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Influence of childhood adversity on health among male UK military personnel

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Background Exposure to childhood adversity may explain why only a minority of combatants exposed to trauma develop psychological problems.

Aims To examine the association between self-reported childhood vulnerability and later health outcomes in a large randomly selected male military cohort.

Method Data are derived from the first stage of a cohort study comparing Iraq veterans and non-deployed UK military personnel. We describe data collected by questionnaire from males in the regular UK armed forces (n=7937).

Results Pre-enlistment vulnerability is associated with being single, of lower rank, having low educational attainment and serving in the Army. Pre-enlistment vulnerability is associated with a variety of negative health outcomes. Two main factors emerge as important predictors of ill health: a 'family relationships' factor reflecting the home environment and an 'externalising behaviour' factor reflecting behavioural disturbance.

Conclusions Pre-enlistment vulnerability is an important individual risk factor for ill health in military men. Awareness of such factors is important in understanding post-combat psychiatric disorder.

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The majority of UK military personnel do not develop combat-related psychiatric injuries, despite enduring arduous operational duties, including deployments to Iraq (Hotopf *et al*, 2006). Previous work has focused on military experiences (Yager *et al*, 1984; Elder & Clipp, 1988), but there is renewed interest in individual factors which may predispose a minority of individuals to becoming unwell (Brewin *et al*, 2000; Ozer *et al*, 2003). Childhood vulnerability is understood to be an important modulator of an individual's risk of later psychological problems, including post-traumatic stress disorder (PTSD; Engel *et al*, 1993; Zaidi & Foy, 1994). The aim of the current study is to examine the association of such self-reported vulnerabilities with later health outcomes in a large randomly selected male military cohort.

METHOD

Sample

Full details of the study have been described previously (Hotopf *et al*, 2006). In brief, the study was the first phase of a cohort study of UK military personnel in service at the time of the Iraq war in March 2003. In total, 4722 personnel who were deployed on the initial 2003 invasion, code named TELIC 1, and 5550 personnel who were not deployed on TELIC 1 (the 'Era' cohort) completed a questionnaire on their childhood experiences, deployment experiences and health outcomes (n=10 272). TELIC 1 was defined, for the purposes of this study, as 18 January to 28 April 2003.

The 10 272 participants represented a response rate after three mailings and active follow-up of 61%. The main reason for non-response was inability to contact personnel. There was no evidence of any response bias by health outcomes, and no difference in the prevalence of medical downgrading (being unfit for duty) in non-responders (Tate *et al*, 2007).

As we have previously reported that there are important gender differences in the UK military (Rona *et al*, 2007) and the proportion of women in the military and in our sample is small, we have limited this analysis to men. In addition, because we have previously shown an interaction between reservist status and deployment (Hotopf *et al*, 2006), which has been explored in greater depth in another paper (Browne *et al*, 2007), we limit the present analyses to regular personnel. After exclusion, the sample size available for these analyses was 7937.

Questionnaire

Participants were sent a detailed 28-page questionnaire booklet. This included information that participation in the survey was voluntary and that the research was being conducted independently of the UK Ministry of Defence. The questionnaire consisted of seven sections: (1) demographics; (2) service information; (3) experiences prior to deployment; (4) experiences on deployment; (5) experiences following deployment; (6) information on current health; and (7) background information, including past medical history and adversity in childhood. The Era cohort were asked to complete sections 3–5 for their most recent deployment; thus it was possible to gain information on deployment experiences for individuals who had served on later Iraq deployments. Full details of the questionnaire and measures have been described previously (Hotopf *et al*, 2006) and are available in the online data supplement to the current paper.

As part of section 7, participants were asked to give a true or false response to a series of 16 questions (some adverse and some protective) which followed the stem statement 'When I was growing up . . .'. Three categories were chosen: family relationships, parenting and adolescent behaviour. Three items were adapted from the Adverse Childhood Exposure study scale (ACE; Felitti *et al*, 1998), and the remaining items were single items based on the existing evidence from the general population on childhood exposures for later adverse health outcomes for adolescents and young people (see online data supplement for further details).

Statistical analyses

From the 16 questions on childhood adversity, a four-point vulnerability count was

Table 1 Frequency of each vulnerability factor and vulnerability count

	n (%)
Vulnerability factor	
Did not come from a close family	1740 (22.3)
Used to get shouted at a lot at home	2324 (29.8)
Often used to play truant from school	1543 (19.8)
Did not feel valued by family	1222 (15.7)
Regularly used to see fighting between parents	1418 (18.2)
No member of family who they could talk to	1936 (24.8)
Regularly hit or hurt by a parent or caregiver	758 (9.7)
Parents had problems with alcohol or drugs	997 (12.8)
Family did not used to do things together	1770 (22.8)
Spent time in local authority care	261 (3.3)
No special teacher/youth worker/family friend who looked out for them	6749 (86.7)
Often in fights at school	1983 (25.5)
No activity which made them feel special/proud	1586 (20.3)
Suspended or expelled from school	1391 (17.9)
Problems with reading and writing at school	1138 (14.6)
Problems and trouble with police	2926 (37.5)
Vulnerability count	
0/1	1780 (23.7)
2/3	2461 (32.7)
4/5	1475 (19.6)
⩾6	1806 (24.0)

created by scoring individuals reporting none or one adverse factor as 1, two or three factors as 2, four or five factors as 3 and six or more factors as 4.

To measure exposure to trauma, a composite measure was derived from the sum of a list of possible 'trauma' exposures experienced during deployment. Participants' scores ranged from 0 to 16 and were divided into three categories for the purposes of analysis (0–1, 2–3 and 4+).

All analyses were performed using STATA version 9.0 and statistical significance was defined as $P<0.05$. Associations between demographic and vulnerability factors were examined using chi-squared tests and logistic regression analyses were performed to examine the relationship between vulnerability factors and health outcomes (Clayton & Hills, 1993). Odds ratios, 95% confidence intervals and two-sided *P* values are presented. All analyses were adjusted for age, service, rank, educational status and marital status.

To identify the factor structure of the vulnerability variables a tetrachoric principal-component factor analysis was undertaken. The Kaiser–Meyer–Olkin measure of sampling adequacy was 0.87 and therefore principal-component factor analysis was deemed appropriate. The loading matrix was rotated to maximise the correlations between each factor. Two factors were identified based on the eigenvalues (>2.0).

RESULTS

Frequency of pre-enlistment vulnerability

Pre-enlistment vulnerability was relatively common in this military population; 76% of those sampled reported at least two or more vulnerability markers while growing up: 37.5% had been in trouble with the police; 29.8% got shouted at a lot at home; 25.5% had been in fights at school; and 3.3% had spent time in local authority care (Table 1).

Demographic and service factors associated with high vulnerability

Higher vulnerability counts were associated with younger age, being in the Army, being a non-commissioned officer or other rank, having low educational attainment and being divorced, separated or widowed (Table 2).

Vulnerability count and associated health outcomes

Higher vulnerability counts were significantly associated with all health outcomes examined (Table 3), all of which showed evidence of a highly statistically significant trend (i.e. the more vulnerabilities that an individual has, the more likely it is that they will meet 'easeness' on these various measures of ill health; $P<0.0001$ for each health outcome).

Factor analysis

To aid data interpretation, two factors were generated using a tetrachoric principal-component factor analysis: factor 1 (family relationships) is comprised of not coming from a close family, family not doing things together, no family member to talk to, not feeling valued by family, being hit by parent or caregiver, seeing/hearing parents fight, parents with drug or alcohol problem and being shouted at when young. Factor 2 (externalising behaviours) is comprised of being expelled or suspended from school, being involved in fights at school, being in trouble with the police and playing truant. Factors were then divided into tertiles, with the highest tertile representing those with the highest factor scores. Associations between each factor and the various health outcomes were examined in the same model since the correlation between the two factors was relatively low ($r=0.3252$), despite being highly statistically significant ($P<0.0001$). Furthermore, there was no evidence of interaction between the two factors on the outcomes examined.

Factors 1 and 2 were, in general, positively associated with all negative health outcomes (Table 4). The 'family relationships' factor was highly associated with having chronic fatigue, multiple physical symptoms, being a current smoker and heavy drinking. The 'externalising behaviours' factor was particularly associated with high levels of alcohol consumption and with having chronic fatigue or meeting caseness on the General Health Questionnaire (GHQ; Goldberg & Williams, 1988).

Vulnerability factors and exposure to trauma

To examine the possibility that those with pre-enlistment vulnerability were at greater risk of adverse health outcomes because of confounding (i.e. the possibility that more pre-enlistment vulnerability meant more

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Table 2 Vulnerability count according to demographic and service characteristics

	Vulnerability count, *n* (%)						
	0/1	2/3	4/5	⩾6	χ^2	d.f.	*P*
Age group							
<25 years	222 (17.0)	405 (30.9)	309 (23.6)	373 (28.5)	122.43	9	<0.0001
25–34 years	714 (23.1)	1002 (33.4)	620 (20.0)	758 (24.5)			
35–44 years	613 (24.8)	829 (33.6)	457 (18.5)	572 (23.2)			
⩾45 years	231 (35.6)	225 (34.7)	89 (13.7)	103 (15.9)			
Service arm							
Naval Service	388 (29.1)	449 (33.7)	256 (19.2)	239 (17.9)	228.23	6	<0.0001
Army	917 (19.8)	1413 (30.5)	975 (21.0)	1328 (28.7)			
Royal Air Force	475 (30.5)	599 (38.5)	244 (15.7)	239 (15.4)			
Rank							
Officers	549 (41.0)	468 (35.0)	166 (11.3)	156 (8.7)	357.47	6	<0.0001
Non-commissioned officers	965 (20.0)	1548 (32.1)	1033 (21.4)	1272 (26.4)			
Other ranks	254 (19.3)	433 (33.0)	266 (20.2)	361 (27.5)			
Educational status							
No qualifications	49 (8.6)	132 (23.0)	125 (21.8)	267 (46.6)	414.55	9	<0.0001
GCSE/O level	616 (19.6)	1020 (32.4)	670 (21.3)	845 (26.8)			
A level	567 (26.1)	750 (34.6)	418 (19.3)	435 (20.1)			
Degree	459 (36.7)	434 (34.7)	184 (14.7)	173 (13.8)			
Deployment group							
TELIC 1[1]	787 (23.0)	1117 (32.6)	692 (20.0)	828 (24.2)	2.48	3	0.479
Era	993 (24.2)	1344 (32.8)	783 (19.1)	978 (23.9)			
Current serving status							
Serving	1600 (23.8)	2193 (32.6)	1317 (19.6)	1627 (24.2)	1.71	3	0.635
Left	173 (22.8)	263 (34.7)	149 (19.7)	173 (22.8)			
Marital status							
In relationship	1465 (24.8)	1954 (33.1)	1137 (19.2)	1353 (22.9)	45.62	6	<0.0001
Single	236 (20.5)	365 (31.7)	252 (21.9)	297 (25.8)			
Divorced/separated/widowed	76 (17.0)	138 (30.9)	80 (17.9)	153 (34.2)			
Ethnicity							
White	1543 (23.7)	2119 (32.6)	1278 (19.7)	1560 (24.0)	1.81	3	0.613
Other	61 (26.9)	67 (29.5)	42 (18.5)	57 (25.1)			
Fitness to be deployed							
Fit	1620 (23.9)	2236 (32.9)	1317 (19.4)	1616 (23.8)	5.67	3	0.129
Unfit	147 (21.6)	208 (30.5)	143 (21.0)	183 (26.9)			

1. Deployed in Iraq between 18 January and 28 April 2003.

exposure to trauma), we examined the association of each of the vulnerability factors with exposure to trauma. The 'family relationships' factor is highly correlated with trauma ($P<0.0001$), and there is a clear pattern between increasing exposure to trauma and being in the highest tertile for this factor. The association with the 'externalising behaviours' factor is less clear, although there is still a correlation ($P=0.001$). In view of this association, we repeated the analyses with only those with previous deployments ($n=5185$) with and without adjustment for exposure to trauma (Table 5). Adjusting for exposure to trauma reduced the effect of the 'family relationships' factor but had a marginal effect on the associations with the 'externalising behaviours' factor.

DISCUSSION

Key findings

Pre-enlistment vulnerability is common in the UK armed forces. Two main factors emerge as important predictors of ill health: a 'family relationships' factor, which reflects the home environment during childhood, and an 'externalising behaviours' factor, which reflects a variety of markers of behavioural disturbance during childhood and adolescence. Pre-enlistment vulnerability is more common in young single men from lower ranks in the Army with low educational attainment. Pre-enlistment vulnerability is associated with a variety of negative health outcomes, including general psychological ill health, PTSD and self-harming behaviour, heavy drinking and smoking. There was a trend between all health outcomes and increasing vulnerability.

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Table 3 Vulnerability count according to health outcomes*

	GHQ caseness		Severe AUDIT caseness		Symptom caseness		Previous self-harm	
Vulnerability count	*n* (%)	OR (95% CI)[1]	*n* (%)	OR (95% CI)[1]	*n* (%)	OR (95% CI)[1]	*n* (%)	OR (95% CI)[1]
0/1	220 (12.5)	1.00	116 (6.6)	1.00	99 (5.6)	1.00	18 (1.0)	1.00
2/3	374 (15.3)	1.22 (1.01–1.47)	314 (12.8)	1.91 (1.51–2.41)	202 (8.2)	1.40 (1.08–1.82)	34 (1.4)	1.21 (0.67–2.20)
4/5	321 (22.0)	1.85 (1.52–2.26)	307 (20.9)	3.14 (2.47–3.99)	198 (13.4)	2.28 (1.75–2.98)	25 (1.7)	1.26 (0.66–2.41)
⩾6	520 (29.0)	2.56 (2.12–3.09)	488 (27.2)	4.39 (3.48–5.54)	309 (17.1)	2.83 (2.20–3.65)	69 (3.8)	2.90 (1.67–5.06)
	Fatigue caseness		Current smoker		Fair or poor health		PTSD caseness	
Vulnerability count	*n* (%)	OR (95% CI)[1]	*n* (%)	OR (95% CI)[1]	*n* (%)	OR (95% CI)[1]	*n* (%)	OR (95% CI)[1]
0/1	345 (19.6)	1.00	373 (21.0)	1.00	126 (7.1)	1.00	34 (1.9)	1.00
2/3	643 (26.3)	1.41 (1.20–1.64)	626 (25.4)	1.11 (0.95–1.30)	237 (9.7)	1.40 (1.11–1.78)	53 (2.2)	1.04 (0.66–1.64)
4/5	521 (35.7)	2.17 (1.83–2.57)	509 (34.5)	1.55 (1.31–1.83)	198 (13.5)	1.93 (1.50–2.48)	69 (4.7)	1.96 (1.26–3.06)
⩾6	804 (44.9)	3.06 (2.61–3.60)	700 (38.8)	1.73 (1.47–2.03)	305 (17.0)	2.36 (1.86–3.00)	128 (7.2)	2.75 (1.81–4.17)

GHQ, General Health Questionnaire; PTSD, post-traumatic stress disorder; AUDIT, Alcohol Use Disorders Identification Test.
*$P < 0.0001$ for all health outcomes.
1. Adjusted for age, service, rank, educational status and marital status.

The 'family relationships' factor is associated with increased exposure to trauma, and this may contribute to the association of this factor with increased risk of PTSD.

Childhood adversity and health

The association of childhood vulnerability and poor adult mental health outcomes reported here has been reported previously in the general population (Brown & Harris, 1993; Kessler *et al*, 1997; Molnar *et al*, 2001). A series of studies using a similar range of measures of childhood adversity has shown a clear and graded association between these measures and other negative health outcomes, such as heavy alcohol use, smoking, illicit drug use, poor physical health, increased mortality and attempted suicide (Anda *et al*, 1999, 2002; Dube *et al*, 2001, 2003*a*,*b*).

Vulnerability and the UK military

Historically, the UK armed forces have recruited from inner-city areas with high levels of socio-economic deprivation and social problems (Johnstone, 1978). Individuals growing up in such areas have often been exposed to many of the vulnerability factors known to contribute to a variety of poor outcomes in adult life (Stewart-Brown *et al*, 2002).

The finding that such vulnerabilities are common and more prevalent among those who are young, from the Army and from lower ranks confirms anecdote, although we believe that this is the first time that it has been documented by an epidemiological study. It has been suggested that such individuals often join up to 'escape' from adversity at home such as physical abuse or marital discord between parents. The decision to make a career in the armed forces may also select for individuals with personality traits, such as sensation-seeking and impulsivity, and these traits are also likely to be associated with pre-enlistment vulnerability (Brodsky *et al*, 2001).

Childhood adversity and PTSD

The association of early adversity with PTSD is of particular interest. A previous meta-analysis has revealed that adversity in childhood, including experience of prior trauma and psychopathology in a parent (including alcohol dependence), is associated with an increased risk of PTSD after exposure to subsequent trauma (Ozer *et al*, 2003).

Previous work suggests that early adversity may predispose an individual to PTSD by a 'double hit': not only are they are more likely to develop PTSD with any given traumatic exposure but they are also more likely to be exposed to trauma in a combat situation (Helzer *et al*, 1987; King *et al*, 1996). This finding is replicated here. This may be explained by the fact that adversity in childhood and adolescence is associated with risk-taking/impulsivity, poor self-regulation and sensation-seeking in adult life, and such personality traits predispose an individual to be exposed to combat (King *et al*, 1996).

The relationship between these risk factors, risk of exposure to traumatic events during combat, other more proximal factors (for example social support, morale within the unit and current psychopathology such as anxiety or depression), and subsequent PTSD will be explored in a subsequent publication.

Limitations

Response bias can be a special problem for sensitive questions within a larger questionnaire, although there was no differential response bias for these questions (data available from authors). Retrospective recall of childhood experiences, particularly adverse ones, is vulnerable to recall bias (Maughan & Rutter, 1997). Robins *et al* (1985) tested recall of family environments in adults by comparing their responses with siblings of a similar age. He found that recall was reliable and valid, and was not influenced by whether the person had a psychiatric disorder or not. Furthermore, questionnaire ratings of early parenting experiences show good stability over a 20-year period (Wilhelm *et al*, 2005). If there is a systematic bias, most studies suggest that people tend to underreport such experiences as adults (Lewis *et al*, 1989; Della Femina *et al*, 1990).

A limitation of our study is that we do not have comparative data from the general population. We are therefore unable to

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Table 4 Vulnerability factors according to health outcomes

	Family relationships factor Adjusted[1] OR (95% CI)			Externalising behaviours factor Adjusted[1] OR (95% CI)		
Health outcome	Lowest tertile	Middle tertile	Highest tertile	Lowest tertile	Middle tertile	Highest tertile
GHQ caseness	1.00	1.15 (0.98–1.36)	1.50 (1.27–1.77)	1.00	1.13 (0.96–1.34)	1.92 (1.64–2.24)
Fatigue caseness	1.00	1.44 (1.25–1.66)	2.08 (1.80–2.40)	1.00	1.16 (1.01–1.33)	1.82 (1.60–2.08)
Severe AUDIT caseness	1.00	1.48 (1.20–1.82)	3.34 (2.73–4.08)	1.00	1.23 (1.02–1.48)	1.69 (1.42–2.02)
Current smoker	1.00	1.33 (1.15–1.54)	2.57 (2.22–2.99)	1.00	0.94 (0.82–1.08)	0.90 (0.78–1.03)
Symptom caseness	1.00	1.55 (1.24–1.95)	2.38 (1.90–2.98)	1.00	1.31 (1.06–1.63)	1.61 (1.31–1.97)
Fair or poor health	1.00	1.36 (1.11–1.67)	1.61 (1.30–1.98)	1.00	1.39 (1.13–1.70)	1.61 (1.32–1.96)
PTSD caseness	1.00	1.30 (0.88–1.91)	1.91 (1.31–2.78)	1.00	1.12 (0.78–1.61)	1.79 (1.29–2.50)
Previous self-harm	1.00	0.86 (0.51–1.45)	1.70 (1.06–2.75)	1.00	1.26 (0.77–2.06)	1.74 (1.10–2.75)

GHQ, General Health Questionnaire; AUDIT, Alcohol Use Disorders Identification Test; PTSD, post-traumatic stress disorder.
1. Adjusted for age, service, rank, educational status, marital status and the other vulnerability factor.

Table 5 Vulnerability factors according to health outcomes, restricted to those who have been deployed since 2000 (n=5185)

	Family relationships factor					
	Adjusted[1] OR (95% CI)			Adjusted[2] OR (95% CI)		
Health outcome	Lowest tertile	Middle tertile	Highest tertile	Lowest tertile	Middle tertile	Highest tertile
GHQ caseness	1.00	1.23 (1.00–1.50)	1.52 (1.24–1.87)	1.00	1.19 (0.97–1.47)	1.43 (1.16–1.76)
Fatigue caseness	1.00	1.46 (1.23–1.73)	2.07 (1.74–2.46)	1.00	1.43 (1.21–1.70)	1.96 (1.65–2.33)
Severe AUDIT caseness	1.00	1.69 (1.31–2.17)	3.89 (3.06–4.94)	1.00	1.67 (1.30–2.15)	3.76 (2.96–4.79)
Current smoker	1.00	1.34 (1.13–1.61)	2.51 (2.11–3.00)	1.00	1.33 (1.12–1.59)	2.48 (2.07–2.96)
Symptom caseness	1.00	1.61 (1.22–2.12)	2.51 (1.92–3.29)	1.00	1.53 (1.16–2.03)	2.23 (1.70–2.93)
Fair or poor health	1.00	1.35 (1.05–1.74)	1.63 (1.26–2.10)	1.00	1.34 (1.04–1.72)	1.58 (1.22–2.04)
PTSD caseness	1.00	1.31 (0.79–2.18)	2.22 (1.38–3.57)	1.00	1.21 (0.73–2.02)	1.83 (1.13–2.95)
Previous self-harm	1.00	0.66 (0.34–1.28)	1.51 (0.85–2.68)	1.00	0.65 (0.34–1.26)	1.47 (0.82–2.62)
	Externalising behaviours factor					
	Adjusted[1] OR (95% CI)			Adjusted[2] OR (95% CI)		
Health outcome	Lowest tertile	Middle tertile	Highest tertile	Lowest tertile	Middle tertile	Highest tertile
GHQ caseness	1.00	1.16 (0.95–1.42)	1.76 (1.45–2.12)	1.00	1.17 (0.96–1.43)	1.78 (1.47–2.16)
Fatigue caseness	1.00	1.17 (0.99–1.37)	1.75 (1.49–2.05)	1.00	1.18 (1.00–1.39)	1.78 (1.52–2.09)
Severe AUDIT caseness	1.00	1.23 (1.00–1.52)	1.69 (1.38–2.08)	1.00	1.24 (1.01–1.54)	1.72 (1.40–2.11)
Current smoker	1.00	1.02 (0.87–1.20)	0.97 (0.83–1.15)	1.00	1.03 (0.87–1.21)	0.98 (0.83–1.15)
Symptom caseness	1.00	1.37 (1.07–1.76)	1.49 (1.17–1.90)	1.00	1.41 (1.10–1.82)	1.55 (1.21–1.97)
Fair or poor health	1.00	1.61 (1.26–2.06)	1.69 (1.33–2.16)	1.00	1.62 (1.27–2.07)	1.71 (1.34–2.18)
PTSD caseness	1.00	1.17 (0.75–1.83)	1.92 (1.27–2.89)	1.00	1.23 (0.78–1.93)	2.06 (1.36–3.11)
Previous self-harm	1.00	1.41 (0.77–2.60)	1.88 (1.06–3.35)	1.00	1.42 (0.77–2.60)	1.89 (1.06–3.37)

GHQ, General Health Questionnaire; AUDIT, Alcohol Use, Disorder Identification Test; PTSD, post-traumatic stress disorder.
1. Adjusted for age, service, rank, educational status, marital status and the other vulnerability factor.
2. Adjusted for all the factors listed in 1 above, plus exposure to trauma.

comment on the prevalence of these factors in the military in comparison to a similar age-matched general population, or to compare their contributions to ill health in the two groups. It may be possible to address such questions by linking our cohort with a contemporaneous general population cohort which has been questioned about similar vulnerability and health outcomes.

Implications

How could this information be used in a meaningful way? Our group have argued that there is no benefit in the routine screening of either new recruits or prospective combatants, as our ability to predict who develops PTSD is poor (Rona *et al*, 2006). Aside from the practical considerations of the stigma of raising these questions within the setting of military culture,

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none of these factors have sufficient precision to be used to prospectively identify individual personnel likely to develop PTSD. Also, what this analysis does not tell us is the reverse side of the coin – the numbers of equally 'vulnerable' personnel whose social and psychological trajectories have been improved by the strong sense of identity, career structure and social support that the military provides.

We therefore categorically do not suggest that these results should lead to a principle of excluding recruits from vulnerable backgrounds. Instead we argue that it is important to recognise that some individuals have pre-enlistment histories which make them more vulnerable to psychological problems. Therefore it should remain a priority for the military as an employer to continue to develop appropriate support systems for all personnel during their service.

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