

ORIGINAL PAPERS

Predisposing factors and associated symptomatology of British soldiers requiring a mental health assessment

A Finnegan¹, S Finnegan², C Jackson³, R Simpson⁴, R Ashford⁵

¹OC Nursing Royal Centre for Defence Medicine, Selly Oak Hospital, Birmingham; ²Practice Nurse, Tree Tops PHC, Wirral; ³Head of Division of Psychology and Professor in Occupational Health Psychology; Birmingham City University; ⁴Joint Defence Professor of General Practice, Royal Centre for Defence Medicine; ⁵Director of Postgraduate Research Degrees, Birmingham City University.

Abstract

Objectives To critically evaluate the predisposing factors and symptomatology that resulted in serving officers and soldiers requiring a Mental Health (MH) assessment.

Methods 317 regular Army personnel who required a formal MH assessment completed a survey that detailed the predisposing factors and symptoms leading to the referral. SPSSv10 was used for data management and analysis of the data by descriptive and inferential statistical methods.

Results Three quarter presented with at least two predisposing factors, the commonest being family issues (42%), relationship problems (40%) and general military stress (39%). Up to half of young male Soldiers required a MH assessment as a result of wanting to leave the Army, and were positively associated with self harming ideology. Female soldiers are significantly over represented. No-one reported feeling isolated.

Conclusion The majority of personnel accessing the Army MH Services present with multi-factorial problems and symptoms that should result in colleagues being aware of their distress, and every effort must be made to support these soldiers within unit lines. That no one reported feeling isolated, challenges the perception that soldiers with MH problems are stigmatised. In those young male soldiers who wish to leave the Army there are indicators that significant periods of notice to leave can have a negative impact on MH. It is unclear why females are more likely to require support. If the emerging themes noted in this study are addressed, and the lessons learnt encapsulated within a predictive theoretical model, then the result could be an improvement in operational capability through the early return of Army personnel and Officers to full duty.

Introduction

Lord Darzi's review of the quality of care in the British health services identified the need to invest in interventions that can tackle medical problems before they occur [1]. Within military Mental Health (MH) care systems, the use of predictive models and screening have proven unreliable [2] and there is a requirement to identify predisposing factors and the associated symptoms that can be beneficial in shaping theoretical models to tackle MH problems before they manifest into disorders requiring specialist care.

Background

The Army has eight Departments of Community Mental Health (DCMHs), which are dispersed across the UK and located in areas of high Army populations. These DCMHs are patient centred, occupational facilities consisting of multi-professional clinical staff of psychiatrists, nurses and sessional support from psychologists and social workers [3]. DCMHs aim to provide a robust, effective and easily accessible service that ensures all military personnel are occupationally fit for role, and able to complete full operational duties. MOD Performance Indicators demonstrate that the

military philosophy of proximity, immediacy and expectancy [4] is achieved in over 95% of occasions and testify to an outstanding standard of service delivery in relation to facilitating access [3]. From an operational perspective it is vitally important that soldiers value the Army MH Services (AMHS), for if they view the service as poor, then they are unlikely to access care. Ninety three percent of patients rated the care provided as either very good / good and only 2% as either very poor / poor, suggesting that the quality of care provided by Army MH clinicians is of a high order [5].

Predisposing Factors and Symptoms.

There are numerous biopsychosocial factors that may overwhelm Army personnel and influence the onset of MH disorders, and any significant alteration in a person's lifestyle or new demands may cause stress and influence the ability to function. How individuals respond will depend on their coping mechanisms [3]. MH difficulties originate from social interactions and responses to the environment, which for the military are contextually influenced by peacetime and operational settings. Recognised civilian stressors leading to MH problems such as isolation [6], family stresses [7] relationship problems [8], childhood abuse [9], and the effects of alcohol [10] would be expected to be similarly reflected within the military population. There are also stressors unique to the military workforce such as psychological adjustment to operationally linked traumatic events [11] or symptomatology exhibited in personnel wishing to leave the Armed Forces, while facing extended periods

Corresponding Author: Lt Col Alan Finnegan MSc BN CPN [Cert] PGCE QARANC, OC Nursing Royal Centre for Defence Medicine, Selly Oak Hospital, Birmingham B17 0JJ
Email: alanfinnegan167@hotmail.com
Tel: 07894526872

of notice to leave [12]. The aim of this study was to identify and evaluate the predisposing factors and symptoms that result in British Army officers and soldiers requiring a formal MH assessment.

Methods

Due to the geographical dispersion of serving personnel an anonymous confidential questionnaire survey was used to gather information from officers and soldiers at the final appointment at the completion of a formal MH assessment at the eight UK DCMHs during 2006-7. The questionnaire, which has previously been shown to be a useful data-collecting tool for gauging satisfaction, moods, beliefs and attitudes [13, 14], was designed following consultation with clinical and non-clinical staff and service users and following a pilot study and published guidelines [15, 16]. Respondents were asked to indicate which predisposing factors and associated symptoms were applicable as well as the opportunity to add any additional information as free text. Completed responses were immediately inserted into a sealed envelope and returned to the first author, who coded the data and inserted onto an electronic database.

Statistical Analysis

Correlations between predisposing factors and symptoms was obtained through multi-variant inferential statistical examination utilising Pearson's Correlation Bivariate and Chi Square tests using SPSS Version 10 (SPSS Woking, England).

Results

It was intended to obtain 40 responses from each of the eight DCMHs; 317 were returned but not all were fully completed. Two hundred and thirty three of 314 respondents were male (74.2%). The rank of respondents were divided into 3 groups (Figure 1) and ages into five year cohorts (Table 1).

The number of predisposing factors identified ranged from 0 to 8 with over 75% of soldiers reporting two or more factors, and 30% highlighting the median number of 2 (Table 2). The most common predisposing factors were related to family issues (42%), relationship problems (40%) and experiencing general military stress (39%) - factors that affected all age groups, gender and ranks. MH conditions that generate significant media interest were less evident, with 17% reporting childhood problems, 14% unresolved trauma and 12% operationally attributable issues, whilst 25% wanted to leave the Army (Table 3). The number of symptoms described ranged from 0 to 12, and over 90% had 2 or more; with a median of 3 (Table 2). The most highly reported symptom was low mood (61%), followed by sleep disturbance (58%) and loss of confidence (42%); 31% reported self harming ideology (Table 4). The statistically significant correlations between predisposing factors and symptoms are provided in Table 5.

Low mood was significantly associated with general military stresses ($p < 0.001$) and relationship problems ($p < 0.002$). Operational factors were not closely associated with any symptoms, and unresolved trauma is associated with pain and sleep disturbance. General military stresses is the predisposing factor that is most likely to be represented by significant numbers of symptoms, which in addition to low mood include tiredness ($p < 0.005$) and lack of confidence ($p < 0.001$). Family stresses are linked to tiredness and sleep disturbance ($p < 0.001$) and relationship problems are correlated with low mood ($p < 0.004$), and hopelessness ($p < .006$). The association with self harming ideology is with soldiers who wish to leave the forces ($p < 0.001$), who also report lack of interest ($p < 0.001$) and childhood factors ($p < 0.001$). Alcohol abuse was not reported in association with any other symptom and no respondents reported being isolated.

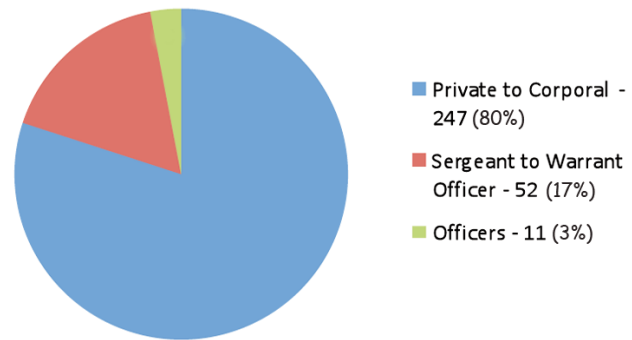


Figure 1. Respondent's rank

Age	Number (%)
Under 18	5 (1.6)
18-22	101 (32.1)
23-27	74 (23.5)
28-32	47 (14.9)
33-37	48 (15.2)
38-42	27 (8.6)
43-47	8 (2.5)
48-52	3 (1)
53-57	1 (0.3)
58-62	1 (0.3)
Total	315 (100)
Range 18 – 58yrs. Mode 18 – 22yrs	

Table 1. Respondents age

Number of Predisposing factors	Number of respondents describing number of predisposing factors (%)	Number of Symptoms	Number of respondents describing number of symptoms (%)
0	6 (1.9)	0	4 (1.3)
1	71 (22.5)	1	28 (9)
2	96 (30.4)	2	53 (17)
3	74 (23.4)	3	63 (20.2)
4	45 (14.2)	4	52 (16.7)
5	14 (4.4)	5	38 (12.2)
6	6 (1.9)	6	19 (6.1)
7	1 (0.3)	7	19 (6.1)
8	3 (0.9)	8	15 (4.8)
		9	9 (2.9)
		10	9 (2.9)
		11	2 (0.6)
		12	1 (0.3)
Total	316 (100)	Total	312 (100)

Table 2. Number of predisposing factors and symptoms described by individual respondents.

Rank	Predisposing Factor	Number who reported it (%)
1	Family Stresses	134 (42.4)
2	Relationship Problems	126 (39.9)
3	Other Military Stresses	123 (38.9)
4	Alcohol Abuse	89 (28.1)
5	Wants to Leave the Army	78 (24.8)
6	Childhood Factors	54 (17.1)
7	Physical Problems	49 (15.6)
8	Unresolved Trauma	45 (14.2)
9	Financial Problems	45 (14.2)
10	Operational Factors	37 (11.7)
11	Cultural Problems	8 (2.5)
12	Legal problems	2 (0.6)
13	Past Family History	1 (0.4)
14	Substance Abuse	1 (0.3)
15	Isolated	0
16	Not Known	9 (2.8)

Table 3. Predisposing factors ranked by incidence. (All data extracted from either 315 or 316 replies except for substance abuse (307) and past family history (282))

Symptom	Number describing its presence (%)
Low Mood	191 (61.2)
Sleep Disturbance	182 (58.3)
Loss of Confidence	130 (41.7)
Tiredness	125 (40.1)
Loss of Interest	123 (39.4)
Feeling of Hopelessness	112 (35.9)
Thoughts of Self Harm	97 (31.1)
Alcohol Abuse	94 (30.1)
Poor Concentration	85 (27.2)
Change in Appetite	76 (24.4)
Physical Symptoms	39 (12.5)
Pain	23 (7.4)
Other	21 (6.7)

Table 4. Presenting Symptoms by prevalence. (All from 312 replies)

Correlation: Factors & Symptoms	PC	P Val	Correlation: Factors & Symptoms	PC	P Val	Correlation: Symptoms & Symptoms	PC	P Val	Correlation: Symptoms & Symptoms	PC	P Val
Operational / Trauma	.338	.001	Family / Sleep Problem	.147	.009	Physical / Pain	.338	.001	Low Mood / Hopelessness	.335	.001
Trauma / Pain	.203	.001	Family / Relationship	.168	.003	Tiredness / Sleep	.412	.001	Low Mood / Poor Concentration	.177	.002
Trauma / Sleep	.176	.002	Family / Finance	.238	.001	Tiredness / Low Mood	.248	.001	Low Mood / Lack of Confidence	.166	.003
Trauma / Operations	.338	.001	Family / Alcohol	.284	.001	Tiredness / Lack of Interest	.251	.001	Lack of Interest / Changes in Appetite	.260	.001
Leave Army / Lack of Interest	.216	.001	Relationship / Low Mood	.165	.004	Tiredness / Changes in Appetite	.313	.001	Lack of Interest / Hopelessness	.203	.001
Leave Army / Self Harm	.202	.001	Relationship / Hopelessness	.155	.006	Tiredness / Hopelessness	.152	.007	Lack of Interest / Poor Concentration	.361	.001
Leave Army / Family	.412	.001	Relationship / Finance	.176	.002	Tiredness / Poor Concentration	.249	.001	Changes in Appetite / Hopelessness	.245	.001
Leave Army / Relationship	.248	.001	Relationship / Physical	.335	.001	Tiredness / Lack of Confidence	.317	.001	Changes in Appetite/Poor Concentration	.189	.001
Leave Army / Childhood Issues	.251	.001	Relationship / Alcohol	.177	.002	Sleep / Low Mood	.168	.003	Changes in Appetite/Lack of Confidence	.217	.001
Leave Army / Finance	.313	.001	Childhood Issues/ Self Harm	.149	.008	Sleep / Changes in Appetite	.283	.001	Hopelessness / Self Harm	.205	.001
Leave Army / Physical	.152	.001	Childhood Issues / Finance	.260	.001	Sleep / Poor Concentration	.284	.001	Hopelessness / Lack of Confidence	.248	.001
Leave Army / Alcohol	.249	.001	Childhood Issues / Physical	.203	.001	Sleep / Lack of Confidence	.213	.001	Poor Concentration/ Lack of Confidence	.198	.001
Mil Stress / Tiredness	.153	.007	Childhood Issues / Alcohol	.361	.001	Low Mood / Changes in Appetite	.176	.002	Self Harm / Lack of Confidence	.149	.009
Mil Stress / Low Mood	.190	.001	Finance / Tiredness	.156	.006						
Mil Stress / Lack of Confidence	.220	.001	Finance / Physical	.245	.000						
Family / Tiredness	.238	.001	Finance / Alcohol	.189	.001						

PC = PEARSON CORRELATION. P Val = Chi Sq Test - Significant 2 – Tail.

With correlation analysis, it is not always the P value that is of the highest interest, but the coefficient bivariate, or correlation value, with significance represented by a high Pearson's Correlation value. Examination of this value did not disclose strong correlations, but a number of low to medium links were noted and generally aligned to the P value.

Table 5. Significant correlations between predisposing factors and symptoms.

Factor Analysis

Utilising principals component extraction method for analysis of the 10 principal predisposing factors (Table 3) identified four emerging trends of

- Family stresses, relationship problems & financial problems
- Unresolved trauma and physical problems
- Operational factors, other military stresses and alcohol abuse
- Wanting to leave the Army and childhood factors.

These factors are therefore likely to be grouped together, with the similar outcome of requiring a MH assessment. The same process was utilised for symptoms and predisposing factors. The symptoms with a primary association indicated a high multi-symptom presentation of tiredness, sleep disturbance, low mood, alteration in appetite, feelings of hopelessness, poor concentration and loss of confidence, indicating that Army personnel are presenting with the biological symptoms of depression. Thoughts of self harm are associated with operational factors, and wanting to leave the Army. Factor analysis incorporating gender, age and rank indicated that the association between alcohol changes over time, until from the early 30's age group onwards, when most personnel are advancing through the ranks, then alcohol appears as a standalone symptom.

Univariate Analysis

Univariate analysis utilising percentages and nonparametric inferential tests was completed across gender, rank and age. The results contained expected statistically significant associations such as between pain with physical problems, and sleep disturbance with tiredness, which would indicate that the respondents have answered the questions diligently and honestly, and suggests the results are valid and reliable.

Males presented with significantly higher levels of alcohol abuse ($p < 0.001$) and wanting to leave the Army ($p < 0.001$) and females with MH problems related to physical problems (Table 6). Nearly one third (31%) of junior ranks wished to leave the Army, and thoughts of self harm were high in this group as a whole (37%). Only three WO and SNCOs (6%) and no officers stated that a predisposing factor was 'wanting to leave the Army' (Figure 2). Low mood increased incrementally with rank and over 70% of all Sergeants and above reported low mood. Officers reported high levels of poor concentration (Figure 3). Predisposing factors and symptoms vary across the age groups. Half of the 28-42 age group reported relationship problems and more than half of the 33-42 age group reported military stresses. Alcohol abuse and physical problems were both highest in those 43-47 years (37%). Those wanting to leave the Army were predominately younger with 47% of 18-22 year olds but only 4% of 33-42 year olds wanting to leave. No-one older than 42 wanted to leave. Sixty percent of those under 18 had problems originating in childhood, whereas unresolved trauma as a precipitating factor ranged from 9% in the 23-27 year old group to 21% in the 28-32 year olds, except for the small numbers of over 48's who reported a 60% rate. Low mood is more prevalent in the older age groups, peaking at 77% in those aged 38-42 years and 80% of those 48 years old or above. Forty five percent of 18-22 year olds reported loss of interest and an equal number had self harming thoughts. Physical symptoms were highest in the 38-42 age group at 23%.

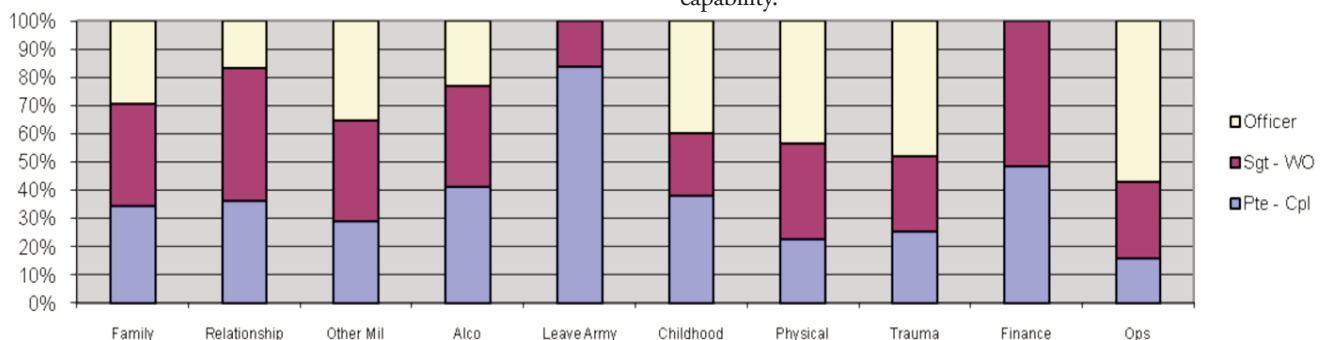


Figure 2. 100% stacked column chart comparing the percentage that each rank contributes to a total across the predisposing factors categories.

Factor	Present	Male (%)	Female (%)
Family Stresses	133	101 (76)	32 (24%)
Relationship Problems	124	97 (78)	27 (22)
Other Military Stress	121	93 (77)	28 (23)
Alcohol*	88	76 (86)	12 (14)
Wants to Leave Army*	77	67 (87)	10 (13)
Childhood Factors	53	34 (64)	19 (36)
Physical Problems*	48	32 (67)	16 (33)
Unresolved Trauma	45	33 (73)	12 (27)
Financial Problems	44	33 (75)	11 (25)
Operational Factors	37	31 (84)	6 (16)

Table 6. The 10 commonest predisposing factors by gender compared using Chi Square test with significance at $p < 0.05^*$. All from 315 replies

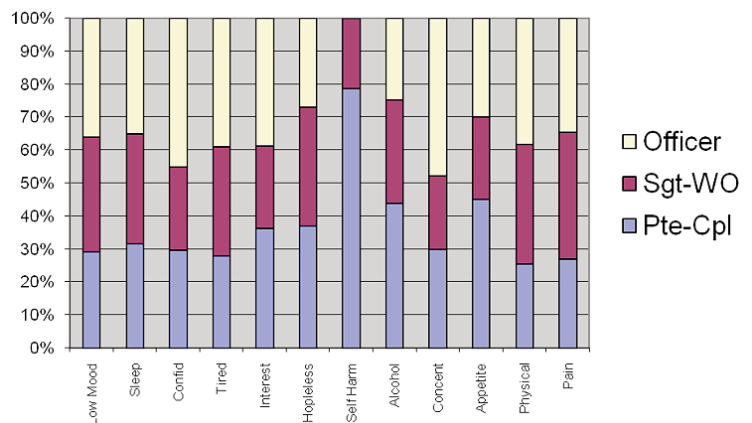


Figure 3. 100% stacked column chart comparing the percentage that each rank contributes to a total across the symptoms categories.

Discussion

The majority of respondents had multiple predisposing factors and presenting symptoms suggesting this is a highly distressed group of individuals. Relationship problems showed the highest number of statistically significant correlations with wanting to leave the army, financial problems, and family problems. Family and relationship problems as primary causative factors are prevalent within the general population [7, 8], and suggest that it is not necessarily service life "per se" that causes distress, although the association with wanting to leave their job suggests that the environment and context of the affective stressors are likely to be very different. There appeared to be several emerging themes from our data.

Support in Unit Lines

The majority of patients accessing the AMHS have multiple, identifiable stressors and symptoms, indicating an extremely distressed cohort. Symptoms such as tiredness, lack of interest and self harming ideology were common and are incompatible in a military workforce that must be focussed, fit, able to take quick and decisive decisions; this will likely negatively effect operational capability.

The British Army has robust welfare and health systems in place, with most units containing Welfare and Health committees who are responsible for maintaining risk registers of vulnerable individuals as part of the British Army's Suicide Vulnerability Risk Management Policy [17]. Therefore, it might be expected that Soldiers experiencing or displaying significant mood and behavioural changes would be noticed, with support offered at unit level before the need for a MH assessment. The most common factors such as relationship and family problems are likely to be known by the Soldier's peer group and as 'general military stressors' was the predisposing factor most likely to be significantly associated with several symptoms, may reinforce the distressed presentation at work. This does not necessarily mean that distraught soldiers are known to the unit hierarchy, or the medical services, as some may believe that medical confidentiality will not be maintained, or that accessing the AMHS will negatively affect their career. Therefore the possibility exists that current measures fail to identify at risk individuals, or alternatively that distressed individuals are noticed, and are being actively directed to the Unit Medical Officer. These possibilities will be examined in a planned future study.

Wanting to Leave the Army

Nearly half of young, junior rank, male soldiers access the AMHS because they wish to leave the Army. Extrapolated across all UK based military personnel this would generate approximately 750 new referrals per year. There is a small but significant link in the 18-22 age group between operational factors and wanting to leave the Army that could indicate a potential fear of tours or not coping well on their initial tour. However, the primary predisposing factors remain family stresses, relationship problems, childhood issues and financial problems. The Army's recognition of the issues means that support is available; however, the soldiers' perception seems to be that leaving the Army is the only answer. The terms and conditions of service within the Armed Forces are not reflected within any other UK based employment group, with young soldiers required to serve up to 3 years notice to leave. These soldiers may therefore make a conscious decision to enter the AMHS as a means of fast tracking a discharge from the Army, unaware that this is not within the remit of the AMHS, and soldiers may have to wait a long time to be discharged.

The consequences of retaining these disenchanted and uninterested personnel must be considered. Not only are they required to undertake important duties such as perimeter guards, but are likely to have regular access to guns; our data suggests that there is a significant correlation between these young disaffected soldiers and self-harming ideology. Suicide rates in the Armed Forces are lower than similar civilian cohorts in all age groups and gender except for young males (under the age of 24) in the Army [18], and it would appear that soldiers retained in the Army against their will is a contributing factor. Whilst an extended period of notice merely limits the future employment opportunities for most leavers, for nearly half of the young soldiers in this study, the result is a mixture of self-harming, destructive behaviour, associated with depressive symptoms. This cohort show a strong correlation of problems originating in childhood and may have joined the Army to get away from social-economic strife, thus leaving the Army is no guarantee that their core issues will be resolved. However, whilst they remain in the Army, their perception is that they will remain distressed; less prohibitive restrictions, reflected in a reduced term of notice to leave, may resolve the distressing symptoms and result in a reduction of MH referrals. Interestingly, whilst this cohort indicated disenchantment with the military, they still rated the AMHS highly [5], although it is highly questionable whether MH clinicians should be involved in what is an administrative issue.

The Impact of Military Life and Relationship Problems

The link between family / relationship problems, and military stresses were consistently reported irrespective of rank, age and gender. The pressures on a military family are well recognised [19, 20]. In this study, 50% of the 27-42 age group reported relationship problems and 46% reported military stresses; there is also a correlation in the middle ranking, mature age group of operational and childhood factors, although this group are likely to refer to their own children rather than unresolved childhood trauma. Employment stressors stem from frequent operational tours, overseas duties and military exercises, combined with long working hours originating from manpower shortages and increasing levels of responsibility. To compound the issues, there are postings every two to three years; to not only different areas but often to a different country. Spouses own employment opportunities are reduced and the impact on children can be significant, often living a nomadic life in different schools and without defined civilian social links. If the parents come from dysfunctional backgrounds, have poor coping mechanisms, or are not compatible, then the likelihood of problems is high [21]. The risk obviously increases as more stressors such as financial problems are added to the mix, resulting in the presentation of tiredness, sleep disturbance, low mood, and feelings of hopelessness. Some of the comments in the free text exemplify the issues such as "Relationship problems due to Service factors such as short notice jobs, extra workload and extra working hours imposed" and "unwanted posting".

The Army has recognised this problem, and invested heavily in welfare and social support, including extensive advice and support for estranged personnel [22]. Whether these interventions are successful is unclear, although the high levels of associated problems indicate that there is room for improvement as some of the British Army's workforce are suffering, not only from a MH perspective but with deteriorating personal relationships. A positive response to this would be for the AMS to formally recognise that the correlation of relationship problems, family issues and military stresses is reflected in primary health care (PHC) assessment and continuing professional development programmes, and reinforced throughout the chain of command by policy change.

Female Soldiers

Of 317 respondents, 26% were female whereas only 9% of the Army in general are female. The reasons for this relative excess of women is unclear and may be a reflection of them being less affected by any potential stigmatisation by seeking MH input or that they genuinely suffer more MH problems in a male-dominated profession. Alternatively, women may find disclosure easier or have a greater faith in the AMS, believing medical confidentiality will be maintained. Women presented more frequently with physical problems and symptoms of pain, poor concentration and loss of confidence. The physical problems may reflect that women now have to complete the same training as their male peers, but do not normally have the same inherent strength or endurance. Of note, females share their male counterparts presentation of multiple stressors, and reinforces that their distress should also be notable at work.

Post Traumatic Stress Disorder

Of all the MH conditions associated with recent military conflicts, none generate as much media and public interest as Post Traumatic Stress Disorder (PTSD), although the impact of this disorder in reducing the operational capability of the British Army appears less than other MH conditions such as depression. (23, 24) Our results confirm this, with traumatic incidents being relatively low as a predisposing factor, but high enough to generate attention in

certain groups, in particular the 21% of 28-32 year olds and 27% of officers. A key component of PTSD is avoidance behaviour [25], where the sufferer takes extensive steps to evade reminders that will stimulate a memory of the traumatic event. This may result in a soldier leaving the Army, or in patients attending PHC with a somatisation disorder to evade disclosing the root cause of their distress [26]. However, in this relatively small survey, where the details of subject's operational experiences was not collected, makes it very difficult to draw any meaningful conclusions.

Depression

Low mood, the classical indicator linked with depression, is the most commonly reported symptom in this study, and strongly associated with general military stresses, relationship problems, and numerous other symptoms such as tiredness, sleep disturbance, change in appetite, lack of concentration and lack of confidence. There are significant differences between the presentation of depression depending on age, rank and gender, although a notable trend is that low mood increases incrementally with age and rank, with over 70% of all Sergeants and above reporting low mood. The results indicate three distinct groups emerging with depressive symptoms.

The first are young males with self harming ideology and numerous symptoms who want to leave the Army. This group have depressive symptoms as a direct response to one situational stressor, and if this is removed then the symptoms are likely to disappear. This group are likely to welcome being identified as having MH issues, and referral to the AMHS services may be part of their exit strategy. They are also likely to want to access the medical services at an early stage, without reservations of the stigma of being labelled.

The second group are older soldiers, progressing through the ranks who report considerably less self harming ideology but increasing numbers of classical depressive symptoms. By the time they reach 28 years old, the low mood is no longer caused by a single situational stressor but originates from multiple factors associated with work issues, unresolved trauma and other military stresses. This group are likely to be moving through the ranks, and given more responsibility and pressure, increasing numbers of operational tours and regular periods away from home. In the experience of the military authors this group are less likely to access support, for fear of harming their career, and may try to deal with these issues through alcohol, which exacerbates their distress and leads to strain within the family and financial problems.

The third group are the older, more senior ranks and officers, reporting low mood in 77% of cases and who present with the most classical clinically diagnostic depression symptoms of tiredness, loss of interest, poor concentration, some thoughts of self harm and attestations of pain and alcohol abuse. Whilst the younger groups are very keen to leave the Army, this group is not. There is the potential that this group have tried to cope with their problems, without external support, for a considerable period of time and the problems have been manifesting slowly in intensity, in a soldier reluctant to seek MH support. This group also reports the highest amount of physical symptoms which may be a means of accessing support with a psychosomatic presentation.

From the age of 33, there is a correlation between the feeling of hopelessness, operational factors and childhood factors. These childhood problems may relate to their own children rather than unresolved adolescent experiences, and demonstrates the multiple stressors associated with being a parent and spending large periods of time away from home on dangerous duties. The issues change from 38 to 42 years old, when most soldiers are nearing the end of their career, and low mood is associated with relationship and financial problems. Many of these soldiers have been in the Army since their teenage years and the adjustment reaction associated with the impending move to civilian life is often stressful.

Alcohol & Substance Abuse

Alcohol was associated with 28% of DCMH admissions, (Table 3) which remains consistent with previously published figures [3, 24], and excessive alcohol consumption in the British Armed Forces is higher in both males and females than the civilian counterparts [27], closely aligned to military social activities, and generally accepted as part of military life [28]. The drinking patterns and levels of addiction are likely to reflect recognised UK Anglo Saxon social trends, commencing with periods of heavy, socially based drinking in young males [27]. However, whilst there are cultural and social issues, alcohol might also be used as a maladaptive coping mechanism to deal with everyday stressors, gradually leading to the insidious development of addiction witnessed after many years of abuse.

Our study population is largely of white male Soldiers, often from socially deprived areas of the UK [19], living away from home and with a large expendable income. Significant numbers of junior ranks recognise their alcohol abuse, linking the misuse to military stresses. However, the association between alcohol and symptoms changes over time, until from the early 30's age group onwards, alcohol is reported as a stand alone issue, which may indicate that alcohol abuse becomes a hidden activity to prevent detection, perhaps for fear of disciplinary action, or loss of employment; and is therefore difficult to detect, yet alone treat. This presentation is not unique to the Army, and alcoholics often mask their behaviour and hide their abuse [29, 30]. Whilst acknowledging that military culture may accommodate alcohol misuse, the military have recognised the risk, and consistently attempted to address this problem with policies and initiatives, leading to alcohol awareness training and education that has been mandatory in unit lines for many years. Our results may indicate that the AMHS provide a robust and accessible service to alcohol abusers, and soldiers access support much quicker than in civilian healthcare practice [31, 32]. Alternatively, these results may show that current initiatives are ineffective, and there is room for significant improvement. If this is the case, then extended interventions to the wider family group may be an option, as they are in a position to notice behavioural changes not readily recognisable within unit lines.

Only one soldier reported drug abuse, and as the Army take a strong disciplinary stance regarding drug abuse, and regular compulsory drug testing ensures that detection is high, then drug abuse would be expected to be low. However, another reason is that patients distrust the AMHS, and fear that an admission for drug abuse would result in disciplinary action.

Isolation

It was an unexpected result that no one reported feeling isolated. Considering that this cohort is predominately young adults, away from their normal social support networks and constructs, this result seems highly unlikely. Coupled with the presumed stigma of MH issues within the Army's macho image [33], then no one being isolated seems even more improbable. The widespread perception that Soldiers with MH problems experience reduced peer support, are stigmatised as being weak, and are not part of the "team", is not supported by the results. This indicates that Soldiers accessing AMHS remain part of a group, although the reason for this is unclear. One hypothesis is that the Army's stance in promoting MH and reducing stigma is working. Alternatively, there may be empathy within unit lines, and recognition that the level and intensity of operational tours, combined with long working hours, has a significant impact on families and relationships, and could lead to anyone requiring help. Another hypothesis is that it is this group that have accessed MH support that report not being isolated, but these perceptions are not reflective of non-service users.

Study Limitations

This survey did not gauge symptoms present at discharge, and

therefore those items listed in this study may be transient / situational stressors or maintaining factors that are resolved during treatment. The questionnaire tick boxes listed symptoms associated with depression, and may have resulted in patients presenting with disorders such as anxiety or PTSD under reporting, although this was compensated with the option for respondents to add additional factors or symptoms through free text. There was also the possibility that personnel highlighting relationship problems and family problems may be double reporting.

These views are taken from UK DCMH attendees in a peacetime setting, and may not be reflective of personnel deployed on operations. In addition, the number of respondents within certain age groups was small, in particular the under 18s (n=5), 43–47 years old (n=8) and over 48 (n=5), and only 3.5% (n=11) were officers. Only 282/317 personnel provided details regarding a past family history of MH problems, and only one reported substance abuse. These results may reflect a fear that a false attestation during the recruitment process regarding a history of MH problems or a disclosure of drug abuse would lead to disciplinary procedures.

It is acknowledged that some of these factors may have developed into maintaining factors by the time the soldier or officer had accessed a DCMH. The timing of questionnaire completion presented the potential for bias but was the best option for obtaining a high response rate and removed any need to contact the MH client after discharge. To combat this potential bias, the cohort were assured that the survey was anonymous and confidential and that they would not be contacted at a future point.

Conclusion

The most common predisposing factors are family issues, relationship problems and general military stress. Factors commonly reported in the media such as childhood problems, unresolved trauma and operationally attributable issues were less prevalent. This detail should influence the priorities within unit lines, and be reflected in the personal training and educational programmes for PHC clinicians, as the focus should be on areas that have the greatest impact on operational effectiveness rather than issues escalated through media interest. The majority of soldiers requiring a MH assessment have multi-factorial problems displayed in a number of different ways and should mean that colleagues are aware that something is wrong, and every effort must be taken to support them within unit lines before the need for a MH assessment occurs. The one notable exception is the high number of male soldiers acknowledging alcohol abuse, which is not associated with any other symptom, and raises the question of how to identify this behaviour at unit level. The momentum with alcohol research, education and awareness programmes should be extended where possible to family members.

Up to 50% of young male Soldiers who require a MH assessment as a result of wanting to leave the Army, and this group are positively associated with thoughts of self harm. The Army's fast and easy access to highly rated MH clinicians is excellent, but these professionals cannot facilitate the soldiers release except to recommend an administrative discharge. Whilst noting the operational imperative to have visibility and continuity of personnel, it is clear that significant periods of notice have a negative impact on the MH of young soldiers. A notable finding is that no one reported being isolated which challenges the perception that soldiers with MH problems are stigmatised

This study has generated a number of questions such as why do such a high proportion of female soldiers access the AMHS, and how much pressure is the current military working environment placing on soldiers? The themes that have emerged from this study will be the subject of a further qualitative research study utilising experienced military MH clinicians as the research cohort. The eventual aim is to both address shortcomings identified and incorporate these and subsequent findings into a theoretical model

to predict MH vulnerability to improve operational capability by returning serving personnel to full working duty. This would produce improved support to Army personnel and enhance the value of the AMHS.

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