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Do Junior Entrants to the UK Armed Forces have worse outcomes than Standard

Entrants?

ABSTRACT 300 words

Introduction

The UK is the only permanent member of the UN Security Council that has a policy of recruiting 16 and 17 year olds into its regular Armed Forces. Little is known about the consequences of enlisting as a Junior Entrant (JE), although concerns have been expressed. We compare the mental health, deployment history and pre- and post-enlistment experiences of personnel who had enlisted as JEs with personnel who joined as Standard Entrants (SEs).

Method

Participants from a large UK military cohort study completed a self-report questionnaire between 2014 and 2016 that included symptoms of probable post-traumatic stress disorder (PTSD), common mental disorders (CMD), alcohol consumption, physical symptoms and lifetime self-harm. Data from regular non-officer participants (n=4447) from all service branches were used in the analysis. JEs were defined as having enlisted before the age of 17.5 years. A subgroup analysis of participants who had joined or commenced adult service after April 2003 was carried out.

Results

JEs were not more likely to deploy to Iraq or Afghanistan but were more likely to hold a combat role when they did (odds ratio 1.28, 95%CI 1.03-1.60). There was no evidence of an increase in symptoms of common mental disorders, PTSD, multiple somatic symptoms (MSS), alcohol misuse or self-harm in JEs in the full sample but there was an increase in alcohol misuse (odds ratio 1.84, 95% CI 1.18-2.87), MSS (odds ratio 1.51, 95% CI 1.04-2.20) and self-harm (odds ratio 2.13, 95% CI 1.15-3.95) in JEs who had commenced adult service

after April 2003. JEs remain in adult service for longer and do not have more difficulties when they leave service.

Conclusions

JEs do not have worse mental health than SEs but there is uncertainty in relation to alcohol misuse, MSS and self-harm in more recent joiners. Monitoring these concerns is advisable.

Key Messages

Concerns have been raised about the UK policy of recruiting 16 and 17 year olds into the regular Armed Forces.

Using data from 4447 participants in a large cohort of UK Armed Forces, we compared those enlisted as Junior Entrants (JE) with Senior Entrants (SE).

JEs were not more likely to deploy to Iraq or Afghanistan than SEs but were somewhat more likely to deploy in a combat role.

Despite that, we found no evidence of an increase in common mental disorders, PTSD, multiple somatic symptoms (MSS), alcohol misuse or self-harm in JEs.

However, there was an increase in alcohol misuse, MSS and self-harm in JEs who had enlisted since April 2003.

JEs remain in adult service for longer and a higher proportion progress to senior ranks.

INTRODUCTION

The minimum age of enlistment into the UK Naval Services, Army or Royal Air Force (RAF) is 16 years. Procedures for enlistment vary between the individual services. Junior soldiers aged 16 or 17 years join the Army Foundation College (AFC) in Harrogate for a 23-week or a 49-week course at the end of which they will have completed initial training (phase 1

training), go on to phase 2 training and be old enough to serve as soldiers in a regular Army unit. The Royal Navy (RN) and RAF differ in that they do not have specific establishments for junior entry training; 16 and 17 year old recruits complete initial training for 10 weeks at HMS Raleigh and RAF Halton respectively alongside those joining at 18 years of age. Those joining the Army as adults complete 14 weeks of phase 1 training at one of three regular Army training establishments. Before 1998, when AFC Harrogate was founded, junior soldiers joined many different training establishments around the country.

In the year up to the end of March 2019, 1,810 individuals aged 16 and 17 years joined the Army, 29% of the total intake for that year. The corresponding numbers for the Naval Services and RAF were 430 (15%) and 270 (14%) respectively.(1)

There has been concern for a number of years around the possible adverse consequences of the long standing policy of allowing those aged 16 or 17 years to join the UK Armed Forces, even whilst accepting that no one is allowed to deploy on operations until they have reached the age of 18 years.

Campaigning groups such as Forces Watch and Medact contend that young people who join the Army at 16 and 17 years of age are more likely to be channelled into Infantry regiments and are thus at higher risk of fatality during deployment and poorer mental health outcomes on return than those who join at 18 years or older.(2, 3) The UN Committee on the Rights of the Child has recommended raising the age of recruitment to 18 years. Among the concerns expressed by the UN committee were that although new guidelines and procedures have served to reduce the number of children deployed into areas where they can be exposed to hostilities and that no child has been deployed since July 2005, children may still be potentially deployed to areas of hostilities and involved in hostilities; active recruitment policy of 16 and 17 year olds may lead to the possibility of targeting those children who come from vulnerable groups; that parents and/or guardians are only involved at the final

stage of recruitment.(4) The UK Parliamentary Joint Committee on Human Rights recommended that the UK adopt the UN CRC recommendations fully in 2009,(5) a view reiterated in 2011 when the committee also recommended that the initial period of service be equalised to four years for junior and adult entrants.(6) In 2005, a House of Commons Defence Select Committee in its report on Duty of Care recommended that the MoD examine the potential impact of raising the recruitment age for all three Services to 18 years.(7) An Army review of Junior Entry was released in 2019 and concluded that the Junior Entry scheme works well in attracting the main target audience but that aligning the minimum commitment of under 18 year olds to those who join at 18 or older needed more analysis to understand the impact on manning levels and operational effectiveness.(8)

There are many anecdotes about the benefits to individuals of early enlistment and also much speculation about the potential harms but there is little empirical evidence to resolve the issue. The XXXXX cohort data allows us to compare deployment, pre-service and post-service experiences and mental health outcomes in those who joined service as Junior Entrants (JEs) and completed basic training with those who joined service as Standard Entrants (SEs) and completed basic training.

METHODS

Study design and participants

The XXXXX cohort study of UK Armed Forces personnel was initiated in 2004 to monitor the health of individuals who took part in the initial phase of the conflict in Iraq in 2003 (TELIC 1). Figure 1 describes the three phases of the cohort study.(9-11)

Data collected at phase 3 were used for this analysis. The overall response rate at phase 3 was 44.3%. The sample for the main analysis was restricted to regular personnel; commissioned officers were excluded (officers are not recruited under 18 years of age).

Age at enlistment was calculated using date of first joining service and date of birth. JEs from each service branch were defined as those who joined service below the age of 17.5 years; the upper age qualification for entry to the Army Foundation College is under 17.5 years. SEs were those who joined service at age 17.5 years or older. For those who were still serving, length of adult service was calculated as the date of questionnaire completion minus the date at which an individual attained the age of 17.5 years; for those who had left service, date of leaving service was used rather than date of questionnaire completion. The sample size for analysis was 4447; 1197 JEs and 3250 SEs.

Measures

Information was collected from participants via a self-completion questionnaire. Additional service data, for example, date of first joining service, date of leaving service and service branch or trade, was provided by the MoD (Defence Statistics).

We assessed symptoms of common mental disorder (CMD) using the 12-item General Health Questionnaire (GHQ-12);(12) probable posttraumatic stress disorder (PTSD) using a modified version of the National Centre for PTSD Checklist (PCL-5) that retained the 17 items of the original PCL-C(13) and appended new items from the PCL-5,(14) enabling us to construct a 20 item PCL-5 scale; multiple somatic symptoms (MSS) using the Patient Health Questionnaire (PHQ-15)(15); and alcohol misuse, using the 10-item World Health Organization Alcohol Use Disorders Identification Test (AUDIT).(16) Binary outcome variables were defined using the following cut-off scores: 4 or more for the GHQ-12 (scores range from 0 to 12) denoting probable CMD,(17) scores of 38 or more for the PCL-5 (scores range from 0 to 85),(18) scores of 10 or more for the PHQ-15,(15) and 16 or more for the AUDIT (scores range from 0 to 40), defined as hazardous drinking that is harmful to health which we have termed alcohol misuse.(16, 19) Lifetime deliberate self-harm was ascertained from a single question “Have you ever purposely harmed yourself (e.g. overdose)?”.

Participants were asked about two indicators of combat intensity experienced during their most recent deployment to Iraq or Afghanistan, namely how often they were outside their base in a hostile area and how often they believed themselves to be in danger of being injured or killed.

Two measures of adversity when growing up were used based on a 16 item scale. The measures, derived from a factor analysis, were: childhood adversity relating to family relationships, and childhood externalising behaviour.(20) Questions about employment and financial status and being in trouble with the law were asked of participants who had left service. Other variables were: sex, age at completion of the phase 3 questionnaire, education level, service, rank and serving status (serving or discharged).

Analysis

Univariable and multivariable logistic regressions were carried out examining the association between service entry type (JE or SE) and mental health outcomes (PTSD, CMD, MSS, alcohol misuse and self-harm), length of adult service, deployment experiences, deployment role, and pre and post service experiences. Multivariable analyses were adjusted for sociodemographic factors (sex, age, and educational status) and military factors (rank and Service), considered as potential confounders for these analyses. We repeated the analysis restricted to a smaller subsample of participants who entered or commenced adult service after 2003 (phase 2 and phase 3 replenishment samples) to examine a possible bias in the entire sample whereby personnel who joined service in the early decades, and who were sampled into our cohort in 2003, represent a subsample of personnel who remained in service for a long period and for whom age at joining may no longer be salient. Analyses were weighted to account for the different sampling strategies used and for response rate differences at phase 3.(11) All analyses were performed using the statistical package STATA (version 16.0), with survey commands used to account for sampling and response weights.

Weighted percentages and odds ratios (ORs) are presented along with unweighted cell counts. We considered p values less than 0.05 to be statistically significant.

RESULTS

Of the 4447 participants who completed a phase 3 questionnaire and were eligible for this analysis, 1197 (32% weighted) had joined service as JEs. Social demographic and military characteristics of SEs and JEs are shown in table 1. At the time of questionnaire completion, JEs in this sample had a slightly higher median age than SEs: 36 (IQR 29-45) years and 35 (IQR 29-42) years respectively but were over represented in both the youngest and the oldest age groups. JEs had lower educational attainment and were less likely to be female than were SEs. There was no difference in marital status between SEs and JEs. The proportion of JEs was higher in the Army than in the Naval Services or the RAF and a higher proportion of JEs than SEs had attained Senior NCO rank. JEs had served for significantly longer than SEs in adult service among those who had left service and among those who were still serving. Proportionately more JEs than SEs had joined service in the decades before 1990.

Table 1: Social and military demographic characteristics of Standard Entrants (SE) and Junior Entrants (JE) (N =4,447). Whole sample responding at phase 3.

Characteristic	Age at joining service		p-value χ^2 test
	17.5 years or older (SE) N = 3,250 Number (%)	Under 17.5 years (JE) N = 1,197 Number (%)	
Sex at sampling			<0.0001
male	2,837(89.1)	1,110(94.7)	
female	413(10.9)	87(5.3)	
Age band (years)¹			<0.0001
<25	258(4.6)	213(8.5)	
25-29	657(12.7)	117(10.5)	
30-34	812(27.7)	249(25.8)	
35-39	481(16.7)	92(8.4)	
40-49	882(32.9)	408(37.3)	
50 or over	160(5.4)	118(9.5)	
Educational level¹			0.018
No qualifications,	170(5.6)	56(5.2)	
GCSE or NVQ level 1-2	1,041(30.7)	482(36.1)	
A level, NVQ level 3 or degree	2,018(63.8)	653(58.8)	
Marital status¹			0.344
In a relationship	2,592(83.8)	968(85.2)	
Single or ex-relationship	586(16.2)	196(14.8)	
Service¹			<0.0001
Naval Services	528(17.4)	171(15.8)	
Army	1,919(58.6)	831(70.4)	

RAF	803(24.0)	195(13.8)	
Rank²			<0.0001
Senior Non-commissioned officer	1,269(43.4)	668(58.0)	
Junior Non-commissioned officer	1,157(34.3)	337(26.8)	
Other ranks	824(22.2)	192(15.2)	
Serving status¹			<0.0001
Serving	2,171(50.0)	644(40.0)	
Left service	1,079(50.0)	553(60.0)	
Sample			<0.0001
Sampled at phase 1	1,742 (67.7)	834 (78.4)	
Sampled at phase 2 & phase 3 (Replenishment samples)	1,508 (32.3)	363 (21.6)	
Period of joining service			<0.0001
1960 -1979	40 (1.4)	88 (7.3)	
1980-1989	448 (17.3)	372 (33.4)	
1990-1999	855 (32.7)	288 (27.1)	
2000-2009	1303 (38.5)	349 (28.0)	
2010-2012	603 (10.1)	100 (4.1)	
Length of adult service (years)¹	Mean (95% CI)	Mean (95% CI)	p-value (adjusted Wald test)
Serving	13.7 (13.3-14.1)	17.0 (16.3-17.7)	<0.0001
Left service	14.3 (13.7-14.8)	18.1 (17.2-19.0)	<0.0001

Data are number (%). Numbers may not add to totals because of missing data. Percentages are weighted. RAF - Royal Air Force. GCSE – General Certificate of Secondary Education. NVQ – National Vocational Qualification.

¹ at completion of phase 3 questionnaire. ² current rank at completion of phase 3 questionnaire or rank at leaving service.

JEs were not more likely to have deployed to Iraq or Afghanistan than SEs but deployed JEs more often reported that they served in a combat role and spent more time outside their base in a hostile area (Table 2). There was no association between service entry type (JE or SE) and probable PTSD, CMD, MSS, alcohol misuse or deliberate self-harm in both unadjusted analyses and analyses adjusted for social and military demographic variables (Table 3). Further adjustment for adverse childhood experiences had negligible effect.

Table 2: Deployment experiences

	Age at joining service		Unadjusted OR (95%CI)	Adjusted OR¹ (95%CI)
	17.5 years or older (SE) Number (%)	Under 17.5 years (JE) Number (%)		
Deployed to Iraq/Afghanistan	2,238 (68.0)	828(65.4)	0.89 (0.75-1.05)	0.74 (0.61-0.89)
Deployed in combat role in Iraq or Afghanistan	699 (31.5)	298(39.5)	1.42 (1.16-1.73)	1.25 (1.00-1.56)
Time spent outside base in a hostile area				
None to one month	1,606 (71.7)	542 (64.1)	1.0	1.0
More than one month	613 (28.3)	274 (35.9)	1.42 (1.16-1.74)	1.31 (1.05-1.63)
Believed in serious danger of injury or being killed				
Never or sometimes	1,737 (77.0)	632 (72.7)	1.0	
Many times	496 (23.0)	192 (27.3)	1.26 (1.00-1.57)	1.16 (0.92-1.47)

¹adjusted for sex, age group, education, service and rank

Table 3: Association between health outcomes and age of enlistment

	Age at joining service		Unadjusted OR (95%CI)	Adjusted OR¹ (95%CI)
	17.5 years or older (SE) Number (%)	Under 17.5 years (JE) Number (%)		
Probable PTSD (PCL-5 38+)	210(7.6)	72(6.5)	0.84 (0.60-1.17)	0.88 (0.62-1.24)
CMD (GHQ 4+)	768(23.5)	248(21.1)	0.87 (0.72-1.06)	0.93 (0.76-1.14)
MSS (PHQ15 10+)	616(20.6)	220(19.3)	0.92 (0.75-1.13)	0.97 (0.78-1.20)
Alcohol misuse (AUDIT 16+)	317(10.5)	138(11.9)	1.15 (0.89-1.48)	1.07 (0.81-1.40)
Self-harm	190(6.6)	65(6.9)	1.05 (0.74-1.48)	1.21 (0.84-1.75)

¹adjusted for sex, age group, education, service and rank

Before joining the Armed Forces, JEs had experienced more adverse family relationship events than those who enlisted as SEs with a significant trend of increased number of adverse events ($p = <0.01$) but the association was not significant after adjustment (Table 4). JEs had not shown more childhood externalising behaviour. After leaving service, there were no statistically significant differences in unemployment and/or being in trouble with the law between JEs and SEs. In unadjusted analyses JEs reported being in less financial difficulty than SEs but after adjustment there was no difference.

Table 4: Experiences before enlistment and after leaving service

	Age at joining service	Unadjusted	Adjusted OR¹
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			OR (95%CI)	(95%CI)
	17.5 years or older (SE) Number (%)	Under 17.5 years (JE) Number (%)		
PRE-ENLISTMENT EXPERIENCE:				
Childhood adversity score				
None or 1 adversities	1,998(64.9)	705(59.4)	1.00	
2 or 3 adversities	652(19.9)	248(22.7)	1.25 (1.02-1.52)	1.20 (0.97-1.49)
4 or more adversities	468(15.2)	195(17.9)	1.28 (1.03-1.60)	1.13 (0.90-1.49)
Childhood externalising behaviour				
	564(18.3)	259(20.5)	1.15 (0.95-1.40)	0.98 (0.79-1.20)
POST SERVICE EXPERIENCES:				
Unemployment	75(6.9)	25(4.6)	0.65 (0.38-1.13)	0.63 (0.36-1.12)
Financial difficulty	107(10.9)	33(6.7)	0.59 (0.38-0.92)	0.67 (0.41-1.07)
Trouble with police/law	50(5.6)	28(6.4)	1.15 (0.68-1.94)	1.45 (0.84-2.51)

¹adjusted for sex, age group, education, service and rank

Subgroup analysis of SEs and JEs who joined or commenced adult service after April 2003.

In the analysis restricted to a subsample of those joining or commencing adult service since 2003 (the phase 2 and phase 3 replenishment samples), the median age of JEs was 24 (IQR 22-28) years and of SEs was 28 (IQR 25-31) years, with 40% of the JEs being under 25 years

of age compared to 14% of the SEs. There was no association between joining as a JE and deployment to Iraq or Afghanistan, combat role or time spent in a hostile area. Symptoms of CMD and PTSD were not statistically significantly associated with junior entry but MSS, alcohol misuse and lifetime reported self-harm were associated (Table 5). There were no differences in childhood adversity or childhood externalising behaviour between JEs and SEs. We could not assess post service experiences since the number of service leavers was too low. No difference in length of service or attainment of senior rank was apparent possibly because not enough time had elapsed since joining or commencing adult service.

Table 5: Subgroup analysis of JEs and SEs who joined or commenced adult service between April 2003 and March 2013. Association between health outcomes and age of enlistment. N = 1871

	Age at joining service		Unadjusted OR (95%CI)	Adjusted OR¹ (95%CI)
	17.5 years or older (SE) N = 1508 Number (%)	Under 17.5 years (JE) N = 363 Number (%)		
Probable PTSD (PCL 50+)	86 (6.7)	32 (9.1)	1.39 (0.85-2.28)	1.49 (0.89-2.47)
CMD (GHQ 4+)	387 (26.1)	92 (29.1)	1.16 (0.85-1.59)	1.23 (0.87-1.73)
MSS (PHQ15 10+)	247 (17.7)	68 (22.2)	1.33 (0.94-1.88)	1.51 (1.04-2.20)
Alcohol misuse (AUDIT 16+)	145 (10.5)	60 (19.0)	2.00 (1.36-2.96)	1.84 (1.18-2.87)
Self-harm	86 (6.2)	25 (10.9)	1.84 (1.08-3.15)	2.13 (1.15-3.95)

¹adjusted for sex, age group, education, service and rank

Demographic differences between JEs who joined service after April 2003 and those who joined in earlier periods were similar to the demographic differences between SEs who joined after April 2003 and those who joined in earlier periods.

DISCUSSION

This study did not find that Junior Entrants from any service branch are more likely to deploy once they reach the age of 18. However, as previously postulated,(2) when deployed, they more often held a combat role. One could then argue that would make them more vulnerable to adverse mental health outcomes, but this was not the case. There were no significant differences between those who had enlisted as JEs compared to those who joined as SEs in respect of probable PTSD, CMD, MSS, hazardous alcohol use or lifetime self-harm.

However, among the smaller subsample of more recent joiners, alcohol misuse, MSS and lifetime self-harm was associated with junior entry.

The second argument raised in parliamentary debates and House of Commons Select Committees is that JEs more often than SEs come from disadvantaged backgrounds and lack the educational qualifications and skills that would equip them for employment once they leave the Armed Forces.(21) Although the somewhat higher adverse family relationship scores reported by JEs provides some evidence of a more disadvantaged background, after adjustment for social and military demographic factors the association was no longer significant. JEs did not report significantly more childhood externalising behaviour than SEs. Although significantly more JEs had lower educational attainment compared to SEs, a considerable proportion of JEs (58.8%) had achieved qualifications equivalent to 'A' levels by the time of questionnaire completion. Educational attainment does not cease on joining the Armed Forces; there is a large Adult Education service within the Armed Forces and

there are various opportunities to gain National Vocational Qualifications (NVQ) and other qualifications.

The alternative view that entering service at 16 or 17 years of age gives opportunities for young people from vulnerable environments who may not have engaged with the educational system to thrive may have some weight. This is supported by our previous finding that joining the Armed Forces is associated with a reduced, not increased, risk of acquiring a criminal conviction compared to the rest of the population, even before pre service social disadvantage is taken into account, the exception being convictions for violent offences which increase in those with direct combat exposure.⁽²²⁾ However, unlike our study of criminal offences, we do not have comparative data from young people of similar social and educational background who did not join the Armed Forces to test the assertion that joining service as a JE compensates for earlier disadvantage. We are not aware of any studies with such data, so the arguments for and against this assertion remain unclear. Among the veterans in this study, there was no evidence that those who had joined service as JEs were disadvantaged compared to SEs once they leave service.

The cost of training a JE is higher than the cost for a SE. For the year 2016-17, the cost per recruit at the Army Foundation College Harrogate was £86,000 for the long course (recruits destined for Infantry regiments or Armoured Corps) and £37,000 for the short course (recruits destined for more technical Arms). The equivalent costs for adult recruits were £27,000 for Infantry Phase 1 training and £31,000 for more technical Arms.⁽²³⁾ To justify the increased cost of recruiting 16- and 17-year olds it would be useful to be able to demonstrate that personnel who joined as JEs serve for longer and go on to hold a more senior rank. In this study, the average length of time spent in adult service among service leavers was four years longer for JEs than SEs, similar to the three-and-a-half-year difference in average length of service reported in answer to a Parliamentary question in 2017.⁽²⁴⁾ The Minister of State

for Defence stated that the average length of service for a soldier enlisting over 18 years old was nine years and nine months whereas for a soldier enlisting under 18 years old it was 13 years and two months. Furthermore, a higher proportion of JEs than SEs in this cohort had gained the rank of senior NCO.

There is a chance that participants who joined service in the early decades, and who were sampled into our cohort in 2003, represent a subsample of personnel who were particularly successful and remained in service for a long time. Having had a successful career in service for many years may have attenuated any differences in current mental health due to mode of enlistment. However, a sensitivity analysis excluding participants serving before April 2003 showed that JEs were no more likely to have deployed to Afghanistan or Iraq than SEs nor to have served in a combat role. PTSD and common mental disorders were not associated with having joined as a JE but reporting multiple somatic symptoms was. The JEs, who were on average four years younger than SEs in this restricted sample, had twice the odds of alcohol misuse and twice the odds of reporting episodes of lifetime self-harm. The increased odds of reporting lifetime self-harm and the higher propensity to misuse alcohol among more recent JEs compared to SEs may point to a higher proportion of more vulnerable young people joining service at 16 or 17 years of age than did so in earlier times. Many more 16 year olds now opt to stay in education, for example in 1971/2, 43% of 16 year olds were in full time education but that had risen to 73% in 2000/2001 and 85% in 2009/10 reducing the pool of potential JE recruits and possibly changing the vulnerability characteristics of the young people in that pool.(25)

Strengths and limitations

This study is based on a large sample with a satisfactory response rate given the long period under consideration. The majority (58% (weighted 71%)) of participants in this study were sampled from Armed Forces personnel who were in service in 2003 but could have joined the

military in any of the preceding decades as long ago as the 1960s or 1970s. The remainder joined service between April 2003 and March 2013. Participants were not sampled from a population of personnel at recruitment and we have no data about individuals who joined at the same time but who had not remained in service until the time of sampling.

The assessment of self-harm was based on a single question.

Conclusions

In conclusion, the XXXXX cohort data allows us to address many, but not all, of the concerns raised about junior entry into the UK Armed Forces. This is the first large study to carry out an analysis of the consequences of recruiting JEs into the UK Armed Forces. Compared to adult entrants, we did not find any evidence that they were more likely to be deployed but that, when deployed, they were slightly more likely to hold a combat role. Despite that, they did not report an excess of symptoms of common mental disorders or PTSD, but there was evidence of an association with alcohol misuse, reporting multiple somatic symptoms and lifetime self-harm among those joining service after April 2003. There is no evidence of increased unemployment, financial difficulties or being in trouble with the law in the JEs compared to SEs when they leave service. Finally, JEs are more costly to train than SEs but that may be balanced by the longer period in service and the higher proportion that progress to senior ranks.

Figure 1 Cohort study design

¹ Deployed to Afghanistan between April 2006 and April 2007

² Joined trained strength between April 2003 and April 2007

³ Joined trained strength August 2009 and March 2013

COMPETING INTERESTS

Declared on submission to maintain anonymity.

ACKNOWLEDGMENTS

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FUNDING

Declared on submission to maintain anonymity.

DATA SHARING

The study remains in progress and data are not currently available for sharing.

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