Do stigma and other perceived barriers to mental health care differ across Armed Forces?

Matthew Gould[1] • Amy Adler[2] • Mark Zamorski[3] • Carl Castro[4] • Natalie Hanily[5] • Nicole Steele[6] • Steve Kearney[7] • Neil Greenberg[8]

[1] Defence Clinical Psychology Service, UK Ministry of Defence, DCMH, PP6, Sunny Walk, HMNB, Portsmouth PO1 3LT, UK

[2] US Army Medical Research Unit – Europe, Nachrichten Kaserne, Karlsruher Str, 144, 69126 Heidelberg, Germany

[3] Canadian Forces Health Services group, 1745 AltaVista Drive, Ottawa, ON K1A 0KG, Canada

[4] Department of Military Psychiatry, Walter Reed Army Institute of Research, 503 Robert Grant Avenue, Silver Spring, MD 20910, US

[5] Psychology Support Section – South Queensland, Gallipoli Barracks, Enoggera, QLD, 4035, AUS

[6] Joint Health Command CP-2-7-098, Northcott Drive, Campbell, ACT 2600, Australia

[7] HQ Joint Forces, 2 Seddul Bahr Road, Trentham, Upper Hutt, Wellington, New Zealand

[8] Academic Centre for Defence Mental Health, King's College London, Weston Education Centre, Cutcombe Road, London SE5 9RJ, UK

Correspondence to: Neil Greenberg. E-mail: sososanta@aol.com

DECLARATIONS

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Summary

Objectives Military organizations are keen to address barriers to mental health care yet stigma and barriers to care remain little understood, especially potential cultural differences between Armed Forces. The aim of this study was to compare data collected by the US, UK, Australian, New Zealand and Canadian militaries using Hoge *et al.*'s perceived stigma and barriers to care measure (Combat duty in Iraq and Afghanistan, mental health problems and barriers to care. *New Engl J Med* 2004;**351**:13–22).

Design Each member country identified data sources that had enquired about Hoge *et al.*'s perceived stigma and perceived barriers to care items in the re-deployment or immediate post-deployment period. Five relevant statements were included in the study.

Setting US, UK Australian, New Zealand and Canadian Armed Forces.

Results Concerns about stigma and barriers to care tended to be more prominent among personnel who met criteria for a mental health problem. The pattern of reported stigma and barriers to care was similar across the Armed Forces of all five nations.

Conclusions Barriers to care continue to be a major issue for service personnel within Western military forces. Although there are policy, procedural and cultural differences between Armed Forces, the nations studied appear to share some similarities in terms of perceived stigma and barriers to psychological care. Further research to understand patterns of reporting and subgroup differences is required.

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Introduction

Armed Forces personnel are routinely exposed to occupational hazards that put them at risk of developing mental health problems (e.g. Hoge *et al*.,[1] Hotopf *et al*.,[2] Sareen *et al*.[3]) which can adversely affect functioning in the workplace and operational effectiveness as well as being a major cause of personal distress. For these reasons, military organizations often invest substantial effort to encourage personnel with mental health problems to come forward and receive effective treatment. However, in both military and civilian populations, only a minority of those with mental illness seek care (e.g. Hoge *et al*.[1]). Evidence from both military[4] and civilian[5] settings has shown that problems with the recognition of need represents by far the most prevalent barrier to receiving care. Fikretoglu *et al*.[4] and Wang[5] have shown that 80–96% of those who might benefit from care do not seek care having failed to recognize their own treatment needs; such individuals acknowledge clear-cut symptoms of mental disorders but deny any need for care. Individuals with mental health problems who do recognize a need for care often face a number of potential barriers to care, including problems with availability, accessibility and acceptability.[5] Furthermore, differences in culture, policies, programmes and the structure of health services may affect the ability of individuals to access care and their experiences of stigma, for example, approaches to mental health screening differ between the US and UK.

Much has been made of the barriers to care that service members may have to deal with, particularly the stigmatization of mental health problems and/or the seeking of mental health care.[6,7] A qualitative review of attitudes about post-traumatic stress disorder (PTSD) in the Canadian Forces found that soldiers felt stigmatized and abandoned after seeking help and many had not sought help for fear of being ostracized and 'shown the door'.[8] Hoge *et al*.[1] investigated help-seeking and perceived barriers to care among United States soldiers and marines after deployment to Iraq (Operation Iraqi Freedom) and Afghanistan (Operation Enduring Freedom). This study revealed that of those who scored above the cut-off on mental health screening measures, only 38–45% indicated an interest in receiving help and only 23–40% had sought mental health care. The three most common perceived barriers to care were: (1) being perceived as weak; (2) being treated differently by unit leadership; and (3) members of their unit having less confidence in them. The problems with stigma may also follow personnel who leave the services. For example, a large-scale survey of ex-service personnel in the UK found that only approximately half of those with mental health problems had sought help; both stigma and embarrassment were found to be frequently cited barriers.[9] However, although there are international data to show that stigmatizing beliefs are prevalent within military organizations, no attempt has been made to examine whether nations differ in terms of stigma and barriers to care. Using data from the military forces of five nations, this study aimed to identify: (1) how frequently stigma and barriers to care were reported by military personnel; (2) whether or not there was a differential reporting pattern, in terms of stigma and barriers to care, between those personnel with mental health problems and those without; and (3) if there were any differential patterns in the way stigma and barriers to care were reported by the individual nations.

Method

This study arose from work conducted by the Technical Cooperation Program (TTCP) Technical Panel 13 (TP13) – Psychological Health and Operational Effectiveness. TTCP is an international collaboration between the USA, Canada, Australia, New Zealand and United Kingdom. It is composed of personnel who represent the military research effort of each of the five nations. Technical Panel 13 examines the Psychological Health and Operational Effectiveness domains. Each member country identified data sources that had enquired about Hoge *et al*.'s 'perceived stigma and perceived barriers to care' items in the re-deployment (i.e. returning home) or immediate post-deployment period.[1] Items from each country were only included in the current study if three or more countries held data concerning the item. This resulted in five items being included in the study: three 'stigma' items ('it would harm my career', 'my unit leadership might treat me differently', and 'I would be seen as weak') and two 'barriers to care' items ('I don't know where to get help' and

'there would be difficulty getting time off work for an appointment').

Overview of studies

US data were collected from a Brigade Combat Team (BCT) within a week of their return home following a year-long deployment to Iraq (Operation Iraqi Freedom, OIF). The study was approved by the US Army Institutional Review Board and funded by the Military Operational Medical Directorate of the US Army Medical Research and Material Command. Surveys (non-anonymous) were administered as a part of a post-deployment mental health training study. After being briefed on the study, 2241 soldiers (77% of the BCT soldiers) provided their informed consent. The baseline survey assessed demographics, deployment history and experiences, mental health outcomes, unit climate measures and perceptions of stigma and took approximately 30 minutes to complete. Screening positive for a mental health problem was defined as scoring above strict criteria on measures of PTSD, depression or anxiety as defined by Hoge *et al*.[1] Specifically, screening positive was defined as scoring 50 or more on the PTSD Checklist (PCL)[10] and reporting severe symptoms and functional impairment on the Patient Health Questionnaire (PHQ) for depression[11] and anxiety.[12]

UK data were collected from troops who were passing through a Third Location Decompression (TLD) facility in Cyprus for 36 hours. The study was funded by the UK Ministry of Defence and received ethical approval from the Ministry of Defence Research Ethics Committee. Personnel had been deployed to either Iraq (Operation TELIC) or Afghanistan (Operation HERRICK) for between four and six months. Self-report questionnaires were distributed to personnel at the end of the decompression to measure views of the decompression process. The questionnaire (non-anonymous) took approximately 10 minutes to complete and assessed demographics, deployment experiences, a short PTSD symptom scale (PC-PTSD)[10] and perceptions of stigma. Scoring positive for a mental health problem was defined liberally as scoring 2 or more on the PC-PTSD. While this scoring method is likely to produce many false-positives, it is also likely to ensure that all those who are really suffering with mental health disorders are contained within the scored positive group.

Australian data were collected on Army and Air Force troops who had deployed to Iraq (Operation CATALYST) and were about to return to Australia. The study was approved by the Australian Department of Defence and integrated into the routine psychological health monitoring process funded by the Australian Department of Defence. A total of 525 questionnaires (non-anonymous) were distributed over three months with a response rate of 35%. Perceived barriers were measured using 12 of the original items in the Hoge *et al*. research;[1] the item 'mental health care costs too much' was omitted as this service is free to Australian military personnel. Psychological distress was measured using the Kessler 10 (K10),[13] where a score of 10–15 suggests low/no risk, 16–29 medium risk, and 30–50 high risk. Scoring positive for a mental health problem was defined as scoring 16 and above on the K10.

Canadian data were collected from an anonymous evaluation form at the end of a five-day Third Location Decompression (TLD) programme in Cyprus which is part of the routine psychological health monitoring process funded by the Canadian Defence Force. Participants were service members returning from a six-month tour of duty involving both combat and peace support operations in Kandahar Province, Afghanistan. Approximately half of the sample was from the combat arms; the remainder served in combat support roles. Respondents had received approximately three hours of educational material about the reintegration process as part of the decompression programme; this included a version of the US's post-deployment Battlemind training[14] which specifically aims to reverse stigma and other barriers to mental health care. The response rate on the evaluation form was consistently greater than 90%, and all four major Land Forces brigades were well-represented. Because mental health symptoms were not assessed at the time of decompression, the hypothesis that those with mental health problems would experience different barriers could not be explored. For comparison purposes, mental health surveillance data (non-anonymous) collected from approximately the same group some 3–6 months after return during the time of post-deployment screening are reported. A positive screen was defined as 50 or more on the Post

Table 1
Overview of studies

	USA	*UK*	*Australia*	*Canada*	*New Zealand*
Study	Non-anonymous	Non-anonymous	Non-anonymous	Stigma/Barriers to care data anonymous Mental health data non-anonymous	Anonymous
n	2241	4713	163	5255	97
Response rate (%)	77	83	35	90	66
Period	2005	2008	2005	2006 – 2007	2009
Deployment	Iraq	Iraq and Afghanistan	Iraq	Afghanistan	Timor Leste
Data collection	Re-deployment	Re-deployment	During the last week of deployment	Re-deployment	Re-deployment

Traumatic Stress Disorder Checklist-Civilian Version (PCL-C)[15] or a positive depression or anxiety screen on the PHQ. Certain demographic variables were also taken from the post-deployment screening data.

New Zealand data were collected from troops going through the Force Extraction Process at the conclusion of a six-month peace-keeping tour in Timor Leste. The study was funded by Headquarters Joint Forces New Zealand and the approval process was in accordance with Defence Force Order 21/2002 Authority to Conduct Personal Research. The survey was completed at the conclusion of a compulsory interview with a New Zealand Defence Force (NZDF) psychologist. All personnel were briefed that the survey was anonymous, unrelated to the interview and would be used for research purposes only. The psychologist did not inspect or refer to the survey on its return. Ninety-seven of the 146 personnel consented to complete the survey (66% response rate). Caseness was measured using the K10 where scoring positive for a mental health problem was defined as scoring 16 and above. This cut-off is likely to include a high rate of false-positives but allows for comparison with other data.

Analysis

The data were compiled into an Excel worksheet and tabulated as appropriate. Descriptive and chi-squared analyses were undertaken using the Statistics Package for Social Sciences (version 12). Although the nations used different measures of psychological health, all used sensitive rather than specific caseness thresholds.

Results

Table 1 briefly describes the included studies. All were carried out at around the time of re-deployment and were mostly based on a large sample size. Table 2 reports the main characteristics of the samples. The US sample comprised Army personnel only; this group were younger and had a shorter length of service than both the other studies. The Australian sample comprised a higher number of officers with a large number of the group reporting having received previous mental health care. The prevalence of mental health problems based on varying self-report screening measures ranged from 9.3% to 31%.

Table 3 reports concerns about stigma and barriers to care among those who did and did not exceed screening criteria for mental health problems. Respondents from the USA, UK and Canada who exceeded the cut-off on screening measures for a mental health problem were, on the whole, more likely to perceive both stigma and barriers to care. Surprisingly, a notable exception to this general pattern emerged; the New Zealand cohort who did not exceed the cut-off were more like to report concerns about stigma.

Table 4 reports concerns about stigma and barriers to care among all respondents across the five nations. Data revealed a remarkably consistent pattern of responding across the nations. The main concern was shown to be stigma items especially 'my unit leadership might treat me differently' followed by 'I would be seen as weak' and 'it would harm my career'. Concerns about barriers to care, namely 'there would be difficulty getting time off work' and 'I don't know where to get help', were

Table 2
Sociodemographic characteristics of the samples

	US *% or* M *(SD)*	*UK*	*Australia*	*Canada*	*New Zealand*
Service					
Army	100	–	48	88	98
Navy	0	–	0	–	1
Air	0	–	52	–	1
Gender					
Man	96	–	87	–	93
Woman	4	–	13	–	7
Age	25.9 (5.7)	28.8 (6.4)	33.2 (7.7)	32.5 (8.1)	–
Relationship status					
Single	57	–	–	40	88
Married	43	–	–	60	12
Length of service years	5.2 (5.2)	–	12.5 (6.9)	11.3 (7.8)	–
Rank					
Junior	55	70	42	69	89
Senior	37	18	31	18	7
Officer	7	12	26	13	4
Received previous mental health care	19	–	60	23	–
Mental Health Screen	14*	13†	23‡	9§	31**

* Exceeding criteria on PCL or PHQ for depression and anxiety
† 2 or more on the PC-PTSD
‡ 16 or more on the K10
§ 50 or more on the PTSD-C or exceeding criteria on the PHQ for anxiety and depression
** 16 or more on the K10

fourth and fifth, respectively, and relatively rarely endorsed. In the main, among all respondents, there were greater concerns about stigma than barriers to care.

Discussion

Principal findings

This paper examines concerns about stigma and barriers to care across the US, UK, Canadian, Australian and New Zealand Armed Forces. The data revealed three main findings. First, all nations showed a similar pattern of response; respondents most frequently endorsed concerns about stigma, especially the beliefs that 'my unit leadership might treat me differently' and 'I would be perceived as weak', rather than concerns about barriers to care. Second, USA, UK and Australian personnel who exceeded the cut-off on self-report mental health screening measures were more likely to express concerns especially about stigma than those who did not exceed the cut-off; the New Zealand cohort did not follow this pattern. Lastly, although some nations appeared to have a lower prevalence of concerns about stigma and barriers to care than others, our data suggest that these concerns continue to be a major issue for service personnel within Western military forces.

Strengths, weaknesses

This study suffers from methodological limitations. On a general level the analysis of stigma is complicated by multiple definitions and by how best this topic can be researched with, as yet, no agreed instrument to measure stigma[16] and no standard methodology.[17] The use of self-report measures to capture attitudes might be biased by social desirability, which can have important effects even in anonymous research, while surveys were administered at different stages of the

Table 3
Concerns about stigma and barriers to care among those who did and did not exceed screening criteria for mental health problems across four nations

	US			*UK*			*Australia*			*New Zealand*		
	% MH–	*% MH+*	χ^2	*% MH–*	*% MH+*	χ^2	*% MH–*	*% MH+*	χ^2	*% MH–*	*% MH+*	χ^2
I don't know where to get help	2	9	48.53‡	7	19	88.54‡	9	16	2.83	2	7	1.67*
There would be difficulty getting time off work for an appointment	14	30	58.60‡	16	31	107.73‡	14	32	6.09†	2	7	1.76*
It would harm my career	18	28	18.46‡	22	25	70.46†	12	19	0.50	33	19	2.01
My unit leadership might treat me differently	38	57	36.37‡	27	40	61.27‡	35	46	0.98	29	29	<.01
I would be seen as weak	34	53	37.60‡	24	41	104.88‡	29	27	0.12	30	29	0.16

MH– = personnel who did not meet screening criteria for a mental health problems
MH+ = personnel who met screening criteria for a mental health problem
All data are based on personnel who 'agreed' or 'strongly agreed' with the stigma or barrier to care item
% = valid percent reported due to missing data
* Violates χ^2 assumption as less than 5 cases so Fisher's exact text reported
† $p < 0.01$
‡ $p < 0.001$

Table 4
Concerns about stigma and barriers to care among all respondents across five nations

	US *%*	*UK*	*Australia*	*Canada*	*New Zealand*
I don't know where to get help	3	10	10	5	3
There would be difficulty getting time off work for an appointment	16	18	18	–	3
It would harm my career	20	23	13	13	29
My unit leadership might treat me differently	41	29	37	–	28
I would be seen as weak	37	26	29	14	30

All data are based on personnel who 'agreed' or 'strongly agreed' with the stigma or barrier to care item
% = valid percent due to missing data

deployment cycle. Certain demographic factors such as age and gender are major determinants of stigma but for methodological reasons we could not adjust for the fact that females and Air Force and Navy personnel were significantly under-represented or control for other potential confounds such as rank as juniors might be more fearful of disclosing a psychological problem. Thus our research is limited by our inability to statistically adjust for the demographical differences between the samples which may limit the generalisability of the results within the military. Also, data were captured on a limited number of stigma and barriers to care items, yet military and civilian population data suggest that there are others that we did not assess.[5] Finally, nations used psychometrically robust but different mental health screening measures thus making comparisons on the prevalance rates difficult while the thresholds used to define 'caseness' were sensitive rather than specific; therefore it is likely that the 'cases' group would have included personnel who, if formally

assessed, would not have clinically significant mental health problems.

Meaning

That some similarities were found in terms of the pattern of stigma responses between the five nations may reflect the fact that the concept of stigma relates to socially agreed group values and judgements which are shaped by cultural and historical factors.[18] Given that the five nations in this study have close historical ties and currently collaborate militarily, it is possible that these countries form a relatively homogenous group in terms of their historically derived stigmatizing beliefs. However, it is important to recognize that judgements about help-seeking can vary across cultures and organizations and across military and non-military personnel.

Our results showed that stigma tended to be more strongly endorsed than barriers to care with the most prevalent concern involving the way that leaders might view their subordinates. There were of course some potentially important differences identified, for example, Canadian Forces members were less than half as likely to report concerns about being perceived as weak than US soldiers. Even assuming that this is not due to simple methodological factors, it is impossible to tell from these data what the Canadians might be doing differently from the Americans. However, in recent years, and in response to many factors (e.g. enhanced awareness of mental health problems in general, operational tempo, threats to force sustainability), there has been some progress in addressing the needs of service personnel. For example, Warner *et al*.[19] found that the most commonly endorsed barriers to mental health care were negative perception by unit members and leaders and being viewed as weak. Interestingly, they showed a 15% reduction in stigma related to mental health care following educational programmes. Our finding of fewer barriers in the Canadian sample (all of whom received mental health training before completion of the survey) may also suggest that the programme may have had the desired effects. It appears, as Hoge *et al*.[1] recognized, that a key target for the military is to reduce stigma and barriers to care through outreach programmes, education and changes in healthcare delivery. All members of TTCP are active in mental health promotion and given the similarities found in the current study it is possible that campaigns that are shown to be successful in one country may be applied to another. Military anti-stigma programmes which have recently showed promise include the UK's Trauma Risk Management (TRiM)[20] and the US Battlemind programme.[14]

Our data are in line with the findings by Hoge *et al*.[1] which showed that concerns about stigmatization were almost twice as likely among personnel who scored above the cut-off on mental health questionnaires. Interestingly, however, in the New Zealand cohort it was personnel who did not exceed the cut-off who were more likely to endorse stigma. There are a number of possible explanations for this including the small sample size which might have resulted in inadequate power and obscured findings or that only 12% were married which might suggest a younger group leading to an age cohort effect. Also, USA, UK and Australian personnel were on broadly similar deployments to Iraq and Afghanistan while New Zealand personnel were deployed on peace-keeping duties to Timor Leste; only New Zealand's elite forces were deployed on combat operations.

Greene-Shortridge *et al*.[6] suggest that those individuals who meet the criteria for 'caseness' are actively considering the potential negative effects of seeking help thus leading to increased reports of stigma. Mental health problems can also predictably lead to cognitive distortions that can interfere with perceptions of self, world and others. It is also possible that those with mental health problems adjust their perceptions about stigma and barriers in response to their own experiences of seeing how other people, who have suffered with mental health problems, have been treated. Research suggests that direct contact with people who have had 'helpful treatment for episodes of mental illness'[21] aids the development of positive attitudes rather than simply knowing someone who has had a mental illness. Worryingly, however, the Institute of Medicine[22] has raised serious concerns about the overall quality of civilian mental health care and it is likely that quality issues are to be found in the military. For example, recent research from the US Army showed that while about one-third of soldiers sought care for mental health problems in the first year after return, they only received an average of about three visits each.[23] This seems

unlikely to be sufficient to meet the significant mental health care needs of this group.

Although many nations' Armed Forces are making genuine efforts to support the psychological needs of their troops and are encouraging personnel to seek help our data suggest that there is still some way to go until these efforts come to fruition. For instance, little is known about why service personnel with mental health problems hold particular beliefs; whether it be as a result of discrimination or otherwise. This is reasonably well-documented in the civilian world, for example, a survey of 556 UK civilian service users by the Mental Health Foundation[24] found that 70% reported having experienced some form of discrimination: 47% in the workplace, 44% from general practitioners and 32% from mental health professionals. Our data showed that personnel were mainly concerned about how they would be treated by the unit leaders. It would be interesting to explore this concern further and whether it is based on witnessing or experiencing forms of discrimination in the military. Stigma may also be related to the reality that personnel who have conditions that might permanently and seriously impair functioning and fitness for deployment, for physical or psychological reasons, are perhaps right to fear for their jobs if they come forward. Just like any other occupational service, no employer can provide a carte blanche guarantee that it will never dispense with a person's services for mental health reasons, particularly if that occupation involves sending personnel to arduous and dangerous places where the carrying of lethal weapons is a necessity. However, overly restrictive policies are likely to have the predictable effect of driving mental health problems underground, at least for those members who want to continue to serve and/or whose livelihood is at stake.

There are many potential reasons why the nations in our study reported different prevalence rates in the barriers to care we examined. For example, Bliese *et al*.[10] argue that psychological screening can identify those who may benefit from early intervention and US, Australian and Canadian soldiers returning from operational duties are now screened for psychological problems. Recent research has suggested that screening processes may encourage self-referral.[23] Therefore, it might have been expected that mental health systems which include such programmes would have raised awareness of mental health problems, and services, and have reduced stigma to a greater degree than non-screening nations (e.g. the UK). However, while the process of mental health screening in military settings has been a highly debated topic,[25] and has not been adopted by the UK, advocates of the process may argue that a reduction of stigma is not its main aim. A recent British qualitative study which explored the beliefs of Service personnel about the potential barriers to a health screening[26] found that a lack of confidentiality in relation to military healthcare provision had engendered the belief that screening questionnaires, if answered truthfully, would be used against the individual and could affect their promotion as well as lead to stigmatization. This view appears to be consistent with the finding that UK personnel reported one of the highest levels of concerns about the career consequences of suffering with mental health difficulties.

Unanswered questions and future research

Although Armed Forces practices and procedures differ considerably between nations the current research suggests that the five nations studied share some similarities in terms of stigma and perceived barriers to psychological care. The implication of these findings suggests that, for instance, all nations would be advised to address the top concern regarding the views of military leaders, if they are to be successful in reducing the prevalence of stigma within their personnel. How best to address this requires further investigation. Also, while each nation has a different organizational approach to the provision of mental health care, our results suggest that all nations need to bridge the gap between the presence of mental health problems in service personnel and their reluctance to seek help. It may also be possible for the nations with the higher levels of stigma to look at the practices of the 'low stigma nations' to identify whether there is anything they might learn from them in the pursuit of improving their cultural attitudes towards mental health problems. For instance, it would make no sense to expand the number of military mental health providers if potential clients do not trust them enough to book an appointment. We suggest a richer understanding of the various barriers to care in military

organizations, and how they interact, is essential if these are to be overcome.

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