from findings that at least half of military personnel with a probable mental disorder do not seek help,[8,12] many seek help too late,[13] chronicity is associated with slower recovery,[9] screening might help to overcome stigma associated with mental disorder,[14] and government-supported screening programmes show a commitment to providing preventive services to military personnel returning from deployment.[15] However, so far, no randomised controlled trial has assessed the effectiveness of screening or its effect on help-seeking behaviour. Because the UK has not mandated a post-deployment screening programme for mental disorders, we had the opportunity to do a randomised controlled trial of screening, which would not have been possible in countries where screening was already national policy, in part because of the potential ethical and public opinion effect of discontinuing an established programme. So far, only observational studies have measured the effect of post-deployment screening; such studies showed that only a subset of those screening positive for mental disorders sought and received an adequate number of therapy or treatment sessions.[16] Studies without a randomisation and control element cannot answer the key questions regarding the effectiveness of such a programme or its effect on help-seeking.

We aimed to assess whether offering tailored help-seeking advice after assessment for possible PTSD, depression or anxiety, and alcohol misuse was effective at reducing prevalence of these disorders. The secondary