Promoting well-being and reducing stigma about mental health in the fire service

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Abstract

Purpose – *Workplace stress is a particular issue in the fire service. Research suggests this is related to excessive demands, relationships with senior managers, changing roles and exposure to traumatic events. The purpose of this paper is to evaluate the impact on managers of three mental health promotion interventions. First, a locally developed course entitled "Looking after Wellbeing at Work" (LWW), second, an internationally developed training course: Mental Health First Aid (MHFA). Third, an hour-long leaflet session (LS).*

Design/methodology/approach – *This study used a random allocation design. In total, 176 fire service line managers were randomly allocated to one of the three training conditions: LWW, MHFA, or a control condition (LS). Participants completed The Attitudes to Mental Illness Scale (Luty et al., 2006) and a locally developed "Mental Health Stigma Questionnaire" pre- and post-intervention. Results were analysed using a MANOVA. Participants were also asked to complete a general evaluation, rating all aspects of the courses from poor to excellent. In total, 30 participants were also chosen at random to conduct telephone interviews about their experience of the course. Results were analysed using thematic analysis.*

Findings – *The LWW and MHFA courses were associated with statistically significant improvements in attitudes to mental illness and knowledge/self-efficacy around mental health, comparing pre- and post-scores, and comparing post-scores of the two training courses with a LS. The general evaluations of the LWW and MHFA courses indicated the mean rating for all aspects of both training conditions was good to excellent. Two themes were identified across the qualitative interviews: participants described they were more able to recognise and respond to mental health problems; and participants described changing attitudes towards mental health.*

Research limitations/implications – *The strengths of this study are the number of participants, random allocation, and multiple facets of evaluation. The quantitative evaluation is limited, as one of the questionnaires has untested psychometric properties. The control condition was limited as it was only offered for one hour, making comparison with two-day training problematic. The qualitative evaluation was useful in gaining descriptive data, however, it may have been possible to conduct a more in-depth analysis with a smaller number of participants.*

Originality/value – *The results from this study indicate that providing training in mental health awareness and promotion was considered helpful, by managers in the Fire Service and had positive outcomes for attitudes and understanding about mental health. While there are limitations, i nitial results of training in mental health promotion are promising. Such training has the potential to promote the public's mental health and wellbeing, and improve the quality of life for people with mental health problems.*

Keywords *Stigma, Wellbeing, Fire service, Mental health promotion, The Attitudes to Mental Illness Scale, Workplace stress*

Paper type *Research paper*

Northumberland Tyne and Wear NHS Community Psychology service provided mental health promotion interventions for Northumberland employers over a three-year period. The rationale for this was the negative beliefs towards people with mental health problems in employment, and the damaging impact of stressful work environments on mental health.

There is consistent evidence that prolonged periods of stress, including work-related stress, have adverse effects on health, through links with heart disease, back pain, headaches, gastrointestinal disturbances, and psychological effects such as anxiety and depression (Health Safety Executive, 2007). Prejudice and discrimination around mental health issues are also significant.

A national survey of attitudes to mental illness suggests that people are more concerned than they used to be about stigma in the workplace, with 50 per cent of respondents saying they would feel uncomfortable talking to their employer about their mental health (NHS Information Centre, 2011). Attitude surveys indicate only four in ten employers said they would think about employing someone with mental health problems, compared with eight out of ten employers who said they would consider employing people who had been unemployed long term or who were lone parents (Thornicroft, 2006). Most members of the public (74 per cent) think employers discriminate against people with mental health problems (Read and Baker, 1996).

Stress and mental health in the Fire Service

The range of emergency response roles that are carried out by the Fire Service are varied and complex. Examples include house fires, flood rescues, road traffic accidents, potential suicides, and rescues from buildings (Fire Brigade Unions Report, 2008). Workplace stress has been highlighted as a particular problem. Hawkin's (2005) survey of 202 fire service officers across the UK revealed 45 per cent were showing signs of emotional exhaustion. Nearly three-fourth were showing psychological symptoms of stress and mental health problems with anxiety, difficulty sleeping, and the physical symptoms of stress being the most common.

Research suggests increased levels of post-traumatic stress in fire fighters compared with the population average (Mitani *et al.*, 2006; Deahl, 1998; McCloy, 1992; Regel, 2007). To help fire fighters cope with this, the Fire Service use Critical Incident Stress Management (CISM). CISM involves pre-crisis education, assessment, defusing, stress debriefing, and further psychological support if necessary (Regel, 2007). While psychological debriefing has been criticised in National Institute for Health and Clinical Excellence (2009) guidelines, Regel (2007) makes a strong case for how CISM differs from psychological debriefing. It offers social support rather than a psychological intervention, and this has been shown to be extremely valuable in alleviating acute and chronic stress in fire fighters (Mitani *et al.*, 2006).

While the traumatic nature of the work of the fire service is likely to play a part in stress-related symptoms, the most commonly reported causes of workplace stress reported by Hawkins (2005) were excessive demands and perceived lack of support from senior managers .Although some of the questions in the questionnaire used by Hawkins were quite leading, the findings are supported by Brunsden *et al.* (2003). They noted tense relationships with superiors, poor consultation, and lack of training, contributed to high levels of stress.

Evidence from the Department for Communities and Local Government (2008) supports the suggestion that relationships with senior managers in the fire service, is a source of stress. They received 1,869 questionnaires from fire fighters across England. While an overwhelming majority (80 per cent) said relationships with their watch colleagues were good or very good, most reported relationships with senior managers to be poor or very poor.

The role of Fire Officer has changed from rescue and response towards the prevention of disasters (Labour Research Department, 2008). As a result, there is more time spent on tasks such as checking fire alarms and awareness raising in schools and workplaces. The Fire Brigade Union have argued that this has resulted in reduced and insufficient training to respond to emergency situations and have suggested that this increases the risks for fire fighters (Labour Research Department, 2008).

In terms of coping with stress, Hawkins (2005, mentioned above) suggests that some of the coping mechanisms available in other workplaces, such as time and workload management are more difficult in the fire service because of the nature of the work demands and the need to

respond to emergencies. Further, the Department for Communities and Local Government Report (2008) suggests that the "fire fighter image" could affect people's willingness to seek help for stress and mental health problems. The questionnaire returns suggested that being "emotionally strong" and "being brave" were seen as important traits in a fire fighter. This is supported by interviews with union officials (Brunsden *et al.*, 2003) which identified that some colleagues may demean others who are experiencing stress. This idea is supported by research into the "culture" of the fire service. A review by the HM Fire Service Inspectorate (1999) that involved visits to ten fire stations, a review of policies, and interviews with staff concluded:

> This closed organisation effect is exaggerated by a "macho" culture that requires "laddish" behaviour and male bonding, characterised by a requirement to "fit in" (p. 21).

However, despite this acknowledged correlation between high levels of stress and the fire service, research has focused on the efficacy of post-incident CISM training. There is little to no research on the provision of general mental health promotion, awareness, or prevention measures.

To summarise, workplace stress is a particular issue in the fire service. Research suggests this is related to excessive demands, relationships with senior managers, changing roles, and exposure to traumatic events. While the service offers some support in relation to coping with traumatic events, this does not cover stress resulting from organisational stressors and it is likely that the prejudices associated with stress and mental health could deter people from seeking help. There is also a lack of mental health research in the fire service. This indicates developing and evaluating relevant mental health promotion initiatives with this at-risk group, would be a worthwhile task.

Aims

The primary aim of this research was to evaluate the impact of three mental health interventions on attitudes and knowledge towards mental health in fire service managers.

The secondary aim was to compare and contrast the differing impact of these interventions.

Method

Mental health interventions

1. A locally developed two-day training course entitled "Looking after Wellbeing at Work" (LWW);
2. an internationally developed training course: Mental Health First Aid (MHFA); and
3. an hour-long leaflet session (LS).

The interventions were all delivered to Northumberland Fire and Rescue Service. An assistant psychologist (first author, J.M.) delivered all the training conditions with various co-facilitators.

LWW

LWW was developed with local mental health practitioners and service users. It was based on a literature review identifying important aspects of mental health promotion training (Robson and Bostock, 2010). The facilitators worked from a manual to ensure consistency. The key objectives were as follows:

1. to promote understanding of the influences on wellbeing at work;
2. to enable people to look after their own and others' wellbeing at work;
3. to increase awareness of the experiences of mental health problems; and
4. to promote positive approaches to people with mental health problems.

The LWW course was shaped by contributions from mental health service users. It emphasised the health, ethical, and business cases for promoting wellbeing, the responsibilities of managers, and how organisational sources of stress could be addressed collectively. It also demonstrated how to deal with personal stress and the stress of colleagues or managed staff. The LWW

course was developed with the Fire Service in mind and used relevant cases studies. Observations and recommendations from the course participants were fed back to senior managers of the Fire Service. The course was based on the sharing of experiences from the service users, and presentation of evidence, as well as learning exercises involving games and role play.

MHFA

MHFA is an international, manual-based, training programme. It is designed to inform members of the public about the signs and symptoms of mental health problems and provide information on how to support people with mental health issues.

The MHFA course aimed to:

1. preserve life if someone was in danger to themselves or others;
2. prevent mental health problems becoming more serious;
3. promote recovery;
4. offer comfort to these experiencing mental health problems;
5. raise awareness of mental health issues in the community; and
6. reduce stigma and discrimination.

MHFA was diagnostically led. It focused on mental health problems, how to identify these, how to help someone in a crisis, how to encourage self-help and to signpost people to professional help. It was a standardised course, delivered by pairs of trained practitioners and used video clips, presentation slides and learning exercises, compared to LWW which was co-run by up to six people, the majority of whom were mental health service users, who shared experiences from their perspectives about workplace mental health and what helped them.

The key differences between the courses were that MHFA was standardised and delivered by professionals, and it was focused on mental health diagnoses, whereas LWW was presented by co-facilitators who were mostly experts by experience of mental health problems, who shared their experiences and also prompted course participants to look at the causes as well as the solutions to promoting wellbeing in their workplaces, and at organisational as well as individual change.

LS

This consisted of a one-hour briefing session, during which participants were invited to view and read over leaflets around stress, mental health, and physical health. They were also able to speak to an assistant psychologist and a health trainer confidentially about any aspect of mental health. This session was offered as a comparison. Ethically, it was important to offer all the managers some form of mental health promotion training, in line with our agreement with the Fire Service. We also wanted to evaluate the impact of a cost and time efficient intervention with longer training courses. The LS intervention mirrored much usual practice, with LSs generally seen as good practice for providing health education.

Participants

LWW, MHFA, and the LS were delivered as mandatory training for managers in Northumberland's Fire and Rescue Service. Participants were all invited to complete pre- and post-questionnaires.

In total, 176 line managers were randomly allocated to one of the three training conditions. In all, 106 attended in total and 89 completed pre- and post-questionnaires: 31 LWW participants, 41 MHFA participants, and 17 LS participants.

Ethics

This study was registered with Northumberland Tyne and Wear NHS Research and Development Department. Identities on questionnaires were confidential and participants

were allocated numbers to allow matching of questionnaires. Only NHS research staff had access to the number/identity coding. Group rules were discussed during each training session, and all participants agreed to keep confidential, all issues discussed in training. All participants were given the contact details of the trainers and offered the opportunity to discuss any questions they had about the training or ask for further support if issues were raised by the training or LSs.

Quantitative measures

The Attitudes to Mental Illness Scale (AMIQ)

The AMIQ (Luty *et al.*, 2006) was administered. The psychometric properties of the AMIQ have been explored with a sample of 1,076 volunteers (Luty *et al.*, 2006). It has adequate reliability, stability, and validity. The AMIQ involves presenting the participant with a vignette describing someone with mental health problems, then presenting them with questions about the described person. Questions included "I would be comfortable if (person with mental health problems) was my colleague at work".

Knowledge and efficacy about mental health problems (KEMHP)

A further questionnaire was developed, the "Mental Health Stigma Questionnaire" using questions from the MHFA national evaluation, the 2008 UK Attitude to Mental Illness Questionnaire (Prior and Carman, 2008), the Social Distance Scale (Link *et al.*, 2004), and questions taken from previous research into stigma around mental health (Sholl *et al.*, 2009, Matschinger and Angermeyer, 1996). This questionnaire had not been validated prior to this research.

The newly developed mental health stigma questionnaire was subjected to factor analysis to develop a further understanding of the psychometric properties. The factor analysis was based on data from pre-questionnaires from all the groups ($n = 106$). Data checks recommended by Field (2005) for factor analysis was carried out including: histogram plots, KMO tests, an anti-image correlation and a Bartlett's test ($B = 519.18$, $p = 0.00$). The tests indicated suitability of the data for factor analysis. One suitable factor was identified: knowledge and self-efficacy. This comprised the following items:

- knowledge of ways I can deal with stress;
- knowledge of ways employers can deal with stress;
- knowledge of mental health problems in general;
- knowledge of the different types of mental health problem;
- knowledge of the signs of a mental health problem; and
- I could do something to help a friend affected by a mental health problem.

The AMIQ and Knowledge and Efficacy questions were scored pre- and post for each group and evaluated for significance using a MANOVA.

Facilitation and content analysis

Participants from both the LWW and MHFA conditions were also asked to complete brief evaluations of the courses; they were asked to rate aspects of the courses from poor to excellent. This evaluation helped assess the quality of delivery of each course, and helped assess for delivery bias by the facilitator.

Qualitative feedback

Of those participants who volunteered, 15 from each of the LWW and MHFA courses (30 in total) were randomly selected to be interviewed by phone. The phone interviews were conducted by a volunteer who had not been involved in delivering the training, to ensure anonymity. Themes

from the interviews were analysed by a volunteer Assistant Psychologist who had not been involved in the training and validated by a further Psychologist.

Results

Group characteristics

In total, 41 MHFA participants, 31 LWW participants, and 17 LS participants completed post-group questionnaires. The LWW and MHFA groups completed their questionnaires on site following training. The LS participants returned follow-up questionnaires by e-mail or post, which is likely to contribute to these differing response rates.

In the LS, the characteristics of those who completed post-group questionnaires and those who did not were similar in most respects, except that more of those who completed the questionnaire at follow-up said they had not experienced a mental health problem (71:33 per cent). A MANOVA comparison showed no significant pre-group differences between the LWW, MHFA, and LS groups.

Aim 1: evaluating the impact of the interventions on attitudes and knowledge

Only participants with matching pre- and post-questionnaires were included in the analysis (LWW = 31, LS = 17, MHFA = 41).

Box plots were used to identify outliers. Given the small sample size in the LS group ($n = 16$) a within subjects MANOVA was selected to increase the power of the analysis (Dancey and Reidy, 2002).

The MANOVA showed a significant main effect of time ($F = 68.00$, $p = 0.00$) suggesting an overall improvement for all groups in AMIQ and KEMHP between Times 1 and 2. However, this should be viewed with caution as the results also showed a significant interaction between time and group ($p = 162.00$, $p = 0.00$). Non-parametric Wilcoxon tests were used for follow-up because of the non-normal distribution of the Time 2 data.

The tests confirmed that for LWW, comparing Times 1 and 2 there was a significant difference in AMIQ ($z = 3.849$, $p = 0.00$) and KEMHP ($z = 4.513$, $p = 0.000$) scores.

The tests confirmed that for MHFA, comparing Times 1 and 2 there was a significant difference in AMIQ ($z = 5.52$, $p = 0.000$) and KEMHP ($z = 5.52$, $p = 0.000$) scores.

The post hoc tests showed for the LS, comparing Times 1 and 2 there was no significant difference in AMIQ ($z = 5.0$, $p = 0.617$) or KEMHP ($z = 0.921$, $p = 0.357$) scores.

This is supported by Figures 1 and 2.

Aim 2: compare and contrast the differing impact of these interventions

Non-parametric Mann Whitney tests were carried out to evaluate the impact of each intervention at Time 2.

The comparisons showed there was a significant difference at Time 2 comparing LWW and LS scores on AMIQ ($z = 2.17$, $p = 0.03$, $r = 0.31$) and KEMHP ($z = 4.86$, $p = 0.00$, $r = 0.70$), with the LWW participants showing significantly more positive scores at Time 2 than LS participants.

The comparisons showed there was a significant difference at Time 2 between MHFA and LS scores on AMIQ ($z = 2.34$, $p = 0.02$, $r = 0.31$) and KEMHP ($z = 5.34$, $p = 0.00$, $r = 0.70$), with the MHFA participants showing significantly more positive scores at Time 2 than LS participants.

The comparisons showed no significant difference at Time 2 between the LWW and MHFA groups on AMIQ ($z = 0.29$, $p = 0.77$, $r = 0.03$) or KEMHP ($z = 0.57$, $p = 0.57$, $r = 0.07$).

Facilitation and content analysis

All aspects of the MHFA and LWW were rated including the manual, facilitators, and exercises. The general evaluations of the LWW and MHFA courses indicated the mean rating

Figure 1 Mean group scores on AMIQ attitudes questionnaire at Times 1 and 2

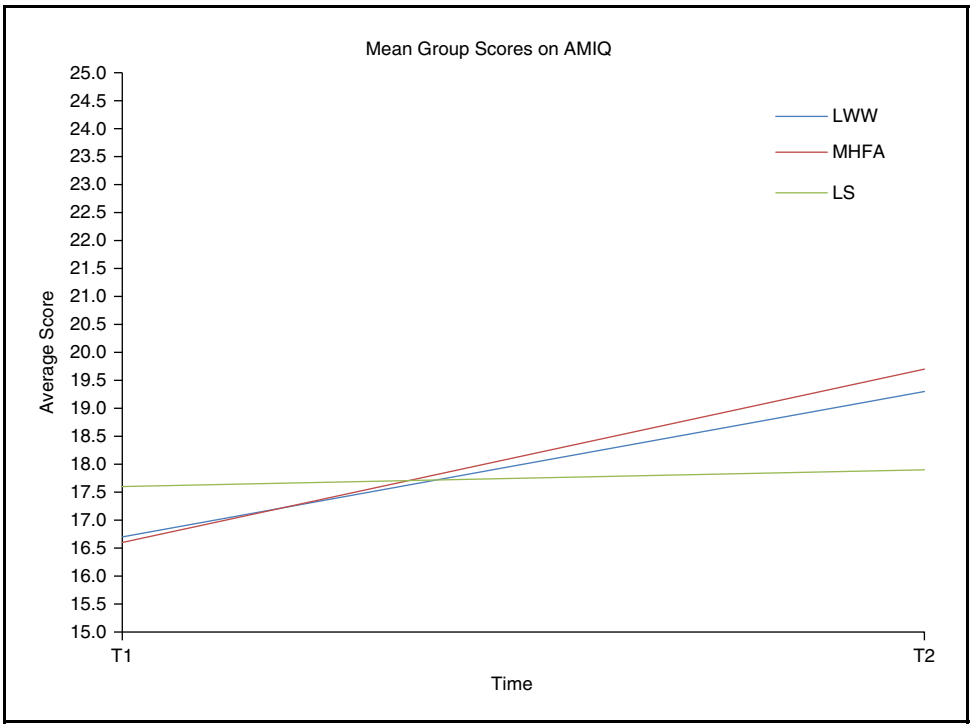
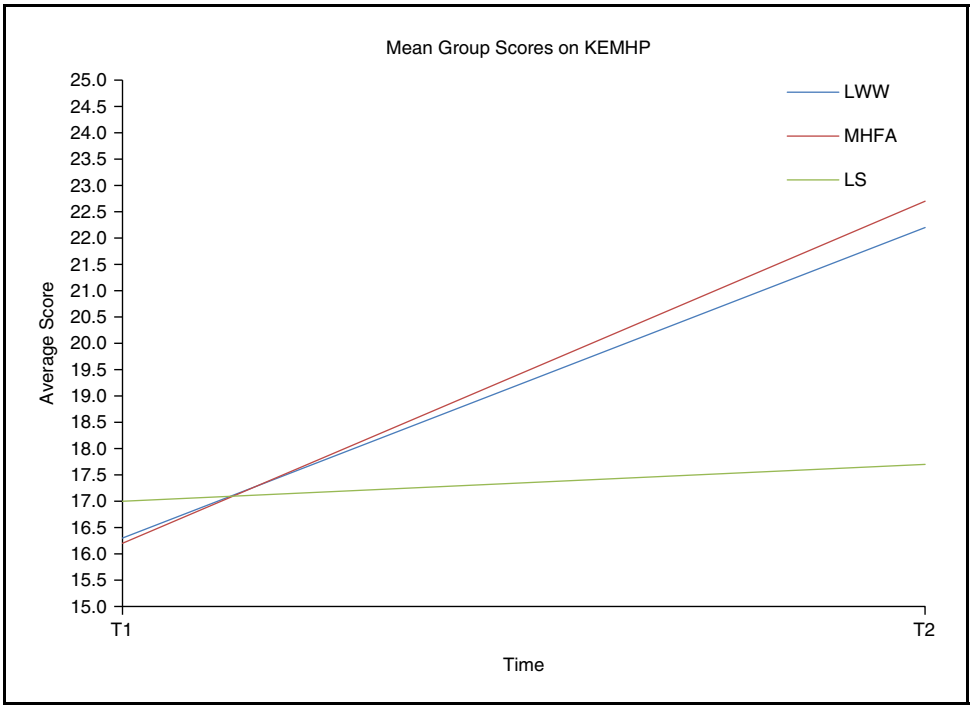


Figure 2 Mean group scores on KEMHP factor at Times 1 and 2



for all aspects of both training conditions was good to excellent. Response scores ranged from 1 (poor) to 5 (excellent). The LWW average score was 3.93. For MHFA the average score was 3.75. This indicates comparable, high quality delivery of both training conditions.

The LWW participants also rated the usefulness of each module of the training on a 1-5 scale; 1 was not at all useful, 5 was extremely useful. The modules scored 4.26 on average, with the "sharing experiences" module being rated most highly ($m = 4.75$).

Qualitative impressions

There was agreement on two main themes from the separate analysis of the 15 LWW and 15 MHFA interviews with participants: recognising and responding to mental health problems and changing attitudes and assumptions. Particular points of difference also emerged and these are included below.

Recognizing and responding to mental health problems

LWW and MHFA participants both stated that recognizing the signs of mental health difficulties was useful in supporting their friends and colleagues and in sharing information. Participants also felt they were now aware of where to go to seek support:

> We were having chats with colleagues anyway before about their problems. But there was no structure before and now we can put names to what we were previously doing and have more people we can email, ring up […] (MHFA course participant).

Participants valued learning about how to recognise signs of stress and mental health difficulties:

> I wasn't aware of the stress levels people were under. That was the main thing I got out of the course, how to look for it and how to deal with it (LWW course participant).

The need for individualised responses to people with mental health problems was recognized by participants of both courses. Distinctive to the LWW group was the recognition that participants were able to consider their own needs and circumstances and how to address these, and how to deal with stressful situations:

> It made me think a bit more about what I am coping with and not coping with. I think I have been ignoring it (the problem) to a point, which I shouldn't have and it (the course) put it into context and I've done something about it (LWW course participant).

Changing attitudes and assumptions

This theme included the recognition of the commonness of mental health problems, and participants described becoming more tolerant, hopeful, compassionate, and less judgemental.

Both LWW and MHFA participants recognized the prevalence of mental health issues. Some contrasted this with their previous knowledge:

> Before it was kind of a taboo subject […] but now we're being educated a bit more, it is a lot wider and common in the workplace" (MHFA course participant).

Participants remarked that they felt more open minded and keen to listen rather than make quick judgements; this included greater insight into the media portrayal of mental health issues. Participants from both courses valued information about recovery and dispelling myths about dangerousness.

LWW participants took part in sessions in which people who had used mental health services shared their experiences. This aspect of the training was reported as overwhelmingly positive and was often cited as the most useful part of the training:

> Talking to the guys who suffered from it was really good. They were very enlightening (LWW course participant).

LWW course feedback suggested that meeting and listening to the volunteers also increased participants' confidence in supporting others, and encouraged compassionate approaches to those with mental health issues. Interestingly the MHFA course participants suggested that the course would have been improved with more real-life scenarios. Suggestions for improvement for the LWW course included ensuring that senior managers attend the training and keeping the focus positive and on wellbeing. Participants commented positively on the knowledge and

style of the facilitators, the opportunity for confidentiality and the well-organised structure of the course.

Discussion

Strengths and Limitations

The strengths of this study are the number of participants, the random allocation, the combination of qualitative and quantitative outcome measures, the use of a validated questionnaire to assess attitudes, and the comparison of two different mental health promotion training programmes. The quantitative evaluation is limited in that one of the questionnaires used has, as yet, untested psychometric properties. Further, the LS only lasted for one hour whereas MHFA and LWW lasted two days. This makes it difficult to establish if the results from the LS are due to length or content. Further, there were fewer responders in the LS compared to the LWW and MHFA, making it more difficult to trust the data from the LS group. A future study would benefit from a more useful comparison of LWW and MHFA with no intervention/treatment as usual.

The qualitative evaluation was useful in gaining descriptive data, however, the large numbers of participants made it difficult to conduct a more in-depth analysis.

All training sessions were carried out by the first author (J.M.) in combination with various other facilitators. Delivery bias in MHFA and LWW was considered using facilitation and content analysis, however facilitation bias cannot be ruled out entirely when considering the results.

This training was carried out with Northumberland Fire and Rescue Service, which could limit how applicable these results are to other organisations and other employers. However, there is promising evidence emerging to suggest that interventions addressing prejudices and discrimination can be effective in other workplaces (Knifton *et al.*, 2008). The LWW training has been delivered in schools with teachers, and with mental health staff; initial results seem promising.

The impact of mental health interventions on attitudes towards and knowledge of mental health problems.

The LWW and MHFA courses were both associated with statistically significant improvements in attitudes to mental illness and knowledge/self-efficacy around mental health after the training. The general evaluations of the LWW and MHFA courses indicated the mean rating for all aspects of both training conditions was good to excellent. Two themes were identified across the qualitative interviews:

1. participants described they were more able to recognise and respond to mental health problems; and
2. participants described changing attitudes towards mental health.

In contrast the LS did not produce significant changes in attitude or knowledge. This result suggests it is possible to affect attitudes towards mental health in fire service managers, but the content and duration are important: a short LS is not enough.

Further research could continue to evaluate the impact of mental health interventions through looking at the impact on measures such as stress-related sickness and the number of personnel accessing mental health-related support.

Comparing the differing impact of these interventions

The LWW course took an organisational stress and wellbeing perspective to mental health problems and addressing possible prejudices and discrimination. The MHFA course trained participants in appropriate screening and supporting of people with mental health problems. Although the courses had different emphases, they were both associated with improving attitudes to mental health. Outcomes did not appear affected by one of the courses having a diagnostic approach with the other having a wellbeing orientation and “it’s normal to be different” approach The study shows that there are advantages to using the locally developed

LWW course which promoted local links and organisational solutions, as well as the carefully tried and tested standardised MHFA course which also elicited good feedback.

This study did not find any significant differences between the LWW and MHFA training. One factor that could affect this finding is lack of measurement sensitivity. Attitudes to mental illness and knowledge/efficacy about mental health problems were the main measures of efficacy. Future research could look at the differences through evaluating the impact on positive mental health, wellbeing, and organisational approaches to stress.

Conclusions

The results from this study indicate that providing two day training in mental health awareness and promotion was considered helpful, was constructively used by managers in the Fire Service, and resulted in statistically significant improvements in attitudes towards and knowledge about mental health problems. The results also suggest a one hour LS was not enough to bring about similar significant changes. While bearing in mind the limitations described above, the findings from this study represent promising evidence for LWW and MHFA with fire service personnel and further research is justified.

The quantitative and qualitative evaluations suggest that both the LWW and MHFA courses are appropriate to address the organisational issues previously outlined for the Fire Service (Brunsden *et al.*, 2003; Labour Research Department, 2008) and did promote understanding of the workplace influences on stress, increased the awareness of mental health issues and how colleagues and managers can help, and promoted more positive approaches to mental health. Overall, the results suggest positive improvements in attitudes and knowledge about mental health problems, in this group of emergency service staff.

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