

Stigma and the Military: Evaluation of a PTSD Psychoeducational Program

Matthew Gould

Department of Clinical Psychology, Royal Holloway, University of London, Egham, Surrey, TW20 0EX, UK

Neil Greenberg

King's Centre for Military Health Research, Weston Education Centre, Cutcombe Road, London, SE5 9RJ, UK

Jacquie Hetherington

Department of Clinical Psychology, Royal Holloway, University of London, Egham, Surrey, TW20 0EX, UK

Trauma risk management (TRiM) is an intensive posttraumatic stress disorder (PTSD) psychoeducational management strategy based on peer-group risk assessment developed by the UK Royal Navy (RN). TRiM seeks to modify attitudes about PTSD, stress, and help-seeking and trains military personnel to identify at-risk individuals and refer them for early intervention. This quasiexperimental study found that TRiM training significantly improved attitudes about PTSD, stress, and help-seeking from TRiM-trained personnel. There was a nonsignificant effect on attitudes to seeking help from normal military support networks and on general health. Within both the military and civilian populations, stigma is a serious issue preventing help-seeking and reducing quality of life. The results suggest that TRiM is a promising antistigma program within organizational settings.

Military personnel are at a considerable risk of developing a range of psychopathologies. Furthermore, the military is a challenging environment in which to provide medical and psychological treatments; logistical constraints, difficult terrain, wide dispersal of personnel, limited practitioners and hostility to outsiders are common (Jones, Roberts, & Greenberg, 2003). Referral to military psychiatric services is consistent with Goldberg and Huxley's (1980) pathways to care model, which suggests many more cases are

in the community than the ones that actually seek help. Although military organizations take a number of steps, at both predeployment and postdeployment, to ensure the welfare of personnel many individuals are reluctant to or unable to seek help (e.g., Iversen et al., 2005). In the general population, the Epidemiologic Catchments Area (ECA) Study in the United States found that less than 30% of people with mental illness pursued treatment (Regier et al., 1993). A variety of factors have been identified to explain

We are grateful to Thomas Britt and Carl Castro for permission to use their questionnaire.

Correspondence concerning this article should be addressed to: Neil Greenberg, King's Centre for Military Health Research, Weston Education Centre, Cutcombe Road, London, SE5 9RJ, UK. E-mail: SoSoSanta@aol.com.

© 2007 International Society for Traumatic Stress Studies. Published online in Wiley InterScience (www.interscience.wiley.com) DOI: 10.1002/jts.20233

reluctance to seek help and failure to fully adhere to treatment, such as symptom severity, cultural appropriateness of services, previous help-seeking experiences and stigma (e.g., Wells, Robins, Bushnell, Jarosz, & Oakley-Browne, 1994, Meltzer et al., 2000).

Stigma has been defined as “an attribute that is deeply discrediting” (Goffman, 1963, p. 13). It may occur at all stages of mental illness, from help-seeking to treatment and discharge (Byrne, 2001) and it has been suggested that it may be more “devastating, life-limiting and long-lasting than the primary illness” (Schulze, Richter-Werling, Matschinger, & Angermeyer, 2003). Having a psychiatric history can lead to negative reactions from others, the denial of life’s essential needs (Mehta & Farina, 1997), and experiences of shame and humiliation (Hetherington, Kleck, Hebl, & Hull, 2000).

Britt (2000) has explored the stigma of psychological problems in the military. The research investigated whether United States peacekeepers, returning from Bosnia, believed they would be stigmatized if they admitted to a psychological problem. Results showed that admitting to a psychological problem was more stigmatizing than admitting to a medical problem and over half believed their career would be affected if they disclosed a psychological problem. In addition, personnel were much less likely to follow through with a psychological referral than with a medical referral. Hoge et al. (2004) investigated help-seeking and barriers to care among United States soldiers and Marines after deployment in Iraq and Afghanistan. For those participants who scored above the cut-off on screening only 38% to 45% indicated an interest in receiving help and only 23% to 40% had sought mental health care. The most common concerns were being “perceived as weak,” “being treated differently by unit leadership,” and “members of my unit having less confidence in me.” A review of attitudes about 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 (Marin, 2002). The report called for widespread systemic changes, education, and training at all levels to address negative attitudes about PTSD.

Existing data is limited, but research has demonstrated that antistigma interventions can significantly modify attitudes and behavioral intentions. For example, Wolff, Pathare, Craig, and Leff (1996) found that lack of knowledge about mental health is associated with negative attitudes and that attitudes can be improved through psychoeducation. The Royal Navy (RN) has developed trauma risk management program (TRiM), which seeks to modify attitudes about PTSD, provide support and education, and identify and refer at-risk personnel (Jones et al., 2003). It is not focused on the medical treatment of PTSD; it has a cognitive-behavioral theoretical orientation toward treatment. There is little evidence that psychoeducation alone is an effective treatment (Foa, Keane, & Friedman, 2000), but through the targeted provision of information TRiM seeks to challenge stigmatizing attributions about mental illness, for example, that PTSD is a sign of weakness. In addition to education, Corrigan (2004) has suggested that protest (‘expressing disapproval towards those with stigmatizing attitudes often as a “shame-on-you” statement’) and contact with people with mental health problems are the main strategies for addressing psychiatric stigma. There is limited research on the effectiveness of protest, but some evidence to support the use of contact with others as a strategy (e.g., Huxley, 1993). TRiM incorporates two of these strategies. Primarily it seeks to educate, but personnel are also encouraged to share their experiences of stress and related problems, so stigma may be further diminished through contact with others.

The main aim of our study was to evaluate the effectiveness of TRiM in producing a positive shift in attitudes about stress and PTSD and seeking help from normal military support networks (e.g., medical staff, welfare, mental health professionals, religious groups) and from TRiM-trained personnel. In addition, the study explored whether TRiM had any effect on general well-being, because, in light of the concerns about psychological debriefing (PD), it was important to demonstrate that TRiM did not have a detrimental effect on mental health. Indeed, TRiM seeks to overcome some of the elements that are considered to be damaging in PD (e.g., that it impedes the normal process

of recovery). However, it was possible that TRiM may increase emotional reactions as personnel could have become aware of new problems and felt ill equipped to deal with such difficulties. The hypotheses were that TRiM training would improve attitudes about stress and PTSD and would improve attitudes about seeking help from normal military support networks and from TRiM practitioners. The study also sought to explore whether TRiM training has any effect on general well-being.

METHOD

Design

The experimental group received TRiM training and the control group no training. Randomization was not possible for operational reasons and certain units had already been identified for TRiM training. The project was approved by Royal Holloway University of London Research Ethics Committee and the Ministry of Defence (Navy) Personnel Research Ethics Committee.

Participants

The sample comprised 124 nonclinical, active service members of the UK Armed Forces. Ninety-nine (80%) participants reported serving in the Royal Marines (RM); 13 (10%) in the Army, and 12 (10%) in the RN. Forty-three (35%) were at the rank of Lance Corporal; 24 (19.4%) at Corporal and 11 (9%) at Warrant Officer (class 2) were the second and third most common ranks, respectively. One-hundred twenty (97%) were male and 4 (3%) were female. Their mean age was 30 (range = 19–47), the mean length of service was 10 years (range = 1–30), and the mean number of deployments was 2 (range = 0–6). Forty-three (35%) reported receiving some form of previous stress education.

Recruitment and Inclusion Criteria

The RN TRiM guidance suggests that unit TRiM team managers should identify appropriate candidates and ask them to volunteer for training. TRiM team managers were

consulted and agreement was gained for the researcher to approach the groups who had been identified for training. Four groups were approached at three military bases in England and one military base in Scotland. Controls were recruited on four occasions from the promotion courses run at the Royal Marine's Commando Training Centre, England. The team leaders of each of the command courses agreed to allocate one hour during the respective training program in which the researcher could meet with personnel.

Military personnel must meet specific criteria if they are to participate in TRiM training including: (a) promoted or selected for promotion to Lance Corporal or above, (b) over 17 years old, (c) a volunteer for training, and (d) a "personnel-focused outlook" (e.g., as shown by good personnel-management skills being noted on serial annual reports); a subjective assessment made by commanding officers or the unit TRiM team manager. Not all military personnel have an aptitude for working within the military personnel organization. Commanding officers are able to comment on aptitude for such work, which is part of the annual appraisal process. Some military individuals are better suited to purely operational or logistical posts.

Control participants were required to meet these criteria. The Command Course Team Leader advised on Criterion d. A potential confound was that personnel who volunteered for TRiM might be more open-minded about mental health issues. Thus, all control participants were given an additional information sheet outlining TRiM; if they consented to training, they were included in the control group. Nine individuals declined to be TRiM trained (no details available).

The Intervention Program

TRiM equips nonmedical personnel to offer basic skills in psychological first aid (i.e., psychoeducation, mentoring) and how to identify at-risk individuals (for details, see Jones et al., 2003). The aims for participants are to understand PTSD and stress reactions, so that negative representations of mental illness are modified, and the problems associated with other posttraumatic management strategies (e.g., PD)

AQ3 are addressed. In addition, participants learn how to plan and implement a peer group-led psychological risk assessment and how to interpret the risk assessments to identify those at risk of psychological injury to facilitate early referral. The course focuses on traumatic stressors and does not present strategies to deal with day-to-day stresses nor does it seek to turn trainees into counselors. It lasts $2\frac{1}{2}$ days utilizing a combination of didactic teaching and role-play. The same tutor, a senior Royal Marine and experienced TRiM trainer, ran all four courses that were evaluated.

Measures

The Background Information Questionnaire (BIQ) is a military audit tool, which records basic sociodemographic data and details on previous operational deployments. To reassure participants that the study was confidential no data were collected on factors such as ethnicity and previous psychiatric history.

The Attitudes to Stress and PTSD Schedule, developed and used by the RN, addresses attitudes towards mental illness (e.g., “people who experience PTSD are weak”). There are seven statements each, scored using a 5-point Likert scale from 1 (*strongly agree*) to 5 (*strongly disagree*) where 3 indicated a neutral response. Two statements were reversed scored. A higher total score (maximum = 35) indicated a more favorable attitude. Duplicate statements on stress and PTSD were included to identify whether these attitudes differed. Reliability tests were carried out; Cronbach’s alpha for the Attitudes to Stress Scale was .730 and .745 for the Attitudes to PTSD Scale, which is acceptable.

The Help-Seeking Stigma Questionnaire has six stigma statements taken from Hoge et al’s (2004) 18-item help-seeking questionnaire. Duplicate statements on seeking help from normal military support networks and from TRiM practitioners were included to identify whether these attitudes differed. A higher score (maximum = 30) indicated a more favorable attitude. Cronbach’s alpha for the stigma of seeking help from normal military support networks was .855 and .913 for the stigma of seeking help from a TRiM practitioner.

The General Health Questionnaire with 28-items (GHQ-28; Goldberg & Hillier, 1979) was used to screen for current mental health. The current research adopted a strategy whereby an individual would be offered support if they had two consecutive scores of 14 or more. No individuals met this criteria; where follow-up data were missing, no individuals scored above 14 at baseline.

Procedure

The study researcher (MG) gave a short briefing that stressed the right not to participate and withdraw consent at any time. Participants then received an information sheet(s) and were given the opportunity to ask questions. All provided written informed consent prior to participation. Questionnaires took approximately 20 minutes to complete and were counterbalanced. Data were collected from June 2005 to January 2006. The TRiM group received a baseline (Time 1) questionnaire before the program, a questionnaire immediately at the end of the program (Time 2), and at 1-month follow-up (Time 3). The control group received a Time 1 and a 1-month follow-up (Time 3) questionnaire. The researcher was present to administer the questionnaires at Time 1 and Time 2. At Time 3, questionnaires were posted with a covering letter. Up to three mailing waves were conducted, with nonresponders followed up by telephone where possible. Completed questionnaires were returned using a prepaid stamped addressed envelope.

Of the 124 individuals identified, 62 (50%) received the TRiM intervention and 62 (50%) no training. Sixty (97%) of the trained sample completed questionnaires at Time 2. Of the original sample, Time 3 data were collected on 87 (70%) individuals: 41 (66%) from the TRiM group and 46 (74%) from the control group. The drop-out rate was distributed relatively equally between the groups. Non-response was most likely the result of operational factors (i.e., unavailability due to other training, leave) although this could not be determined.

Based on a two-group ANOVA, where power = .80 and alpha = .05, an $n = 64$ per group would show a medium effect size and an $n = 26$ would show a large effect size

(Cohen, 1992). The actual sample had $n = 87$ with 41 and 46 in each group, which is therefore considered adequate to detect an effect, although there is some risk of Type II error. Data were analyzed using SPSS (version 12).

RESULTS

After dropout, paired data (i.e., Time 1 and 3) were available on 87 participants. Fifty percent reported serving in Northern Ireland, with Telic 1 (Iraq War) the second most common operational deployment (48%). The majority (38%) were at Lance Corporal rank although ranking ranged from Marine to Captain, representing good coverage of military roles. Table 1 reports sociodemographic data of the sample with rank collapsed into Juniors (Marine, Lance Corporal, Corporal) and Seniors (Sergeants and above) and mean operational tours. Sociodemographic characteristics of military personnel will vary by service and because the majority of participants reported serving in the RM (an all male service), women are underrepresented in the sample; women comprise approximately 10% of military personnel (Defence Analytical Services Agency, 2005). Almost 80% of the sample was married or cohabiting (46% and 33% respectively). Only 35% reported receiving previous stress education, although some form of psychoeducation is likely to occur at predeployment and is sometimes offered at induction, postdeployment, and on promotion courses.

Comparison of TRiM and Control Groups for Baseline Differences

Factors collected at baseline were used to identify differences between the TRiM ($n = 41$) and control ($n = 46$) groups (Table 2). Significant differences were found on age, length of service, service, and rank. The TRiM group participants were older, more experienced, and contained a higher number of senior personnel. In addition, factors collected at baseline were used to identify any differences between responders ($n = 87$) and nonresponders ($n = 37$). The groups were distinguished by age, length of

Table 1. Sociodemographic Characteristics and Previous Military Experience ($n = 87$)

	<i>N</i>	%	<i>M</i>	<i>SD</i>
Gender				
Male	85	98	—	—
Female	2	2	—	—
Service				
RM	72	83	—	—
Navy	9	10	—	—
Army	6	7	—	—
Marital status				
Married/cohabitating	69	79	—	—
Single	18	21	—	—
Rank groups				
Junior	50	61	—	—
Senior	32	39	—	—
Previous stress education				
Yes	30	35	—	—
No	55	65	—	—
Age	—	—	31	6
Length of service	—	—	12	7
Operational tours	—	—	2	1

Note. Data not available for all participants.

service, and rank groups. Nonresponders were significantly younger, less experienced, and from the junior ranks.

Between-Treatment Changes From Baseline Using ANCOVA

Table 3 reports the between-group comparison of 1-month follow-up scores using ANCOVA. The dependent variables were scores at 1-month, the fixed factor was group, and the covariates were age, length of service, rank, and baseline score. Given the predominance of RM in the sample, separate analyses were carried out on service. Assumptions of homogeneity of regression were tested and found to be normal. After baseline differences were adjusted for, there was evidence of a significant effect of the TRiM intervention on attitudes to stress and PTSD, seeking help from TRiM practitioners and on general mental health, as indicated by lower GHQ-28 scores. There is a nonsignificant effect of the TRiM intervention on attitudes to seeking help from normal military support networks.

Table 2. Baseline Differences Between the TRiM and Control Group in Terms of Sociodemographic and Previous Military Experiences

	Control group <i>N</i> = 46				TRiM group <i>N</i> = 41				χ^2 or <i>t</i> test
	<i>N</i>	%	<i>M</i>	<i>SD</i>	<i>N</i>	%	<i>M</i>	<i>SD</i>	
Gender									
Male	46	100	—	—	39	95	—	—	2.29
Female	0	0	—	—	2	5	—	—	
Service									
RM	46	100	—	—	26	63	—	—	20.33***
Navy	0	0	—	—	9	22	—	—	
Army	0	0	—	—	6	15	—	—	
Marital status									
Married/cohabitating	34	74	—	—	35	85	—	—	1.73
Single	12	26	—	—	6	15	—	—	
Rank groups									
Junior	33	77	—	—	17	44	—	—	9.44**
Senior	10	23	—	—	22	56	—	—	
Previous stress education									
Yes	16	36	—	—	14	35	—	—	<1
No	26	64	—	—	26	65	—	—	
Age	—	—	30	5.75	—	—	33	6.73	2.54**
Length of service	—	—	10	5.70	—	—	13	8.25	2.06*
Operational tours	—	—	2	0.95	—	—	2	1.48	<1

Note. TRiM = Trauma risk management program.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Due to the significant differences in term of service, additional analyses were conducted comparing RM only (controls $n = 46$ and TRiM $n = 26$). No baseline differences were found between the groups. ANCOVA revealed that TRiM significantly improved attitudes to stress, $F(1, 69) = 4.64$, $p < 0.05$; PTSD, $F(1, 69) = 6.27$, $p < 0.01$; and seeking help from TRiM practitioners, $F(1, 69) = 19.98$, $p < 0.001$. Attitudes to seeking help from normal military support networks, $F(1, 69) = 1.72$, $p = 0.194$, and general mental health, $F(1, 69) = 1.48$, $p = 0.228$, were nonsignificant.

Within-Treatment Changes Using ANOVA

To explore the timeline of changes in the TRiM group, repeated measures ANOVA were carried out (Table 4). Mauchley's test of sphericity was nonsignificant on all the scores indicating equivalent covariances. Significant differences were found on attitudes to stress, PTSD, seeking

help from normal military support networks, and from TRiM practitioners. Unlike the between-subjects analysis, the within-subjects analysis showed a nonsignificant effect on GHQ-28. This occurred as the controls general health deteriorated over time, whereas the TRiM group improved over time. However, this improvement was not sufficient to be significant without the controls deteriorating as a comparison. To locate significant differences in the ANOVAs pairwise t tests were conducted (Table 5). Significant changes occurred immediately at the end of the training and, although they appear to decline over time, generally changes remained significant at 1-month follow-up.

DISCUSSION

Although this study was quasiexperimental, the results provide evidence that TRiM may have a number of benefits

Table 3. Attitudes to Stress, PTSD, and Help-Seeking and Mental Health in TRiM and Control Groups, Before and 1 Month After Intervention

	Control group <i>N</i> = 46		TRiM group <i>N</i> = 41		<i>F</i> (1,76)
	<i>M</i>	<i>SD</i> or 95% CI	<i>M</i>	<i>SD</i> or 95% CI	
Stress					
Baseline	25.7	3.4	26.9	3.8	
1-month follow-up	25.6	4.3	28.0	3.0	
Adjusted 1-month follow-up	26.1	25.2–27.0	27.5	25.5–28.5	4.00*
PTSD					
Baseline	25.9	3.8	26.6	3.7	
1-month follow-up	25.6	4.4	28.2	3.4	
Adjusted 1-month follow-up	25.8	24.8–26.8	28.0	26.9–29.0	8.54**
Normal support					
Baseline	16.0	4.0	17.2	4.5	
1-month follow-up	15.7	3.8	18.2	4.8	
Adjusted 1-month follow-up	16.2	15.1–17.2	17.7	16.6–18.9	3.90
TRiM practitioners					
Baseline	16.8	4.3	19.1	4.7	
1-month follow-up	16.3	3.9	21.5	4.6	
Adjusted 1-month follow-up	17.0	15.9–18.1	20.7	19.6–21.9	20.2***
GHQ-28					
Baseline	1.7	2.7	1.1	2.1	
1-month follow-up	2.38	3.5	0.85	1.7	
Adjusted 1-month follow-up	2.31	1.4–3.1	0.91	0.04–1.7	4.92*

Note. PTSD = Posttraumatic stress disorder; TRiM = Trauma risk management program; GHQ-28 = General Health Questionnaire with 28-items.

Table 4. TRiM Group Comparison of Baseline, 3-Day and 1-Month Scores

	Time 1 Baseline		Time 2 3 Day		Time 3 1 Month		<i>F</i> (2,78–80)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Stress	26.8	3.7	29.0	2.9	28.1	3.0	10.04***
PTSD	26.7	3.7	29.1	3.6	28.2	3.4	10.89***
Normal Support	17.0	4.3	19.2	5.0	18.1	4.8	5.98**
TRiM practitioners	19.0	4.7	22.12	4.0	21.4	4.6	11.4***
GHQ-28	1.2	2.1	0.7	1.7	1.0	2.1	1.02

Note. PTSD = Posttraumatic stress disorder; TRiM = Trauma risk management program; GHQ-28 = General Health Questionnaire with 28-items.

in terms of reducing stigmatizing attitudes and increasing help-seeking behavior. Results demonstrated that TRiM training improved attitudes about stress and PTSD. At baseline, attitudes to stress and PTSD were relatively positive, which were unexpected findings. Personnel may recognize that because of the battlefield and the complex roles they perform they are at risk of developing psychologi-

cal problems, in particular, stress and PTSD, which are perhaps the best-known psychopathologies in the military (Defence Medical Services Department, 2006), and therefore are more tolerant of these forms of suffering. In addition to personal experiences of mental illness, it is likely that understanding and awareness of stress and PTSD has occurred through exposure to other peoples' related

Table 5. Pairwise *t* Tests to Identify Differences Between the Three Time Points in the TRiM Group

	Time 1–Time 2	Time 1–Time 3	Time 2–Time 3
	<i>t</i> (39)	<i>t</i> (39)	<i>t</i> (39)
Stress	–3.78***	–2.38**	2.24*
PTSD	–3.99***	–3.01**	2.06*
Normal support	–3.32**	–1.48	2.17*
TRiM practitioners	–3.96***	3.78***	1.07

Note. PTSD = Posttraumatic stress disorder; TRiM = Trauma risk management program. Significant results at Time 2–Time 3 would be nonsignificant with Bonferroni correction, where $p = .016$.

experiences. Huxley (1993) found that people hold positive attitudes about mental illness through contact with people with mental illness, although notably these positive attitudes were dependent upon the person with mental illness having received helpful treatment. In addition, personnel are likely to be more aware of these psychopathologies as TRiM has been active in the RM for approximately 8 years and these psychological problems are typically mentioned during predeployment briefings.

Results showed a trend effect about seeking help from normal military support networks across all personnel, although a nonsignificant effect in RM personnel, and that TRiM significantly improved attitudes about seeking help from TRiM practitioners. That participants were reluctant to seek help from normal military support networks is consistent with the findings of Greenberg et al. (2003), which showed that most personnel turned to informal networks for support such as their peers. Concerns about confidentiality, being perceived as weak by others and hostility to outsiders, who are seen as unlikely to understand military personnel, are important factors in shaping help-seeking behavior in the military. These factors are possible explanations for the neutral attitudes towards seeking help from normal military support networks found in the current study. In addition, the sample was mainly comprised of men and research (e.g., Moller-Leimkuhler, 2002) consistently shows gender difference in help-seeking behavior, perhaps because of the social norms of traditional masculinity (e.g., courage, independence, success, and invulnerability). Given that masculine characteristics are endorsed

to a strong degree in the military, indeed military culture has been described as “masculine-warrior” (Dunvin, 1994), help-seeking is likely to be more difficult in the military. That attitudes to seeking help from TRiM practitioners were slightly more positive could be because this type of help addresses some of these concerns, for example, TRiM can provide ongoing support delivered by familiar members of the team (i.e., peers). In terms of Goldberg and Huxley’s (1980) pathways to care model, TRiM could be positioned as a low-level system assisting individuals with the appraisal process of needing help and referral. However, further research is required to identify the perceived specific advantages and disadvantages of seeking help from TRiM practitioners.

The differences between attitudes to stress and PTSD, and attitudes to help-seeking may have occurred due to the content of the training program. TRiM training emphasizes the causes, reactions, and risk factors of stress and PTSD, and includes only limited information on support and treatment. That personnel continue to be reluctant to seek help may indicate that they continue to lack knowledge in these areas. Indeed, Meltzer et al. (2000) found that the main reason individuals with neurotic disorders did not seek help was that they did not think anyone could help, and they regarded some symptoms as similar to a normal reaction. Angermeyer and Matschinger (1996) found a lack of knowledge in the public about the effects of treatment, with pharmacotherapy viewed particularly negatively. Concerns about medication may be more marked in the military as medication may impact on the roles

personnel can perform, albeit temporarily (e.g., a service person might not be deployed if prescribed antidepressants). These findings perhaps suggest the need for additional health information with particular focus on services and treatments. Indeed, personnel may be reassured to hear that talking therapies, such as trauma-focused cognitive-behavior therapy or eye movement desensitization and reprocessing, are effective treatment for PTSD (Foa, Keane, & Friedman, 2000).

TRiM had a significant positive effect on psychological well-being, but not in RM personnel, although this effect occurred due to a deterioration in the mental health of the control group. At baseline, psychological well-being was similar in both groups and to that found in previous studies, which used the GHQ-28 (e.g., Hacker Hughes et al, 2005). Interestingly, the mental health of the control group was worse at 1-month follow-up. This group did not deploy during the study period, but they were attending a demanding and competitive RM promotion course, which requires that participants work as a team and function as a cohesive unit. Unit cohesion has been shown to be beneficial to the groups' mental health (Shils & Janowitz, 1948). Therefore, morale may have been high during the course (when they completed the baseline measures) accounting for the higher scores at baseline and lower scores at follow-up when the course had finished. That results showed a nonsignificant improvement in the mental health of the TRiM group, at least in the short term, is an important finding as it has been suggested that psychoeducation during debriefing may increase awareness of stress reactions (e.g., Raphael & Meldrum, 1995). Although the TRiM group comprised nonclinical personnel, it is possible that the TRiM person has developed the emotional and practical skills to deal with his or her own mental health as well as others. Again, further research is required to identify these specific elements. Recent research, which evaluated emotional ventilation and psychoeducation versus a control no debriefing group, did not find any differences between the groups, except for an adverse effect of emotional debriefing on those with early hyperarousal symptoms (Sijbrandij, Olf, Reitsma, Carlier, & Gersons, 2006). TRiM allows personnel to share their emotional experiences, but places

emphasis on the avoidance of forced emotional catharsis. It is important to recognize that TRiM, unlike PD, does not position itself as a treatment and so symptom reduction and improved well-being are not the main goals of the program.

A major limitation of this research concerns generalizability. The military is a unique organization, as Deahl et al. (2000) state, "servicemen are a highly selected group, unrepresentative of the civilian population, trained to fight and work in hazardous situations and in cohesive groups." Our data indicate that on some factors the sample is not representative. Individuals who refused to participate in the research might have expressed different views, especially those belonging to groups who were underrepresented in the sample; younger personnel from the junior ranks. Also, there is the risk of expectancy and selection effects, for example, that individuals more interested in mental health signed-up to the course, which may account for the relatively positive baseline attitude scores. Conversely, Byrne (2000) states, "stigmatisers, as a rule, are unlikely to volunteer to attend educational packages" (p. 68); therefore, it is not known whether TRiM would be effective among a more hostile group. A further limitation is that this was a brief longitudinal study and previous authors have argued that attitude change programs should be run regularly because effects are unlikely to be maintained over the long-term (e.g., Schulze, Richter-Werling, & Matschinger, Angermeyer, 2003). The study used self-report questionnaires and it is possible that initial positive attitudes occurred because of participants providing socially desirable responses, which may have resulted in a ceiling effect on the project outcomes. Limited sociodemographic characteristics were collected at baseline—potentially important as sociodemographic factors can determine attitudes (Wolff et al., 1996).

A system to raise mental health awareness is perhaps increasingly pressing; the rate of military operations is increasing and campaigns are becoming more complex with military personnel arguably at greater risk of psychological distress than ever before (Hotopf et al., 2006). As Foa et al. (2000) comment, "psychoeducation can provide individuals with a psychological map to understand their reactions

AQ6

AQ7 which does much to contain their distress.” The results support the implementation of the program within the Naval service. Stigma occurs at all levels; therefore, if TRiM is to succeed it must be implemented at all levels of the military and supported by military leaders who have an important role in influencing the attitudes of their subordinates. On a clinical level, as Byrne (2000) suggests, clinicians should ask about adverse help-seeking experiences and stigma and incorporate these into the treatment plan. Additional support and education may be needed to make professionals more aware of these issues and of techniques to elicit detailed accounts from ambivalent clients. In addition, given that results showed relatively neutral attitudes to seeking help, one strategy would be for clinicians and military personnel to engage jointly in outreach work.

In terms of future research, there should be adequate follow-up especially as the results suggested improvements were declining. If so, it would be important to identify what type of ongoing training is required. In addition, research should address concerns regarding the ability to generalize the results from the present sample. There is considerable interest in TRiM from other Armed Forces around the world, but there are cultural differences in explanations and treatments for stress and PTSD and differences in the delivery of mental health services. However, based on the current sample, the results show that TRiM is a promising program and adds to the evidence-base of psychoeducation programs.

REFERENCES

- Angermeyer, M. C., & Matschinger, H. (1996). Public attitude toward psychiatric treatment. *Acta Psychiatrica Scandinavica*, *94*, 326–336.
- Britt, T. W. (2000). The stigma of psychological problems in a work environment: Evidence from the screening of service members returning from Bosnia. *Journal of Applied Social Psychology*, *30*, 1599–1618.
- Byrne, P. (2000). Stigma of mental illness and ways of diminishing it. *Advances in Psychiatric Treatment*, *6*, 65–72.
- Byrne, P. (2001). Psychiatric stigma. *British Journal of Psychiatry*, *178*, 281–284.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155–159.
- Corrigan, P. W. (2004). How stigma interferes with mental health care. *American Psychologist*, *59*, 614–625.
- Deahl, M., Srinivasan, M., Jones, N., Thomas, J., Neblett, C., & Jolly, A. (2000). Preventing psychological trauma in soldiers: The role of operational stress training and psychological debriefing. *British Journal of Medical Psychology*, *73*, 77–85.
- Defence Analytical Services Agency. (2005). UK defence personnel in figures: A statistical commemoration of the Entente Cordiale. London: Her/His Majesty's Stationery Office.
- Defence Medical Services Department. (2006). Surgeon General's policy letter: Provision and management of defence mental health services (ref. 03/06). London: Author.
- Dunivin, K. O. (1994). Military culture: Change and continuity. *Armed Forces and Society*, *20*, 531–547.
- Foa, E. B., Keane, T. M., & Friedman, M. J. (Eds.). (2000). *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies*. New York: Guilford Press.
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine*, *9*, 139–145.
- Goldberg, D., & Huxley, P. (1980). *Mental illness in the community: The pathway to psychiatric care*. London: Tavistock.
- Greenberg, N., Thomas, S. L., Iversen, A., Unwin, C., Hull, L., & Wessely, S. (2003). Do military peacekeepers want to talk about their experiences? Perceived psychological support of UK military peacekeepers on return from deployment. *Journal of Mental Health*, *12*, 565–573.
- Hacker Hughes, J., Cameron, F., Eldridge, R., Devon, M., Wessely, S., & Greenberg, N. (2005). Going to war does not have to hurt: Preliminary findings from the British deployment to Iraq. *British Journal of Psychiatry*, *186*, 536–537.
- Heatherton, T. F., Kleck, R. E., Hebl, M. R., & Hull, J. G. (2000). *The social psychology of stigma*. New York: Guilford Press.
- Hoge, C. W., Castro, C., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems and barriers to care. *The New England Journal of Medicine*, *351*, 13–22.
- Hotopf, M., Hull, L., Fear, N. T., Browne, T., Horn, O., Iversen, A., et al. (2006). The health of UK military personnel who deployed to the 2003 Iraq war: A cohort study. *Lancet*, *367*, 1731–1741.

- Huxley, P. (1993). Location and stigma: A survey of community attitudes to mental illness: Enlightenment and stigma. *Journal of Mental Health, 2*, 73–80.
- Iversen, A., Dyson, C., Smith, N., Greenberg, N., Walwyn, R., Unwin, C., et al. (2005). 'Goodbye and good luck': The mental health needs and treatment experiences of British ex-service personnel. *British Journal of Psychiatry, 186*, 48–486.
- Jones, N., Roberts, P., & Greenberg, N. (2003). Peer-group risk assessment: A post-traumatic management strategy for hierarchical organisations. *Occupational Medicine, 53*, 469–475.
- Marin, A. (2002). Systemic treatment of CF members with PTSD. Ombudsman report. Retrieved November 17, 2004, from <http://www.ombudsman.forces.gc.ca/reports/special/PTSD>
- Mehta, S., & Farina, A. (1997). Is being "sick" really better? Effect of the disease of mental disorder on stigma. *Journal of Social and Clinical Psychology, 16*, 405–419.
- Meltzer, H., Bebbington, P., Brugha, T., Farrell, M., Jenkins, R., & Lewis, G. (2000). The reluctance to seek treatment for neurotic disorders. *Journal of Mental Health, 9*, 319–327.
- Moller-Leimkuhler, A. M. (2002). Barriers to help-seeking by men: A review of sociocultural and clinical literature with particular reference to depression. *Journal of Affective Disorders, 71*, 1–9.
- Raphael, B., & Meldrum, L. (1995). Does debriefing after psychological trauma work? *British Medical Journal, 310*, 1479–1480.
- Regier, D. A., Narrow, W. E., Rae, D. S., Manderscheid, R. W., Locke, B. Z., & Goodwin, F. K. (1993). The de facto U.S. mental and addictive disorders service system: Epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry, 50*, 85–94
- Schulze, B., Richter-Werling, M., Matschinger, H., & Angermeyer, M. C. (2003). Crazy? So what! Effects of a school project on students' attitudes towards people with schizophrenia. *Acta Psychiatrica Scandinavica, 107*, 142–150.
- Shils, E., & Janowitz, M. (1948). Cohesion and disintegration in the Wehrmacht in World War II. *Public Opinion Quarterly, 12*, 280–315.
- Sijbrandij, M., Olf, M., Reitsma, J. B., Carlier, I., & Gersons, B. (2006). Emotional of psychological debriefing after psychological trauma. Randomised controlled trial. *British Journal of Psychiatry, 189*, 150–155.
- Wells, J. E., Robins, L. N., Bushnell, J. A., Jarosz, M. A., & Oakley-Browne, M. A. (1994). Perceived barriers to care in St. Louis (USA) and Christchurch (NZ): Reasons for not seeking professional help for psychological distress. *Social Psychiatry and Psychiatric Epidemiology, 29*, 155–164.
- Wolff, G., Pathare, S., Craig, T., & Leff, J. (1996). Public education for community care. A new approach. *The British Journal of Psychiatry, 168*, 441–447.

Author Proof

Queries

AQ1. AU: Please provide the page number on which this quote appears.

AQ2. AU: Change OK?

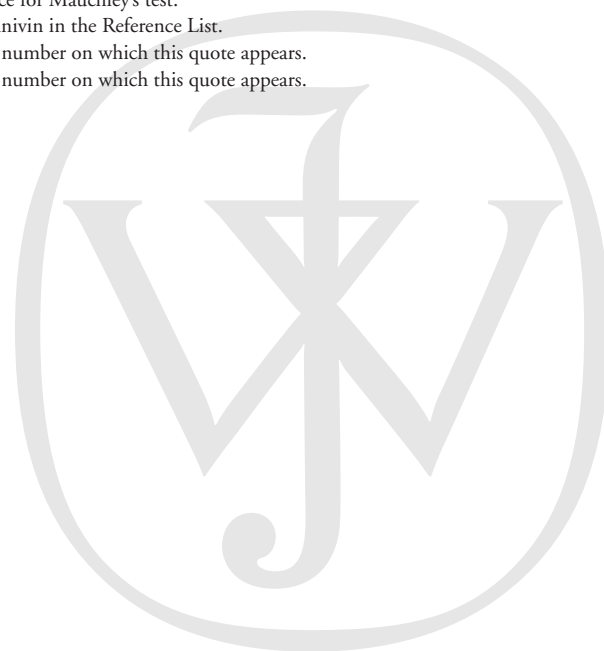
AQ3. AU: Edit OK?

AQ4. AU: Please provide a reference for Mauchley's test.

AQ5. AU: Spelling correct? It's Dunivin in the Reference List.

AQ6. AU: Please provide the page number on which this quote appears.

AQ7. AU: Please provide the page number on which this quote appears.



Author Proof