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United Kingdom Military Doctors; Stigma, Mental Health and Help-seeking – a comparative cohort study

ABSTRACT

Introduction: Studies suggest that medical doctors can suffer from substantial levels of mental ill-health. Little is known about military doctor's mental health and wellbeing; we therefore assessed attitudes to mental health, self-stigma, psychological distress and help-seeking among United Kingdom Armed Forces doctors. **Methods:** Military doctors (n=678, response rate 59%) completed an anonymous online survey; comparisons were made with serving and ex-military personnel (n=1448, response rate 84.5%) participating in a mental health-related help-seeking survey. Basic socio-demographic data were gathered and participants completed measures of mental health-related stigmatisation, perceived barriers to care and the 12-item General Health Questionnaire. All participants were asked if in the last three years, they had experienced stress, emotional, mental health, alcohol, family or relationship problems and whether they had sought help from formal sources. **Results:** Military doctors reported fewer mental disorder symptoms than the comparison groups. They endorsed higher levels of stigmatising beliefs, negative attitudes to mental healthcare, desire to self-manage and self-stigmatisation than each of the comparison groups. They were most concerned about potential negative effects of and peer perceptions about receiving a mental disorder diagnosis. Military doctors reporting historical and current relationship, alcohol or mental health problems were significantly and substantially less likely to seek help than the comparison groups. **Conclusion:** Although there are a number of study limitations, outcomes suggest that UK military doctors report lower levels of mental disorder symptoms, higher levels of stigmatising beliefs and a lower propensity to seek formal support than other military reference groups.

Key messages:

What is already known about this subject? Mental health, stigma and help-seeking have been investigated in civilian doctors; little is known about these factors in military medical practitioners.

What are the new findings? In comparison to other military personnel and veterans, military doctors report lower levels of mental disorder symptoms, higher levels of stigmatising beliefs and a lower propensity to seek formal support when mentally unwell.

How might this impact on policy or clinical practice in the foreseeable future? Military doctors may require a bespoke mental health referral and treatment system in order to overcome barriers to care.

INTRODUCTION

Mental illness can be viewed in stigmatising or stereotypical ways; it can be viewed as socially unacceptable and such views can impact care pathways (Rogers and Pilgrim 2010). A systematic review of military stigma research concluded that stigmatised military personnel are unwilling to access mental health care and that military personnel often self-stigmatise when they are psychologically distressed (Vogt 2011). A multi-national study compared stigma across international armed forces and found stigma to be ubiquitous and associated with reduced help seeking (Gould et al., 2010); the authors suggested that increasing mental disorder symptom levels were associated with more self-stigmatising beliefs and reduced help-seeking from mental health support services; stigma was a more important determinant of help-seeking than practical barriers to care. Britt et al (2008) surveyed United States (US) military personnel and identified a significant relationship between mental health-related stigmatisation and mental distress. Practical barriers to care rather than self-stigmatising beliefs were strongly associated with reduced help-seeking. The evidence that stigma inhibits help-seeking is therefore somewhat unclear is mostly derived from cross-sectional studies. Nonetheless, researchers frequently emphasise the importance of stigma in military populations and the potential negative impact upon help-seeking (Nash et al., 2009). Mental ill-health stigmatisation is not limited to military contexts; a comparison of attitudes to mental health in United Kingdom (UK) civilian and military populations suggested that stigmatisation was often similar in form and content, although military respondents were less positive about mentally ill people being integrated into the workplace (Forbes et al., 2013).

Turning to doctors as a discrete occupational group, there is some evidence that self-stigmatising beliefs about seeking care are relatively common (Henderson et al., 2012) and that mental health-related stigma has a high prevalence even at the early stage of medical studentship (Chew-Graham et al., 2003.); links have been proposed between infrequent help-seeking and poorer health in civilian doctors (Wallace 2012). Doctors may not seek medical help for fear of letting either themselves, their patients or their colleagues down (Adams et al., 2010). Within the UK Armed Forces, military doctors occupy a unique position and are highly visible in a military unit. In these circumstances, there is a risk that any mental distress and associated help-seeking might be observed by peers and unit members, including commanders; research in civilian contexts suggests

that doctors often attempt to conceal health problems by self-medicating in order to avoid disclosure to other doctors (Davidson and Schattner 2003). To the best of our knowledge, attitudes to mental health disorders, stigmatising beliefs, symptoms of psychological distress and mental health-related help-seeking have not been studied in UK military doctors. Given the paucity of research in this area, this cross-sectional study sought to answer four questions:

Do military doctors:

1. Report greater mental health-related stigmatisation, self-stigmatisation and perceived barriers to care than serving regular, reserve and military veteran groups?
2. Who report symptoms of common mental disorder (CMD) or subjective health and wellbeing problems report more stigmatisation and perceived barriers to care than other military groups with similar problems?
3. Seek formal help at greater or lesser levels than other military groups?
4. Have different patterns of mental health stigmatisation than other military groups?

METHOD

Samples

Sample 1 – Military doctors were invited to complete an anonymous online survey. A limited set of socio-demographic characteristics were gathered including categorised rank groups, professional status (unaccredited or accredited practitioner), area of work (primary or secondary care), categorised service length, Service background and sex.

Sample 2 – The comparison sample comprised a sub-sample of military and ex-military reserve and regular engagement individuals participating in the third phase of a self-report health and wellbeing cohort study (n=7955) (Hotopf et al., 2006, Fear et al., 2010). Respondents in the main cohort study who endorsed having experienced a stress, emotional or mental health problem in the past three years (n=1448) were invited to take part in a telephone interview which included a number of questions and measures replicated in the doctor survey. Only the sex and rank variables were common to both datasets.

Procedure

Military doctors were recruited through multiple routes to complete the survey. Strategies included the provision of non-coercive e-mail prompts from career managers, service heads, the UK Defence Medical Deanery and heads of individual medical specialities. Participants were directed to an online site where they were presented with an electronic survey, a participant information sheet and consent form; progressing to the survey indicated consent to participate. The survey took place between February and May 2017.

Measures

The doctor online survey and the comparison telephone interview survey contained measures of mental health-related stigmatisation and perceived barriers to care; these were assessed using a multiple response scale widely used in UK (Sharp et al., 2015) and US mental health research (Hoge et al., 2004). Items from the barriers to access care evaluation (BACE) scale (Clement et al., 2012) and the self-stigma of seeking psychological help scale (SSOSH) (Vogel et al., 2013) were used to assemble a composite stigma measure. All scale items were responded to using a five item Likert scale; potential responses ranged from strongly disagree, disagree, neither agree nor disagree, agree and strongly agree. A binary variable was created for each individual mental health stigmatisation and practical care barrier item which indicated endorsement (agree or strongly agree) and non-endorsement, (two categories of disagreement plus the neither agree nor disagree response). Two scales were generated; stigma, comprised of stigmatisation, practical barriers to care and attitudes to mental healthcare (including a desire to self-manage) and a discrete self-stigmatisation scale. Each of the two scales were independently summed, tertiles were generated for each count variable and a binary variable was produced, which consisted of combined middle and lower tertile responses and upper tertile responses.

In the online survey, doctors were invited to complete the 12-item General Health Questionnaire (GHQ-12) (Goldberg and Williams 1988, Goldberg et al., 1997) which measures common mental disorder (CMD) symptoms. The comparison sample completed a paper version of the GHQ-12 prior to participation in the telephone interview study. Endorsing four or more symptoms represented the cut-off point for classification as a possible case of common mental disorder (CMD).

Participants in both the military doctor and comparison samples answered questions about their mental health and related help-seeking within the last three years in three categories. Participants were asked if they had experienced; 1. stress, emotional or mental health problems; 2. problems with alcohol and 3. problems related to relationships or families. They were then asked if they had sought help for each of the problem categories. Interview study participants were asked if they had

sought help from formal sources including mental health specialist, doctor, online and telephone therapy; doctors were asked if they had sought formal help for each of the problem categories.

Analyses

Analyses were undertaken using the statistical software package SPSS version 24. Descriptive statistics were generated for the various stigma measures and categorical variables were explored using Pearson's Chi Squared Tests. The associations between mental health-related stigmatisation, self-stigmatisation, help-seeking, probable CMD symptoms and self-reported mental health, alcohol, family and relationship problems were examined using unadjusted logistic regression analyses to produce odds ratios with 95% confidence intervals. Odds ratios were further adjusted for sex and Service background. Similar analyses examined the association of stigmatisation, self-stigmatisation and probable CMD symptoms with help seeking and mental health within the doctor sample only. For doctors, odds ratios were adjusted for rank, professional Status, number of years of military service, Service background, sex and clinical speciality. Statistical significance was defined as $p \leq 0.05$.

Ethical approval

Ethical approval was granted by the UK Ministry of Defence Research Ethics Committee (535/MODREC/14 for the telephone interview study and 557/MODREC/14 for the doctor's study).

Results

Sample description

Of the 1154 military doctors eligible for inclusion in the survey, 678 participated (response rate 59%). 242 of 307 (79%) Royal Navy doctors, 262 of 562 (47%) Army doctors and 174 of 285 (61%) Royal Air Force doctors took part. Of the military doctors, 35.7% were Royal Navy, 38.6% Army and 25.7% Royal Air Force. Of 1727 comparison sample individuals invited to participate in the telephone interview study, 1448 elected to take part (response rate 84.5%).

63.4% of the military doctors were of junior or field officer rank and 36.6% were staff officer (higher) rank or equivalent. There was an even distribution of unaccredited or training grade doctors (49.9%) and accredited, consultant or general practitioner doctors (50.1%); 30.5% worked in a primary care setting and 69.5% in secondary care. Various lengths of military service were adequately represented. Women constituted 27.8% of the military doctor sample (Table 1). Within the

comparison group, 667 personnel (46.1%) were serving on a regular military engagement, 124 (8.6%) were serving on a reserve engagement and 657 (45.4) were ex-service (Table 2).

Table 1. Characteristics of military doctors, stigmatisation, attitudes to mental healthcare and mental health symptoms

Doctor Characteristic (n, %)	‡Reported 7-19 Stigmatisation items n (%)	†AOR	Reported 2-5 Self-stigmatisation items n (%)	†AOR	GHQ-12 Caseness n (%)	†AOR
Rank Group						
OF2-OF3 (429, 63.4)	215 (50.1)	1	205 (47.8)	1	112 (26.1)	1
OF4 and above (248, 36.6)	87 (35.2)	0.68 (0.38-1.21)	87 (35.4)	0.76 (0.41-1.42)	53 (21.5)	0.77 (0.38-1.59)
Professional Status						
Unaccredited/Training Grade (337, 49.9)	175 (51.9)	1	166 (49.3)	1	91 (27.0)	1
Accredited Consultant or GP (338, 50.1)	127 (37.7)	0.78 (0.46-1.33)	125 (37.2)	0.82 (0.47-1.43)	73 (21.7)	0.65 (0.34-1.25)
Work Area						
Primary Care (205, 30.5)	91 (44.6)	1	89 (43.6)	1	51 (25.0)	1
Secondary Care (467, 69.5)	209 (44.8)	1.05 (0.72-1.54)	202 (43.3)	0.92 (0.62-1.37)	115 (24.7)	0.99 (0.63-1.57)
Service Length						
0-5 years (109, 16.1)	53 (48.6)	1	45 (42.3)	1	20 (18.3)	1
6-10 years (152, 22.5)	73 (48.0)	0.96 (0.59-1.58)	89 (58.6)	**2.17 (1.29-3.65)	45 (29.6)	*1.88 (1.01-3.48)
11-15 years (184, 27.2)	88 (47.8)	0.98 (0.61-1.58)	76 (41.3)	1.24 (0.74-2.08)	55 (29.9)	**2.27 (1.22-4.22)
16-20 years (106, 15.7)	48 (45.3)	0.89 (0.52-1.53)	39 (37.1)	1.33 (0.69-2.57)	23 (21.9)	1.59 (0.72-3.49)
More than 20 years (126, 18.6)	40 (32.0)	**0.49 (0.29-0.84)	43 (34.4)	1.38 (0.67-2.82)	23 (18.4)	1.35 (0.58-3.18)
Service Background						
Royal Navy (242, 35.7)	135 (55.8)	1	120 (50.4)	1	68 (28.1)	1
Army (262, 38.6)	98 (37.5)	***0.46 (0.31-0.68)	93 (35.8)	**0.55 (0.37-0.81)	51 (19.6)	*0.61 (0.39-0.95)
Royal Air Force (174, 25.7)	70 (40.2)	**0.51 (0.34-0.77)	78 (44.8)	0.75 (0.50-1.14)	47 (27.0)	0.93 (0.59-1.47)
Sex						
Female (189, 27.8)	90 (47.9)	1	93 (49.7)	1	54 (28.9)	1
Male (489, 72.2)	213 (43.6)	0.84 (0.59-1.20)	200 (41.0)	0.75 (0.52-1.08)	112 (23.0)	0.80 (0.53-1.20)

*p<0.05

**p<0.01

***p<0.001

†Odds ratio adjusted for rank, professional Status, number of years served, Service background, sex and clinical speciality

‡Attitudes to mental healthcare, perceived barriers to care and stigmatisation

Table 2. Perceived problems, help-seeking and mental health disorder symptoms among military doctors, UK AF serving personnel and ex-service veterans

Characteristic	No n (%)	Yes n (%)	OR (95% CI)	¹ AOR (95% CI)
‡Stress, emotional or mental health problem in last 3 years				
Ex-Service (n=657)	0 (0.0)	657 (100.0)		
Doctor (n=673)	363 (53.9)	310 (46.1)		
Regular (n=667)	0 (0.0)	667 (100.0)		
Reserve (n=124)	0 (0.0)	124 (100.0)		
†Sought help for a stress, emotional or mental health problem in the last 3 years				
Ex-Service (n=657)	264 (40.2)	393 (59.8)	1	1
Doctor (n=309)	199 (64.4)	110 (35.6)	***0.37 (0.28-0.49)	***0.32 (0.24-0.43)
Regular (n=667)	306 (45.9)	361 (54.1)	*0.79 (0.64-0.99)	*0.76 (0.61-0.95)
Reserve (n=124)	52 (41.9)	72 (58.1)	0.93 (0.63-1.37)	0.86 (0.58-1.27)
Alcohol problem in last 3 years				
Ex-Service (n=657)	548 (83.4)	109 (16.6)	1	1
Doctor (n=667)	645 (96.7)	22 (3.3)	***0.17 (0.12-0.28)	***0.19 (0.12-0.30)
Regular (n=665)	568 (85.4)	97 (14.6)	0.86 (0.64-1.16)	0.89 (0.66-1.20)
Reserve (n=124)	110 (88.7)	14 (11.3)	0.64 (0.35-1.16)	0.70 (0.39-1.28)
†Sought help for an alcohol problem in the last 3 years				
Ex-Service (n=109)	83 (76.1)	26 (23.9)	1	1
Doctor (n=22)	19 (86.4)	3 (13.6)	0.50 (0.14-1.84)	0.54 (0.15-1.99)
Regular (n=97)	68 (70.1)	29 (29.9)	1.36 (0.73-2.53)	1.34 (0.72-2.49)
Reserve (n=14)	8 (57.1)	6 (42.9)	2.39 (0.76-7.54)	2.40 (0.75-7.60)
Relationship or family problem in last 3 years				
Ex-Service (n=653)	317 (48.5)	336 (51.5)	1	1
Doctor (n=665)	457 (68.1)	214 (31.9)	***0.44 (0.35-0.55)	***0.46 (0.37-0.58)
Regular (n=665)	281 (42.3)	384 (57.7)	*1.29 (1.04-1.60)	*1.31 (1.05-1.63)
Reserve (n=123)	55 (44.7)	68 (55.3)	1.17 (0.79-1.72)	1.22 (0.83-1.80)
†Sought help for a relationship or family problem in the last 3 years				
Ex-Service (n=336)	214 (63.7)	122 (36.3)	1	1
Doctor (n=212)	161 (75.9)	51 (24.1)	**0.56 (0.38-0.82)	**0.54 (0.36-0.80)
Regular (n=384)	216 (56.3)	168 (43.8)	*1.36 (1.01-1.84)	1.34 (0.99-1.81)
Reserve (n=68)	41 (60.3)	27 (39.7)	1.16 (0.68-1.97)	1.15 (0.67-1.96)
GHQ-12 four or more symptoms				
Ex-Service (n=656)	336 (51.2)	320 (48.8)	1	1
Doctor (n=676)	510 (74.5)	166 (24.6)	***0.34 (0.27-0.43)	***0.34 (0.27-0.43)
Regular (n=667)	373 (56.0)	293 (44.0)	0.83 (0.66-1.02)	0.82 (0.66-1.02)
Reserve (n=123)	70 (56.9)	53 (43.1)	0.80 (0.54-1.17)	0.78 (0.53-1.16)

†This is the proportion of those who endorsed having a problem in the last 3 years

‡All groups except doctors were sampled on the basis that they reported a stress emotional problem in the last 3 years

¹Adjusted for sex and service background (Royal Navy, Army, Royal Air Force)

*p<0.05

**p<0.01

***p<0.001

Stigmatisation among military doctors

Within the doctor sample, following adjustment for confounding variables, higher (upper tertile) levels of stigmatisation (endorsing 7-19 items) were significantly less frequent among those who had served for 20 years or more compared to those with shorter lengths of service (32.5% vs. between 45.3% and 48.6%). Stigmatisation was also significantly lower among Army (37.5%) and Royal Air Force (40.2%) doctors than among Royal Navy doctors (55.8%). For all other doctor characteristics, stigmatisation levels were not significantly different. For self-stigmatisation, compared to those with less than five years of military service (42.3%), only doctors who had served between 6 and 10 years reported significantly more self-stigmatisation (58.6%). Compared to RN doctors, Army doctors reported significantly lower levels of self-stigmatisation (35.8% vs. 50.4%), while RAF doctor's self-stigmatisation levels were not statistically significantly different to RN doctors. Compared to doctors serving for less than five years (18.3%), probable cases of common mental disorder were significantly higher among doctors who had served between six and ten years (29.6% caseness) and 11-15 years (29.9% caseness) (Table 1).

Mental health and help-seeking

All comparison sample members were recruited on the basis that they self-reported a stress, emotional or mental health problem occurring in the last three years; 46.1% of military doctors reported such a problem. Among those who had experienced such problems, doctors were significantly less likely than veterans to have sought help (35.6% versus 59.8%) and were less likely to have sought help than both regulars (54.1%) and reserves (58.1%).

Doctors were significantly less likely than veterans to report a past three year alcohol problem (3.3% vs. 16.6%) and were less likely to report such a problem than both regulars (14.6%) and reserves (11.3%). In all four samples, participants reporting subjective alcohol problems sought help infrequently, ranging from 13.6% among doctors to 42.9% among reserves; failure to find significant differences in help-seeking was probably related to low help-seeking numbers resulting in insufficient statistical power.

Doctors were significantly less likely than veterans to report past three year relationship problems (31.9% vs. 51.5%) and were less likely to report such a problem than both regulars (57.7%) and reserves (55.3%). Of those reporting such a problem, doctors were significantly less likely to seek

help than veterans (24.1% vs. 36.3%) and were less likely to seek help than both regulars (43.8%) and reserves (39.7%).

Doctors were significantly less likely to be classified as having a probable CMD than veterans (24.6% vs. 48.8%) and were less likely to self-report caseness than both regulars (44.0%) and reserves (43.1%) (Table 2).

Stigmatisation across samples

Doctors were more likely to endorse each of the eight stigmatisation items than regulars, reserves and veterans. The most common stigmatisation items were: not wanting a mental health problem to appear on medical records, unit leaders treating a person with mental health problems differently and unit members or colleagues having less confidence in a person if they were known to have mental health problems. Six of the seven stigmatisation items were endorsed by around half of the doctors. All practical barriers to care were endorsed at a higher level by doctors than by the comparison samples; among doctors, the most commonly reported barrier was difficulty getting time off work for an appointment. With the exception of the item 'I want to solve the problem on my own' which was endorsed by 59.6% of the doctors and around 53.0% of the other groups, negative attitudes towards and a desire to self-manage mental health problems were reported at much lower levels than either stigmatisation, self-stigmatisation or practical barriers to care. Doctors were more likely than the three reference groups to endorse self-stigma. The two most commonly endorsed items were feeling inadequate for seeking mental healthcare and feeling worse about oneself if unable to solve one's own problems; these were endorsed by 65.5% and 51.3% of the doctors respectively (Table 3).

Table 3: Mental health-related stigmatisation, attitudes to mental healthcare, perceived barriers and self-stigmatisation

Domain	Stigma Item	Endorsed Scale Item				P
		Doctor (n=678) n (%)	Regular (n=667) n (%)	Reserve (n=124) n (%)	Ex-service (n=657) n (%)	
Sti	Not wanting a mental health problem to be on my medical records	455 (67.3)	301 (45.1)	64 (51.6)	250 (38.1)	<0.001
Sti	My unit leaders/bosses might treat me differently	438 (64.8)	303 (45.5)	54 (43.5)	255 (38.8)	<0.001
Sti	Members of my unit or my colleagues might have less confidence in me	414 (61.3)	287 (43.0)	52 (41.9)	205 (31.2)	<0.001
Sti	It would harm my career	365 (54.0)	248 (37.2)	47 (37.9)	176 (26.8)	<0.001
Sti	It would be too embarrassing	326 (48.3)	232 (34.8)	46 (37.1)	167 (25.4)	<0.001
Sti	I would be seen as weak (by those who are important to me)	318 (47.0)	248 (37.2)	46 (37.1)	203 (30.9)	<0.001
Sti	Concern about what my friends or family might think	263 (38.9)	200 (30.0)	42 (33.9)	181 (27.5)	<0.001
Sti	My leaders/bosses would blame me for the problem	138 (20.4)	96 (14.4)	23 (18.5)	81 (12.3)	<0.001
PB	There would be difficulty getting time off work for treatment	309 (45.8)	79 (11.8)	28 (22.6)	117 (17.8)	<0.001
PB	I don't know where to get help	113 (16.7)	30 (4.5)	12 (9.7)	46 (7.0)	<0.001
PB	It is difficult to get an appointment	109 (16.1)	41 (6.1)	18 (14.5)	104 (12.8)	<0.001
PB	I don't have adequate transport	17 (2.5)	5 (0.7)	1 (0.8)	6 (0.9)	<0.05
Att	Wanting to solve the problem on my own	401 (59.6)	356 (53.4)	66 (53.2)	347 (52.8)	0.05
Att	My visit would not remain confidential	160 (23.7)	60 (9.0)	21 (16.9)	54 (8.2)	<0.001
Att	Mental health treatment has harmful side effects	48 (7.1)	33 (4.9)	10 (8.1)	50 (7.6)	0.20
Att	I would think less of a team member if I knew he/she was receiving mental health counselling	44 (6.5)	44 (6.6)	5 (4.0)	34 (5.2)	0.50
Att	I have had previous bad experiences with mental health professionals	29 (4.3)	54 (8.1)	14 (11.3)	90 (13.7)	<0.001
Att	Mental health care doesn't work	28 (4.1)	27 (4.0)	10 (8.1)	40 (6.1)	0.09
Att	My leaders/bosses discourage the use of mental health services	26 (3.9)	20 (3.0)	7 (5.6)	22 (3.3)	0.50
Att	I don't trust mental health professionals	16 (2.4)	28 (4.2)	7 (5.6)	47 (7.2)	<0.001
Self	I would feel inadequate if I went to a mental health professional for help	233 (65.5)	215 (32.2)	34 (27.4)	180 (27.4)	<0.05
Self	I would feel worse about myself if I could not solve my own problems	347 (51.3)	278 (41.7)	46 (37.1)	259 (39.5)	<0.001
Self	I would be less satisfied with myself if I went to a mental health professional	260 (38.5)	165 (24.7)	32 (25.8)	156 (23.7)	<0.001
Self	It would make me feel inferior to ask a mental health professional for help	149 (22.1)	126 (18.9)	26 (21.0)	112 (17.0)	0.13
Self	Seeking psychological help would make me feel less intelligent	69 (10.2)	62 (9.3)	14 (11.3)	54 (8.2)	0.54

PB = perceived barriers to care, Sti = stigmatisation, Att = Attitudes to mental healthcare, Self = Self-stigmatisation
p values are for Pearson chi squared test

Self-stigmatisation and mental health

Compared to veterans, military doctors were significantly more likely to report both stigmatisation and perceived barriers to care and self-stigmatisation irrespective of whether they were cases on the GHQ-12 or not. Although all sub-groups reported more stigmatisation, perceived barriers to care and self-stigmatisation when they were classified as cases on the GHQ-12, doctors showed the largest increases compared to the other three sub-groups. Sub-group analyses suggested that seeking help was associated with a reduction in self-stigmatisation in all groups and was significantly lower among help-seekers in the veteran and regular sub-groups (Table 4).

Table 4: Service background or profession, mental health, self-stigma

Mental Health	Sub-Sample	Upper Tertile n (%)	OR (95% CI)	¹ AOR (95% CI)
Stigma, attitudes and barriers to care				
Not a GHQ Case	Ex-Service (336)	62 (18.5)	1	1
	Doctor (510)	199 (39.0)	***2.83 (2.04-3.93)	***2.61 (1.87-3.64)
	Regular P3 (373)	87 (23.3)	1.34 (0.93-1.94)	1.35 (0.94-1.95)
	Reserve P3 (70)	18 (25.7)	1.53 (0.84-2.80)	1.36 (0.74-2.50)
GHQ Case	Ex-Service (320)	95 (29.7)	1	1
	Doctor (166)	104 (62.7)	***3.97 (2.68-5.90)	***3.77 (2.51-5.68)
	Regular P3 (293)	99 (33.8)	1.21 (0.86-1.68)	1.22 (0.86-1.71)
	Reserve P3 (53)	24 (45.3)	*1.96 (1.09-3.54)	*1.93 (1.07-3.50)
Self-Stigma				
Not a GHQ Case	Ex-Service (336)	92 (27.4)	1	1
	Doctor (510)	193 (37.8)	**1.62 (1.20-2.18)	**1.55 (1.14-2.10)
	Regular P3 (373)	112 (30.0)	1.14 (0.82-1.58)	1.15 (0.83-1.58)
	Reserve P3 (70)	16 (22.9)	0.79 (0.43-1.44)	0.75 (0.40-1.37)
GHQ Case	Ex-Service (320)	113 (35.3)	1	1
	Doctor (166)	100 (60.2)	***2.78 (1.89-4.08)	***2.71 (1.82-4.03)
	Regular P3 (293)	115 (39.2)	1.18 (0.85-1.64)	1.17 (0.83-1.62)
	Reserve P3 (53)	22 (41.5)	1.30 (0.72-2.35)	1.30 (0.72-2.35)
Help-seeking and self-stigmatisation				
Sub-Sample	No Help	Help	OR (95% CI)	¹ AOR (95% CI)
Ex-Service (657) (No help n=264, help n=393)	111 (42.0)	94 (23.9)	***0.43 (0.31-0.61)	***0.43 (0.30-0.60)
Doctor (674) (No help n=562, help n=112)	250 (44.5)	43 (38.4)	0.78 (0.51-1.18)	0.73 (0.48-1.11)
Regular P3 (667) (No help n=306, help n=361)	136 (44.4)	92 (25.5)	***0.43 (0.31-0.60)	***0.41 (0.30-0.58)
Reserve P3 (124) (No help n=52, help n=72)	19 (36.5)	19 (26.4)	0.62 (0.29-1.35)	0.64 (0.29-1.43)

¹Adjusted for sex and service background (Royal Navy, Army, Royal Air Force)

*p<0.05

**p<0.01

***p<0.001

Discussion

To the best of our knowledge, this cross-sectional study of mental health, related attitudes and help-seeking is the first to be conducted among military doctors serving in the UK Armed Forces. The main findings of this study were that military doctors reported fewer symptoms of common mental disorder than other military sub-groups; 24.6% of military doctors reported symptoms of CMD compared to between 43% and 40% of the other military sub-groups. For comparison, in a literature review published in 2015, Vijendren, Yung and Schez reported that 32% of hospital consultants and 28% of oncologists had mental health problems, 44% of accident and emergency consultants reported psychological distress, 32% of colorectal and vascular surgeons experienced job-related exhaustion and 27% of radiologists and gastroenterologist experienced psychiatric morbidity. Although such comparisons are crude, it seems that military doctors may have marginally better mental health than their civilian counterparts.

Within the military doctor group, stigmatisation, negative attitudes to mental healthcare and a desire to self-manage and self-stigmatisation were higher than the comparison groups irrespective of being classified as a common mental disorder case on the GHQ-12 or not. There was a general trend toward reporting more stigma in the presence of caseness across the sub-groups which was highly significant among military doctors. For military doctors, this outcome is consistent with the findings from previous military research indicating that there is a positive association between increasing mental distress and expressing greater levels of self-stigmatising beliefs (Vogt 2011). Our data further suggest that military doctors reporting a relationship, alcohol or mental health problem occurring in the last three years were significantly and substantially less likely to seek help than the comparison groups. In all sub-groups, seeking help was associated with reduced stigma and in the case of military doctors and regulars, this was highly significant.

Our findings suggest that there may well be an important facet of mental health in military doctors which differs significantly to other military groups; namely, the marked association between mental health stigmatisation and poorer mental health and a lower propensity to seek care. In keeping with previous studies (Chew-Graham et al., 2003), where medical students reported self-stigmatising beliefs about the impact of mental difficulties upon their career, military doctors were concerned about mental health problems appearing on their medical records, being treated differently and colleagues having less confidence in them. This does not seem to be unique to military doctors and may represent an aspect of medical culture. Our data lends support to the concept that individuals are often most concerned about how their mental health might be perceived by others (Ben-zeev,

2012). A recent systematic review suggests that stigmatisation can have a small to moderate negative effect upon help seeking behaviours (Clement et al., 2014). We found that stigmatisation was greater among those who had not engaged with mental healthcare and that it was markedly lower among those who had engaged in care. This is potentially important as it implies that negative views of mental healthcare are often revised after care is sought and are therefore potentially modifiable in the prodromal space.

The UK Armed Forces provide a comprehensive, occupationally-focused mental healthcare service; among its objectives is to optimise mental health in order to maximise the number of personnel fit for deployed military duties (Whybrow 2013b, Whybrow 2013a, Whybrow et al., 2015). Despite having ready access to such care, previous studies suggest that military personnel may not necessarily choose to access it when required. In the case of military doctors, this may well be compounded by a particular unwillingness to seek help when unwell; this outcome has been demonstrated in research among civilian doctors (Stanton and Randal 2011). Military doctors may therefore face both unique role-related and ubiquitous perceived or actual barriers to mental healthcare which may impact the likelihood of seeking care through standard military routes. Within the civilian sector, attempts to overcome this challenge have included the provision of separate and confidential services for medical personnel. Garelick (2012) suggests that self-referral to a confidential psychological service with easy access to a face-to-face consultation may make it easier to overcome barriers to care. Additionally, other care pathway entry points such as online or remotely delivered therapies, which have been shown to be effective for some mental health problems such as depression and OCD might further promote access to care (Kessler et al., 2009, Cuijpers et al., 2009, Wootton 2016). Within the UK armed forces, self-referral to mental health services appeared to facilitate help-seeking and had no adverse impact on the capacity of care providers (Kennedy et al., 2016). Exploring novel, multi-modal ways of facilitating access to care which are perceived as tailored toward the unique needs of military doctors might have a positive impact on their help-seeking behaviours. If alternative means of mental health support for military healthcare professionals were to be provided, it might be helpful to develop this in collaboration with potential service users, the aim being to ensure that the service is tailored to meet the needs of those people for whom it is being provided.

Given that the current study is military doctor specific, further studies of military healthcare specialists could be expanded to include other professional groups such as military nurses and allied health professionals as they may be similarly adversely impacted by barriers to care. Military medical personnel other than doctors do not automatically hold officer status, which is known to

buffer mental distress in the Armed Forces (Fear et al., 2009); if they are similarly affected by stigma, they may not benefit from higher rank as a protective factor.

Strengths and limitations

Our data are cross sectional and limit our ability to infer causation (Bryman 2012); however, we used psychometrically sound survey instruments that have previously been used in a diverse range of UK military groups. This enabled comparisons to be made with a large cohort of non-medical personnel and helped us to identify unique differences related to the military medical role. What is not clear is whether the findings are unique to military doctors or whether they are relevant to all military healthcare professionals. A further limitation to this study is the use of an internet based survey. Whereas using face-to-face interviews can result in response rates of 80% or more, internet or postal surveys can produce lower response rates (Polit and Beck 2012). This study achieved a response rate of 59 % in the online survey of doctors and 85% in the comparison group telephone interviews, both of which we argue are respectable but being markedly different in proportion, may have introduced some unmeasured bias. There were differences in the response rate of doctors from different branches of the military. The army sample had a lower response rate than the other service branches and it is possible that this may have introduced further bias. It may be that non-responders had worse mental health and greater self-stigmatising beliefs than those who participated and this may have been a problem in the Army doctor sample in particular; we simply do not know.

Conclusion

Self-stigmatising beliefs about accessing help for mental health difficulties are common among military personnel especially when they are symptomatic and contemplating engaging with care. There was some evidence in this study that engagement with care may well positively impact stigmatisation and attitudes to mental healthcare. Military doctors reported lower levels of mental disorder symptoms than other military groups but higher levels of self-stigmatising beliefs. Most notably, military doctors were concerned about the possible negative impact of a mental disorder diagnosis being recorded in their medical records and how this might be negatively perceived by their peers. This is a potential barrier to accessing care that could potentially be overcome by promoting easier access to a tailored, confidential service possibly delivered remotely. This would need to be further evaluated for its utility. Finally, we do not know if stigma and reduced help-seeking is unique to military doctors; therefore, widening the study to all include a broad range of healthcare professionals might be helpful.

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