

# An Initial Evaluation of the Clinical and Fitness for Work Outcomes of a Military Group Behavioural Activation Programme

Matthew Wesson and Dean Whybrow

*Royal Navy Mental Health Rehabilitation Service, DCMH Portsmouth, UK*

Matthew Gould

*Defence Clinical Psychology Service, DCMH Portsmouth, UK*

Neil Greenberg

*Academic Centre for Defence Mental Health, Kings College London, UK*

**Background:** Behavioural Activation (BA) is an evidence-based psychological treatment for depression based on behavioural theory. However, in common with other talking therapies, there is limited evidence about occupational factors related to treatment. This is an important gap in the research given the emphasis placed on employment considerations in recent service initiatives. **Aim:** A service evaluation to investigate the clinical and fitness to work outcomes of a group BA programme for serving military personnel. **Method:** 46 patients experiencing moderate to severe depression attended a 12-session Military Behavioural Activation and Rehabilitation Course (MBARC). The primary outcomes were the Patient Health Questionnaire-9 (PHQ-9), a self-report measure of depression and the patient's medical employability category. **Results:** Clinical and statistically significant changes were found on the PHQ-9 between pre-course and 3-month follow-up. Pretreatment 3 patients (6.5%) were psychologically fit to deploy on full operational duties in their primary role; this increased to 25 (56.8%) and 29 (65.9%) at 3 and 6-months respectively. **Conclusion:** Preliminary findings suggest that MBARC is a clinically and occupationally effective treatment for depression in military personnel. Further research is required to identify if BA delivered in a group setting would be effective in non-military settings and whether treatment benefits are maintained in the longer term.

*Keywords:* Behavioural activation, depression, group therapy, military.

## Introduction

Research has demonstrated the high cost of depression and anxiety disorders to industry and that employment is largely beneficial to psychological well-being (Waddell and Burton,

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Reprint requests to Matthew Wesson, Royal Navy Mental Health Rehabilitation Service, DCMH Portsmouth, PP6, Sunny Walk, HMNB Portsmouth, Hampshire PO1 3LT, UK. E-mail: m.wesson@stressandtrauma.co.uk

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2006). Until recently there had been little coordination between clinical and occupational outcomes; however, the Increasing Access to Psychological Therapies (IAPT) initiative has recently published data showing an average of 5% of patients return-to-work (RtW) after treatment (Clark, 2011). The UK Armed Forces (UKAF) operates an in-house occupational mental health service consisting of 15 Departments of Community Mental Health (DCMHs). Their primary remit is to maximize the operational effectiveness of the military units they serve through the provision of high quality and timely mental health care, which aims to return patients to full operational fitness wherever possible. Therefore, any occupational and clinically effective intervention is of significant interest to the UKAF.

MBARC is a group therapy programme for the treatment of UKAF personnel suffering from depression. As with all BA approaches it is based upon the classic behavioural explanation for depression, which proposes that the disorder occurs because an individual has experienced a reduction in anti-depressant behaviours within their social environment (Martell, Addis and Jacobson, 2001). Research has shown BA to be as effective as other treatments for depression such as cognitive therapy (e.g. Cuijpers, van Straten, Andersson and van Oppen, 2008). Additionally, there is limited post-course data that it is efficacious when delivered as group therapy (Houghton, Curran and Saxon, 2008). The aim of this paper is to report the findings of a service evaluation into the clinical and fitness to work outcomes of a novel BA group programme for serving military personnel.

### Method

MBARC is a weekly 10-session group intervention for treating patients with moderate to severe depression. Patients were recruited via referrals from clinicians working in local DCMHs who had already carried out a full mental health assessment. A MBARC facilitator would complete an individual clinical interview to determine suitability. Exclusion criteria included co-morbid presentations such as alcohol abuse or posttraumatic stress disorder (PTSD), a primary presentation other than depression (e.g. an anxiety disorder), and alternative commitments that did not allow full attendance on the course. If suitable this initial appointment would also be used to develop a formulation and agree therapy goals. Each session, delivered to groups of up to 10, is divided into two blocks of one-hour duration delivered over a morning. The first block of every session involves completing psychometrics, a general “check in”, setting an agenda and then breaking down into two smaller groups in order to review the homework. The second block of every session introduces a new topic culminating in the setting of both theme related homework and more general BA based homework informed by the Addis and Martell version of BA (2004). Unique to this course, and specifically included due to the military population, is a challenging adventure sailing day for all participants, usually delivered during the first week. This is provided free of charge by Ministry of Defence staff from a local military establishment. The aim of this aspect is to improve the group ethos amongst attendees early in the programme. In addition, 2 to 4 weeks post-course each patient is seen individually for a brief re-assessment and to review their relapse management plan. The first six courses were delivered by two cognitive behavioural therapists and course seven by one of these psychotherapists along with a trainee therapist.

Clinical outcomes for MBARC were monitored using the PRIME-MD Patient Health Questionnaire 9 item (PHQ-9, Kroenke, Spitzer and Williams, 2001). The PHQ-9 is a 9-item self-report screen for depression with total score ranging from 0 to 27 and scores of 5, 10, 15

**Table 1.** Change in PHQ-9 severity categories pre/post/follow-up

PHQ-9 category	Pretreatment <i>N</i> (%)	Posttreatment <i>N</i> (%)	3-month follow-up <i>N</i> (%)
Minimal (0–4)	0 (0)	21 (45.7)	8 (38.1)
Mild (5–9)	0 (0)	16 (34.8)	11 (52.4)
Moderate (10–14)	15 (32.6)	5 (10.9)	1 (4.8)
Mod/ Severe (15–19)	21 (45.7)	1 (2.2)	0 (0)
Severe (20+)	10 (21.7)	3 (6.5)	1 (4.8)
Total	46 (100)	46 (100)	21 (100)

and 20 representing cut-points for mild, moderate, moderate/severe and severe depression respectively. Occupational fitness was assessed using the patient's medical employability category. The UKAF use a system of medical classification called the Joint Medical Employability Standard (JMES), which records the functional capacity of serving personnel. As the full JMES categorization is complex, here they are translated into either fit to deploy on operational duties or not. No demographic data were collected as details on this DCMH patient population has been reported elsewhere, along with details of prevalence rates of common mental health problems such as depression (Gould, Sharpley and Greenberg, 2008). Results were analysed using SPSS (V20). As a service evaluation, ethics permission was not necessary but appropriate permissions were granted.

## Results

The PHQ-9 and occupational status data were collected from the first seven MBARC courses delivered over an 18-month period ( $N = 46$ ). Patients who attended less than five sessions ( $N = 4$ ) and patients whose PHQ-9 scores were in the mild or below range pre-course ( $N = 5$ ) were excluded from the analysis. PHQ-9 mean score pretreatment was 16.33 ( $SD = 3.7$ ; range 11–24), which is suggestive of moderate/severe depression and mean score posttreatment was 6.63 ( $SD 5.7$ ; range 0–23) and at 3-month follow-up 5.57 ( $SD 5.0$ ; range 0–22), which are both within the mild category for depression. A repeated measures ANOVA was used to explore the timeline of PHQ-9 changes, which found a significant treatment effect ( $F_{(2,40)} = 41.48$   $p = <.001$ ). Mauchly's test of sphericity was found to be non-significant. To locate significant difference pairwise *t* tests were conducted, which revealed significant differences between pre- and posttreatment and pretreatment and follow-up. Table 1 details the changes across categories of depression severity at pre-, posttreatment and follow-up.

Pretreatment 3 (6.5%) patients were psychologically fit to deploy on full operational duties in their primary role; this increased to 25 (56.8%) and 29 (65.9%) at 3 and 6-months respectively.

## Discussion

To the authors' knowledge this is the first evaluation of the follow-up outcomes of a group behavioural activation (BA) programme for a military personnel sample and the first to consider how BA affects occupational fitness. There were a number of key findings.

First, the data showed that 10 weekly group-delivered BA sessions helped a substantial number of UKAF personnel recover from pre-course depression; whilst all subjects reported moderate or severe depression symptoms before the course, 90% reported none or mild depressive symptoms at the 3-month follow-up point. Second, this improvement in depressive symptoms was associated with a substantial improvement in occupational fitness; before treatment around 1 in 20 was fit to deploy, whilst 6 months after treatment two-thirds were. Lastly, the improvements in mental health found at the end of the course of treatment were maintained 3 months later.

Although the evidence for BA for non-military groups is now well documented, few papers have specifically focused upon improving the occupational health of depressed people, leading to lack of knowledge in this area (Nieuwenhuijsen *et al.*, 2009). This study's findings add support to the argument that BA can lead to positive changes both clinically and occupationally. These data suggest that MBARC can be viewed as one possible way of ensuring the delivery of an evidence-based intervention for depression across the UKAF. This is particularly relevant as research carried out recently in the UKAF suggests that only one in eight of military personnel suffering from common mental health problems received an evidence-based therapy after accessing specialist help (Iverson *et al.*, 2010). The authors believe that group therapy might be especially helpful as it builds upon the UKAF natural affinity to peer support.

This study is an example of pragmatic "real world" research and therefore contains limitations. For example, we did not have a control arm, and as duration since the onset of depression was not recorded it cannot be determined whether the improvements are due to the high rates of natural recovery found in recent onset depression (Clark, 2011). However, the magnitude of the changes in depression and occupational fitness scores over the short study period make it unlikely that natural remission is the cause of the significant changes we report. Additionally, fitness to work could be considered a blunt tool to measure the efficacy of an intervention, as there are many reasons why an individual might remain medically fit for operations or not.

Another limitation is that the effects of antidepressant medication on outcomes were not assessed. Whilst this might be construed as a weakness, all patients had been on a waiting list for high intensity psychotherapy prior to joining the group and thus the majority of those had been prescribed medication and were likely to have been taking it for longer than 4 weeks, which is the usual period in which antidepressants would have started to work if they were going to. Indeed, a retrospective analysis of available records ( $n = 53$ ) found that 66% of course attendees had been put on anti-depressant medication whilst they were waiting to start MBARC. Given the magnitude of our findings it is not feasible that the use of anti-depressants alone could be sufficient to account for the recovery rates. It is notable that some participants may have benefited from the combination of medication and therapy, which is in-line with current best practice (NICE, 2009). It is also important to note that in order to regain full occupational fitness within the military, personnel should have ceased any use of medication. At the point of measuring the final outcome any patient who would have been on medication would have had to stop it in order to be classed as fully fit.

Finally, results may have been biased by the exclusion of treatment dropouts and patients with low symptoms pretreatment. In general, we found that dropouts were usually related to clients not being able to commit to the weekly appointments or the discovery of an alternative underlying mental health condition such as PTSD. Low dropout rates are often found in this

military population because medical appointments are considered the patient's place of duty. Scores of below 12 on the PHQ-9 at initial assessment were later added to the exclusion criteria from the 3rd course onwards; these patients were offered a low intensity intervention instead.

In summary, this initial evaluation of a group BA process suggests MBARC is an effective and possibly resource efficient intervention, which may be useful within a stepped care model at other DCMHs. As such, MBARC appears to be one of the tools that the UKAF can use to help ensure that their personnel receive evidenced-based treatment and have the best chance of recovering to a high standard of occupational fitness. As this study is based upon a pilot MBARC site at a single DCMH, it is suggested that the UKAF should consider how best to utilise the MBARC on a wider scale. These results should also be of interest to other organizations that deliver occupational mental health care.

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