Traci Leven Research

Mindfulness Based Stress Reduction Pilot for NHSGGC Staff

Final Report

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Executive Summary

The Research

NHSGGC commissioned Traci Leven Research to conduct analysis and report on findings relating to the Mindfulness Based Stress Reduction (MBSR) Pilot. The research tasks specified were to:

- Clean and recode an SPSS datafile containing all information from the pre- and post- course evaluation forms
- Analyse all data from the pre-and post-course evaluation forms
- Review and collate relevant learning points from various document/sources.

Methods

Available resources were collated and reviewed, and learning points extracted. Details were extracted which gave information about tasks undertaken, challenges encountered, mitigating actions, etc.

Data from pre- and post- training evaluation forms were input by NHSGGC staff and sent to the researcher for preparation and analysis. Analysis of the evaluation data was conducted in SPSS and included paired sampled t-tests which compared the means scores on all scales and sub-scales between pre- and post- training, crosstabulations with chi-square tests to explore differences between categorised scales pre- and post-training.

Additional qualitative data from participants were also available from comments made on two bespoke evaluation forms at two of the MBSR courses and 13 email responses to a request for feedback from participants approximately three months after their training. These qualitative data were sorted and analysed by themes and subthemes.

Process of Development and Delivery of MBSR Courses

An NHSGGC mindfulness short life working group was established to develop and implement the MBSR Pilot. The group carried out the following tasks in 2015-16:

1. **Develop a Training Pack** – existing Mindfulness Scotland resources formed the basis of the training pack/session content. The training pack included a course manual and CDs of guided meditations. An eight week programme based on the well-established MBSR curriculum with some elements of Mindfulness Based Cognitive Therapy (MBCT) was developed.

2. **Identify mindfulness trainers from within NHSGGC staff group and also from Mindfulness Scotland -** A 'Mapping Exercise' was conducted which identified potential staff to deliver the training. Around 20 NHSGGC staff were identified who were trained in some form of mindfulness. A much smaller group was identified who were able to deliver MBSR/MBCT at the times and venues suggested.

3. **Agree an evaluation framework and evaluation tools -** An evaluation framework was developed. Standardised tools were used to gauge levels pre- and post-training and therefore allow a measurement of change/impact: Cohens

Perceived Stress Scale; Five Facets of Mindfulness; Maslach Burnout Inventory (MBI); Personal Resilience Assessment tool.

4. **Agree targeting of the courses to stress 'hotspots' within the organisation -** The group liaised with key stakeholders including managers, Occupational Health, Unions, and Human Resources to identify stress 'hotspots'.

5. **Organise the delivery of eight mindfulness taster sessions –** eight taster sessions were organised for targeted groups. Demand for taster sessions was high.

6. **Organise the administration of delivering five 8-week MBSR courses -** Five eight-week courses were delivered. Courses were popular and over-subscribed and applicants were shortlisted and offered places. Challenges in making arrangements for the courses included tight timescales, difficulty in finding suitable venues and sourcing equipment. Course participants comprised 83% women and 17% men.

Pilot resources indicate that the projected costs for the pilot were £14,470, and actual costs were £15,851.

In addition to the taster sessions and courses delivered to NHSGGC staff, one other MBSR course (January – February 2016) and one accompanying taster session (in September 2015) were delivered for Glasgow City Council staff using a different pack and trainer, but using the same evaluation tools. The findings presented here include the Glasgow City Council participants together with the NHSGGC participants.

Outcomes and Impacts

The findings show a significant improvement on every one of the eight dimensions of resilience as measured by the Personal Resilience Assessment Tool. A total score - Resilience Quotient (RQ) was calculated which can range from 32 to 160, with scores of 116 or over indicating that someone is resilient/very resilient. Overall, the mean RQ was 107 before the training, but this rose to 122 after the training. Before the training, fewer than one in three (31%) participants had a RQ which indicated that they were resilient or very resilient. However, this rose to just under two in three (65%) after training. Most (82%) participants showed some increase in RQ.

The Maslach Burnout Inventory measured three components:

Burnout – Two in three (68%) showed a reduction in their burnout score after training. The proportion who had high levels of burnout reduced from 31% to 15% after training.

Depersonalisation - Just over half (54%) showed a reduction in their depersonalisation score after training. The proportion of participants who had depersonalisation scores which indicated moderate or high levels of burnout reduced from 65% to 47%.

Personal Achievement – Three in five (60%) showed an increase (i.e. improvement) in their personal achievement score. The proportion who had scores indicative of moderate or high levels of burnout decreased from 69% to 51%.

Three of the Five Facets of Mindfulness showed a significant improvement in scores after training:

- Mean **observing** scores (on a scale of 4 to 20) rose from 13.4 to 16.0;
- Mean **describing** scores (on a scale of 5 to 25) rose from 15.2 to 16.2;
- Mean **nonreactivity to inner experience** scores (on a scale of 5 to 25) rose from 13.4 to 16.9.

The Cohen Perceived Stress Scale was used to measure stress On this scale, scores of around 13 are considered average and scores of around 20 points or more are considered indicative of high levels of stress. Prior to training, the mean perceived stress level was 20.0. After training, the mean had reduced significantly to 13.2. Overall, 84% of participants saw a reduction in their perceived stress level after training. The proportion who had a score indicating high stress levels reduced from 48% to 10%.

Follow-Up Feedback

All participants who completed an evaluation form for one of the QEUH courses gave responses which indicated that the format and content of the course was satisfactory. Comments revealed that a key aspect of the sessions which participants found particularly helpful was listening to, and sharing experiences with other participants.

All 13 QEUH participants, and 18 of the 19 physiotherapy participants said they would recommend the course to others. Some of those who provided feedback some months after completing the course indicated that they had already recommended mindfulness courses to others.

All participants of the QEUH course who completed a course evaluation agreed that they felt motivated to continue practicing mindfulness, and all participants also agreed that they felt able to continue practicing mindfulness. Among the 19 participants of the course for physiotherapy staff who completed the follow-up evaluation questionnaire, 16 said they were still doing any of the mindfulness techniques on a regular basis. Fifteen of the 19 physiotherapy participants said they planned to continue to practice mindfulness on a regular basis.

Most of those who provided feedback some months after their training, indicated that they were still practicing the techniques they had learned, at least to some extent. Some had successfully managed to incorporate mindfulness techniques into their daily or weekly routines. Some indicated that they did not have time to practice as often as they would like or to practice as many of the techniques as they would like, but were continuing to some extent.

All 13 participants of the QEUH course who were asked to complete a course evaluation agreed that they found the course helpful and that they had a better understanding of managing difficulty using mindfulness. Eighteen of the 19 physiotherapy participants said they got something of value from the course. Also, of the 19 physiotherapy participants, most said that specific measures were improved or much improved after training. These included self contentment, management of stress and taking care of self.

Many of those who provided feedback a few months after their training indicated that the course had helped them reduce stress. Some also felt they were generally more mindful, contemplative or content as a result of the course and their continued practice. Two of those who provided feedback indicated that they felt the course had help to reduce or avoid stress-related work absence. Overall, several participants who provided feedback months after the training enthused about the scale of the impact the training had had on their lives.

Conclusion

The evaluation has clearly shown the effectiveness of the delivery of MBSR training to staff. The course has been largely beneficial in equipping participants to effectively employ mindfulness techniques and effective in reducing stress and burnout and improving resilience. It could be expected that wider scale participation in MBSR among NHSGGC staff could lead to a reduction in stress related absence.

Recommendations

The evidence leads to the recommendation of future roll out of MBSR training courses to staff. Some specific recommendations are:

- Work should continue to identify the most suitable venues across the NHSGGC estate in which MBSR sessions can be delivered. Where venues are identified they should be booked as far in advance as possible to ensure availability.

- Deliver future taster sessions to allow staff to make informed decisions about whether MBSR would be helpful/suitable.

- The extent of demand for future training course places should not be underestimated.

- An extended lead time before courses would allow for more effective preparation including the identification/booking of venues, procurement of resources and administration of applications.

- Increased availability of further opportunities for continued practice of mindfulness techniques (e.g. lunch time or after work drop in sessions)

- As the courses were very predominantly attended by women, a specific group provided for men only may help to encourage more attendance from men.

- The findings from this evaluation should be shared with staff to highlight the potential benefits of participation in an MBSR course.

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1 Introduction

1.1 Background

Fit for Work Scotland[1] estimates that one worker in six in Scotland experiences problems related to mental health or stress, and where this leads to absence from work, on average an employee will take 21 days off work. The cost of mental health problems to Scotland's employers is estimated to be more than £2 billion per year.

Stress among Scotland's workforce is prevalent not only among workers in the private sector but also among public sector staff. In January 2015, Police Scotland were shown to have lost more than 53,000 working days over the previous two years due to anxiety and depression. Among Scottish NHS staff, there was a rise in the number signed off work with mental health problems, from 7,975 in 2012/13 to 8,540 in 2013/14 – a rise of 7% in one year[2].

Data for NHS Greater Glasgow & Clyde (NHSGGC) show that from September 2015 to September 2016, there were a total of 5,595 occupational health referrals (either management referrals or self-referrals). By far the most common cause of referral was anxiety/stress/depression or other psychiatric illness – which accounted for 1,929 referrals – just over a third (34%) of all occupational health referrals. Among these 1,929 referrals, 1,192 (62%) were recorded as being work related or partly work related.

NHSGGC data show that in September 2016, the absence rate across all staff was 5.26% and analysis of absence for 2016-2017 showed that anxiety/stress/depression/other psychiatric illness was the most common reason for absence across the workforce.

Stress is not only a major reason for workplace absence, but also leads to decreased work performance and poor health outcomes for staff. NHSGGC, which aims to be an exemplar employer, has implemented a multi strategy approach to reduce stress among its workforce. One element of this approach has been the piloting of a series of Mindfulness Based Stress reduction (MBSR) courses for NHSGGC staff.

Evidence base[3]

There is a growing evidence base for using mindfulness based approaches to help staff manage work related and personal stress, increase resilience and reduce burnout. The most recent review, The Mindful Nation UK report[4] identifies a role for mindfulness within workplaces and specifically for the NHS as an employer:

> *"We recommend that public sector employers such as the NHS and civil service pioneer good practice and set up mindfulness pilot projects, which can be evaluated as part of their responsibility to combat stress."*

Furthermore, implementing such stress reduction interventions is consistent with policy guidance to the NHS including Everyone Matters: Workforce 2020 Vision; Safe and Well at Work - Occupational Health & Safety Strategic Framework for NHS Scotland, 2011; and the Health Promoting Health Service framework. Locally in NHSGGC, our Staff Health Strategy 2016-19 drives innovative wellbeing activities.

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[1] http://www.fitforworkscotland.scot/employers/preventing-absence/common-causes-of-work-absence/
[2] http://www.bbc.co.uk/news/uk-scotland-scotland-politics-30689782
[3] This section was written by NHSGGC
[4] ***Mindful Nation UK*** Report, Mindfulness All-Party Parliamentary Group, 2015

A literature review was undertaken by the NHSGGC Public Health Research team. The review considered the evidence for MBSR training for staff. The review included: the context for delivery; the outcomes and experiences for health staff; the delivery and implementation of MBSR; exclusion criteria; and post-training requirements. Resilience and burnout were also included within the search. The findings of the review informed the development of the MBSR pilot.

1.2 The Research

NHSGGC commissioned Traci Leven Research to conduct analysis and report on findings relating to the MBSR Pilot. The research tasks specified were to:

- Clean and recode an SPSS datafile containing all information from the pre- and post- course evaluation forms
- Analyse all data from the pre-and post-course evaluation forms
- Review and collate relevant learning points from the following sources:
    - Notes from the mindfulness sub group meetings
    - Notes from MBSR Tutors' meetings
    - Notes from MBSR coordinator and administrator
    - Organisational data e.g. employee sickness absence, stress trends across the organisation

However, these tasks were slightly revised during the course of the project, in the following ways:

- Organisational data on sickness absence and stress trends were not available for analysis (e.g. to explore differences before and after the training). However, it was recognised that the scale of the training and the small proportion of the workforce who attended would not be likely to result in observable changes in absence rates. The data for 2015-2016 only were available and have been included in the background section above.

- Data from additional evaluation forms issued to participants on two courses were made available and have been analysed and reported.

- NHSGGC emailed participants and invited freetext email feedback in October 2016 (approximately three months after the completion of the course). Responses were available to the evaluation. These were reviewed and analysed by key themes and have been reported.

2 Methods

2.1 Introduction

This chapter describes the sources of data and methods used in the evaluation.

2.2 Collation of Learning Points

Available resources were collated and reviewed, and learning points extracted. The sources comprised:

- Notes from the administrator of mindfulness courses
- Notes from MBSR pilot subgroup meetings
- Emails sent between members of the subgroup
- Notes from MBDR tutors' meetings.

Details were extracted which gave information about tasks undertaken, challenges encountered, mitigating actions, etc.

2.3 Data Preparation

Data from pre- and post- training evaluation forms were input by NHSGGC staff and sent to the researcher for preparation and analysis. Preparation of the data for analysis included:

- Combining the data into one SPSS dataset, adding pre- and post- responses for each participant. Participants were identified by a unique reference number. Pre- training data were available for 105 participants, and post-training data were available for 96 participants. Only the 96 participants for whom responses were returned for both pre- and post- training were included in the final dataset.
- Adding a variable to record the number of sessions attended by each participant (from register data separately supplied), and a second variable to categorise whether they attended 7/8 sessions or fewer.
- Adding a variable to categorise participants as clinical or office based staff (from job title).
- Computing new variables from answers to score each participant both pre- and post- training for each of the scales and sub-scales.
- Where relevant, creating variables which categorise scores for scales.
- Calculating variables to record the size of the change observed for each of the scales and sub-scales (post-training score minus pre-training score) for each participant.

2.4 Data Analysis

Analysis of the evaluation data was conducted in SPSS, and consisted of:

- Paired sampled t-tests which compared the means scores on all scales and sub-scales between pre- and post- training. The 95% ($p \leq 0.05$) probability level was used.

- Crosstabulations with chi-square tests to explore differences between categorised scales pre- and post- training.
- Means and frequencies of changes observed after training for each scale/sub-scale.
- Explorative t-tests to determine whether there were any significant ($p \leq 0.05$) differences in the mean observed differences for those who attended 7/8 sessions compared to those who attended fewer sessions.

Further data were provided for two courses from bespoke forms which MBSR teachers had issued to evaluate their course. These were provided as SPSS data files and frequencies were run to identify categories of responses.

Additional qualitative data from participants were also available from:

- Comments made on the two bespoke evaluation forms at two of the MBSR courses;
- An email sent by one participant after the course
- 13 email responses to a request for feedback from participants approximately three months after their training.

These qualitative data were sorted and analysed by themes and subthemes. The three overall themes under which data were first sorted were:

- Acceptability of the course
- Continued practice of mindfulness techniques
- Impacts

Key messages were analysed under each of these themes.

3 Processes of Development and Delivery of MBSR Courses

3.1 Introduction

This chapter describes the processes of development and delivery of the Mindfulness Based Stress Reduction (MBSR) courses and has been produced from the collation of learning points from the various sources available to the evaluation.

3.2 Key Tasks Undertaken by the Mindfulness Working Group

An NHSGGC mindfulness short life working group was established to develop and implement the MBSR Pilot. The group carried out the following tasks in 2015-16:

1. **Develop a Training Pack**

Existing Mindfulness Scotland resources formed the basis of the training pack/session content. Representatives from Mindfulness Scotland's Teacher Training team worked together with NHS mindfulness trainers to develop a suitable course. This included editing the Mindfulness Scotland resource content into an eight-week course with approximately two hours per weekly session. The content of each session followed the core curriculum for MBSR, with elements of Mindfulness Based Cognitive Therapy (MBCT).

2. **Identify Mindfulness trainers from within NHSGGC staff group and also from Mindfulness Scotland**

A 'Mapping Exercise' was conducted which identified potential staff to deliver the training. The mapping exercise identified existing mindfulness practitioners in the NHS. The exercise resulted in a record of names, areas of work, contact details, and whether there would be interest in delivering future courses. Around 20 NHSGGC staff were identified who were trained in some form of mindfulness. A much smaller group was identified who were able to deliver MBSR/MBCT at the times and venues suggested.

Courses were delivered by NHSGGC staff and Mindfulness Scotland teachers (who were also NHS employees). Nine teachers were involved in delivering the courses to NHSGGC staff (although one withdrew due to illness), with two teachers at each course.

3. **Agree an evaluation framework and evaluation tools**

An evaluation framework was developed as part of the overall project plan with a logic model. This can be found in Appendix B.

The literature review which informed the development of the pilot had already identified three standardised tools to be used to gauge levels pre- and post-training and therefore allow a measurement of change/impact:

- Cohens Perceived Stress Scale – to measure perceived stress;
- Five Facets of Mindfulness – to measure understanding of mindfulness principles
- Maslach Burnout Inventory (MBI) – to assess burnout risk.

A search was also undertaken to identify a tool to measure resilience, and this resulted in the Personal Resilience Assessment tool being used in the evaluation. This measures eight dimensions of resilience.

4. Agree targeting of the courses to stress 'hotspots' within the organisation

The group liaised with key stakeholders including managers, Occupational Health, Unions, and Human Resources to identify stress 'hotspots'. HSCP physiotherapy staff, and staff at Queen Elizabeth University Hospital (QEUH), Gartnavel and Cowlairs were identified as groups who would be likely to benefit from stress reduction interventions.

5. Organise the delivery of eight Mindfulness taster sessions.

The group was responsible for organising nine taster sessions to targeted groups. These comprised three groups with physiotherapy staff in October/November/December 2015 and six sessions across Queen Elizabeth University Hospital (three sessions), Gartnavel (two sessions) and Cowlairs (one session). The group's tasks included booking venues, organising speakers, promoting the sessions with the workforce and booking participants onto the sessions. The three physiotherapy taster sessions were much longer (around three hours) than the much shorter later ones. The presentation and structure of the later sessions were based on the longer session and delivered by some of the same teachers. Among the six later sessions delivered in March 2016, there was a total of 158 participants. A further 19 members of staff registered their interest, but were unable to attend a taster session.

Taster Session	Date	Number of participants
Glasgow HSCP Physiotherapy Taster 1	October 2015	25
Glasgow HSCP Physiotherapy Taster 2	November 2015	25
Glasgow HSCP Physiotherapy Taster 3	December 2015	25
QEUH Taster 1	March 2016	28
QEUH Taster 2	March 2016	25
QEUH Taster 3	March 2016	36
Gartnavel Taster 1	March 2016	21
Gartnavel Taster 2	March 2016	23
Cowlairs Taster	March 2016	25

Additionally, a taster session was delivered for Glasgow City Council staff in late 2015.

Among the 90 attendees of the last six taster sessions for whom job title details are recorded, 40% were office based/administrative/support or managerial staff and 60% were clinical/patient-facing staff.

Demand for taster sessions was higher than expected. The administrator noted that taster sessions booked up very quickly. A number of people who had not booked onto the taster sessions turned up at them. It was recognised in hindsight that more taster sessions could have been provided. The high demand resulted in a burdensome volume of data entry of applications and administrative tasks such as responding to applicants.

6. Organise the administration of delivering five 8-week MBSR courses

The group's tasks included booking venues, promoting and booking courses, purchasing mats and blocks, printing and collecting evaluation packs. Five eight-week courses were delivered, which comprised:

- Glasgow HSCP Physiotherapy course – 22/01/16 to 18/02/16
- Queen Elizabeth University Hospital Labs – 18/04/16 to 06/06/16
- Gartnavel Post Graduate Training Centre course – 19/04/16 to 08/06/16
- Cowlairs Decontamination Unit – 20/04/16 to 08/06/16

- Queen Elizabeth University Hospital Teaching and Learning Centre – 21/04/16 to 19/06/16

Nine MBSR teachers delivered the training courses between them (from NHSGGC and Mindfulness Scotland), each using the same training resources and content. In line with national best practice guidance, all teachers had professional, paid supervision. Several used a supervisor who trained at Bangor University and is affiliated to Mindfulness Scotland and two used a pre-arranged supervisor.

Application packs were sent to all those who had attended the taster sessions in order to elicit applications to participate in an eight week MBSR course. This included a questionnaire which was designed to identify those not suitable for the course (i.e. those with recent trauma or who may benefit from more intense services run by clinical psychology). Information was also sent by email to local site managers, Occupational Health, Human Resources and Unions to inform them about the pilot including its purpose and format. Agreement was sought from Senior staff that time off work would be granted to participants to attend the sessions if required. However, it was stressed that staff should not be 'sent' on the course.

Application packs included:

- Information about the advantages of participation including evidence of the effectiveness in reducing stress in the workplace.
- Advice that the pilot project would be evaluated, and that participants will be asked to complete evaluation forms at the start and end of the course.
- Information about what to expect from the course including the duration of sessions (around 2 hours) and an outline of the aims – 'to help you develop an in-depth personal experience of mindfulness and to build the foundations of a sustained personal practice, with a view to applying this in your lives and also in your professional work'.
- An outline of the expectations of participants including commitment to attend all eight sessions and also a time commitment of 30-40 minutes per day for home practice of meditation.
- Advice that mats and yoga blocks would be provided, but that participants should bring their own blanket and cushion, and that participants should wear comfortable clothing to allow movement.
- Advice that the course may not currently be suitable, with details of reasons for non-suitability under headings of availability, emotional turbulence, mental health challenges, substance use.
- Details of training course venues, dates and times.
- An application form asking for:
    - contact details;
    - whether attended a mindfulness taster session (Yes, No or 'No, but I have a clear understanding about what mindfulness involves' – with those ticking the last category asked to explain)

- how they heard about the session, and which course they wished to apply for (1st, 2nd and 3rd choice).
- Confirmation of their commitment to attend all sessions, practice at home and complete the evaluation forms.
- Statement of support (approx. 250 words) to detail why they wanted to attend the course from a personal and professional perspective.

Courses were popular and tended to be over-subscribed. The group had to shortlist applicants to offer them places on the course. Each course had a maximum of 20 places. From review of communication among the group, there did not appear to be set criteria to shortlist, but where groups were oversubscribed, reasons for not selecting some applicants included not having attended a taster session or not having completed the form well. Those deemed more suitable to a clinical psychology intervention were also declined. Staff also reported that they did not select people if they did not demonstrate a clear understanding of the nature or aims of the course and the need for personal practice. The administrator reported that the process of screening applications was complex and time consuming. Applicants to the course were emailed with confirmation that they were being offered a place or information that they had not been shortlisted due to over-subscription. Successful applicants were invited to confirm their attendance/register for their place. Confirmation/reminder emails were sent to attendees. However, there was a small number who did not attend.

The administrator reported a number of challenges in making arrangements for the courses including:

- Timescales were tight, particularly for ordering equipment and identifying/booking venues
- Suitable venues were difficult to find – NHS venues were often not available for the full eight weeks, could not be used after 5pm, or could not accommodate a two hour booking, and many were not suitable in terms of being a 'calming space'
- It was difficult to source the equipment needed in the quantities required.

Some practical issues encountered when delivering the sessions were that rooms used as venues for the sessions had not always been cleared of desks, tables etc. and this took significant effort for the staff delivering the group to clear when they arrived. Storing resources also provided to be problematic, as it was difficult to identify suitable available space to store mats, blocks etc. between sessions. At courses run in venues where storage could not be found, participants were asked to keep their equipment during the eight weeks and return it at the end. Other feedback from trainers included:

- Although the room provided at one venue was a good size for the group, the carpet was dirty and the air conditioning made the room too cold (the cold temperature of the room was also mentioned by one participant in subsequent feedback).
- One venue had an odd-shaped room with pillars, bookcases and computer banks in the way.

- Initial sessions involved unpacking resources – it was advised for subsequent staff running their first session that they should be equipped with scissors to help unpack mats, etc. and be prepared to dispose of a large amount of cardboard packaging.

- Completion of evaluation forms at the start of the course was time-consuming. Some trainers sent the forms out for completion at home before coming to the first sessions, which was felt to work well. Those who issued them for completion at the first session noted it took around 20 minutes, and advised that Week 1 sessions should be longer to accommodate this.

Data are not available for all participants, but of the 96 participants (81 NHSGGC and 15 GCC) for whom full evaluation data are available, the profile of participants was:

- 17% were male; 83% were female.
- 15% were aged under 35; 23% were aged 35-44; 45% were aged 45-54; 17% were aged 55 or over.
- (Among NHS staff) 28% were office based/administrative/managerial staff; 71% were clinical/patient-facing staff.

3.3 Costs

Pilot resources indicate that the projected costs for the pilot were £14,470. This comprised £10,200 for trainers (including preparation time), £3,000 for supervision costs, £720 for resources (including mats, bricks, blankets and pillows), £500 for printing (delegate packs and CDs), and £500 for venue costs.

Although anecdotally most participants attended in their own time, the number who attended during working hours is not known. However, the sessions with physiotherapy staff were offered in working hours. Staff being released from work to attend the course would have incurred a further cost to NHSGGC.

The initial budget for resources assumed the purchase of yoga mats, yoga bricks, blankets and pillows. However, this was subsequently revised and participants were asked to bring their own fleece blanket and pillow. Review of documentation suggests that this revision was not due to budget limitations, but rather constraints relating to health and safety/infection control. Early delivery revealed that yoga blocks were more successful for the mindfulness sessions than the bricks which had been purchased.

Records show that the cost of the pilot was higher than originally projected, with a final cost of £15,851.

3.4 Glasgow City Council Sessions

In addition to the taster sessions and courses delivered to NHSGGC staff, one other MBSR course (January – February 2016) and one accompanying taster session (in September 2015) were delivered for Glasgow City Council staff using a different pack and trainer, but using the same evaluation tools. The organisers of this course were part of the working group and it was agreed to incorporate the results where possible into the pilot study as the courses were similar in content and approach. The findings presented in the next chapter include the Glasgow City Council participants together with the NHSGGC participants.

3.5 Follow-Up Drop In Pratice Groups

Following the delivery of the eight week courses, monthly 'drop in' practice sessions were offered at Gartnavel and these continue. Delivery is shared by a number of mindfulness teachers on a rota basis. This is offered in the teachers' own time, and there is no payment for this.

4 Outcomes and Impacts

4.1 Introduction

This chapter presents the results of the analysis which compared the pre-course responses to the post-course responses for the following measures:

- Personal Resilience
- Burnout
- Mindfulness
- Stress

Information on how each of these measures were scored can be found in the evaluation form in Appendix A.

This chapter also presents the findings from the collation and analysis of further evaluation data submitted via bespoke forms for two courses, and from written feedback submitted by participants.

4.2 Personal Resilience

The Personal Resilience Assessment Tool was used to measure eight dimensions of resilience (see Appendix A – page A4).

The findings show a significant improvement on every one of the eight dimensions of resilience. A total score - Resilience Quotient (RQ) was calculated for each participant before and after the training. RQ scores can range from 32 to 160, with scores of 116 or over indicating that someone is resilient/very resilient. Overall, the mean RQ was 107 before the training, but this rose to 122 after the training.

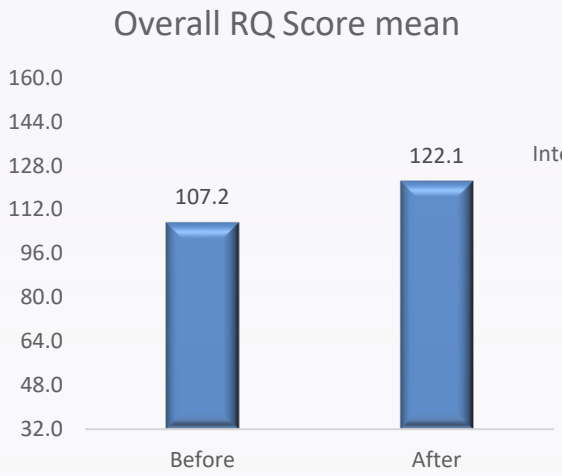
Before the training, fewer than one in three (31%) participants had a RQ which indicated that they were resilient or very resilient. However, this rose to just under two in three (65%) after training.

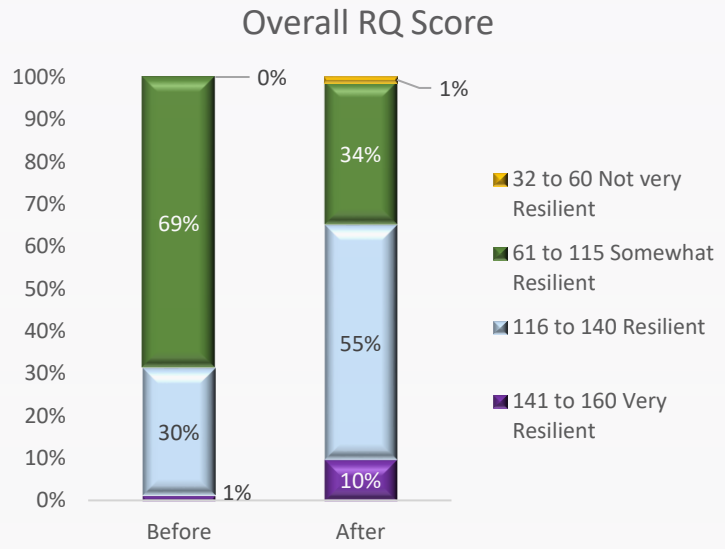
Of the 83 participants for whom pre- and post-training RQ scores were obtained, 68 (82%) showed some increase in RQ, and 52 (63%) showed an increase of at least 10.

Measures of Resilience

(Personal Resilience Assessment Tool)

Mean Resilience score rose from 107 to 122 Significant rise for all 8 sub-scales





Increase in % who were 'resilient' or 'very resilient': from 31% to 65%

82% of participants had an Overall RQ score which improved; 63% had a score which improved by 10 or more

4.3 Maslach Burnout Inventory

The Maslach Burnout Inventory (see Appendix A, Page A11) measured three components:

- Burnout
- Depersonalisation
- Personal Achievement

Burnout

The Burnout scale gave each participant a score between 0 and 42. Scores can be categorised as:

- 17 or less: Low-level burnout
- 18-29: Moderate burnout
- 30 or more: High-level burnout.

Of the 87 participants for whom complete pre- and post-training data for the Burnout component were available, 59 (68%) showed a reduction in their burnout score after training, four (5%) showed no change, and 24 (28%) showed an increase in burnout. Overall, the mean burnout score reduced from 14.6 before training to 11.2 after training. The proportion of participants who had moderate or high levels of burnout reduced from 31% to 15%.

Depersonalisation

The Depersonalisation scale also gave participants a score between 0 and 42. Scores for depersonalisation were categorised as:

- 5 or less: Low-level burnout
- 6-11: Moderate burnout
- 12 or more: High-level burnout

Just over half (54%, 49 participants) of the 91 participants who completed all relevant questions showed a reduction in their depersonalisation score after training, while 13 (14%) showed no change and 29 (32%) showed an increase in depersonalisation. Overall, the mean depersonalisation score reduced from 8.4 to 7.0. The proportion of participants who had depersonalisation scores which indicated moderate or high levels of burnout reduced from 65% to 47%.

Personal Achievement

The Personal Achievement scale gave participants a score between 0 and 48, with high scores indicative of low burnout. Scores are categorised as:

- 33 or less: High level burnout
- 34-39: Moderate burnout
- 40 or more: Low-level burnout

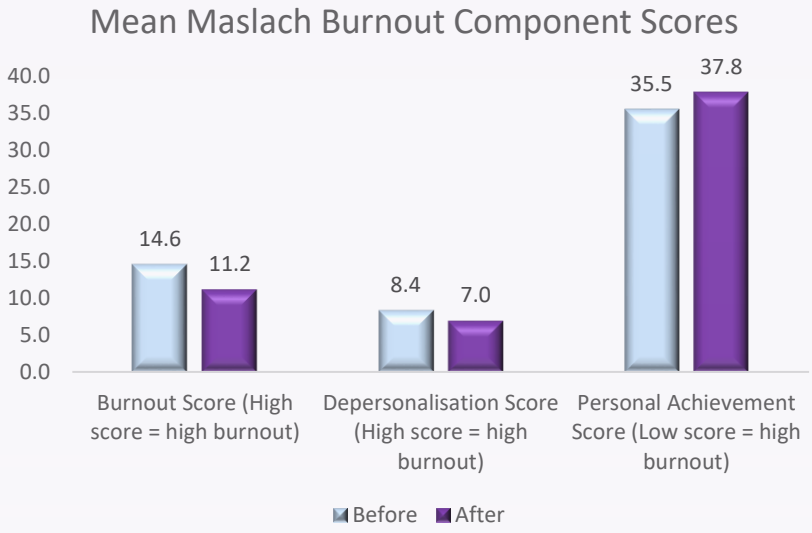
Of the 88 participants who completed all questions on personal achievement, 53 (60%) showed an increase (i.e. improvement) in their personal achievement score, 10 (11%) showed no change, and 25 (28%) showed a reduction in their personal achievement score. Overall, the mean personal achievement score increased from 35.5 before training to 37.8

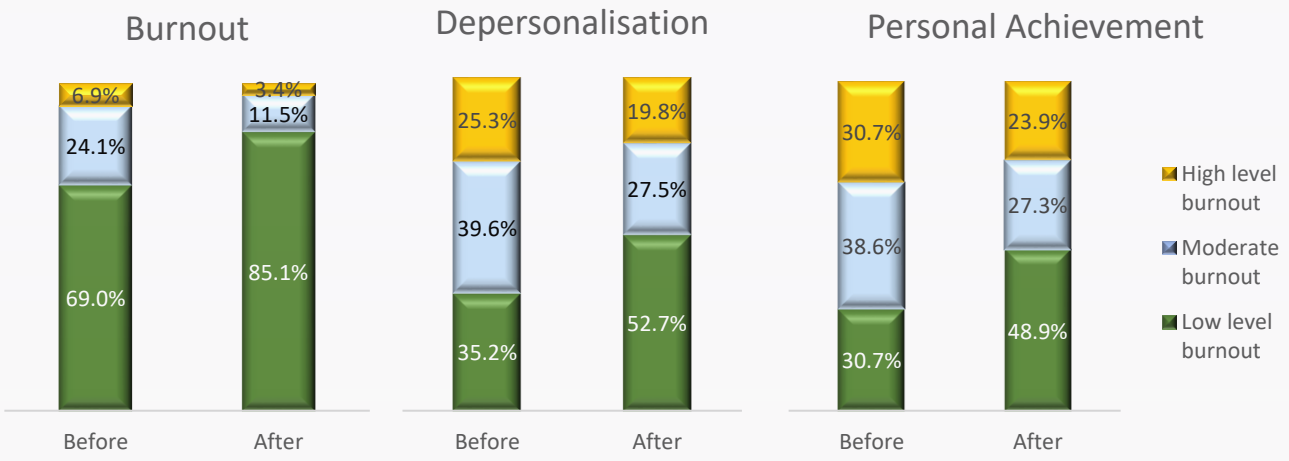
after training. The proportion who had scores indicative of moderate or high levels of burnout decreased from 69% to 51%.

Measures of Burnout

(Maslach Burnout Inventory)

Mean scores showed improvements in Burnout, Depersonalisation and Personal Achievement





Decrease in the % showing high level burnout on all 3 measures

68% had improvements in burnout scores
60% had improvements in personal achievement scores

4.4 Five Facets of Mindfulness

The Five Facets of Mindfulness questionnaire derived scores for participants before and after training for the following five facets:

- Observing
- Describing
- Acting with Awareness
- Nonjudging of Inner Experience
- Nonreactivity to Inner Experience

Two versions of the Five Facets questionnaire were used – a shorter version for the physiotherapy and Glasgow City Council staff, and a longer version for staff at other sessions. Only the questions common to both versions have been used to calculate scores. The questions for the shorter version can be seen on Page A1 in the Appendix (the longer version is also shown on Page A15).

Mean scores for three of these facets showed an improvement after training:

- Mean **observing** scores (on a scale of 4 to 20) rose from 13.4 to 16.0;
- Mean **describing** scores (on a scale of 5 to 25) rose from 15.2 to 16.2;
- Mean **nonreactivity to inner experience** scores (on a scale of 5 to 25) rose from 13.4 to 16.9.

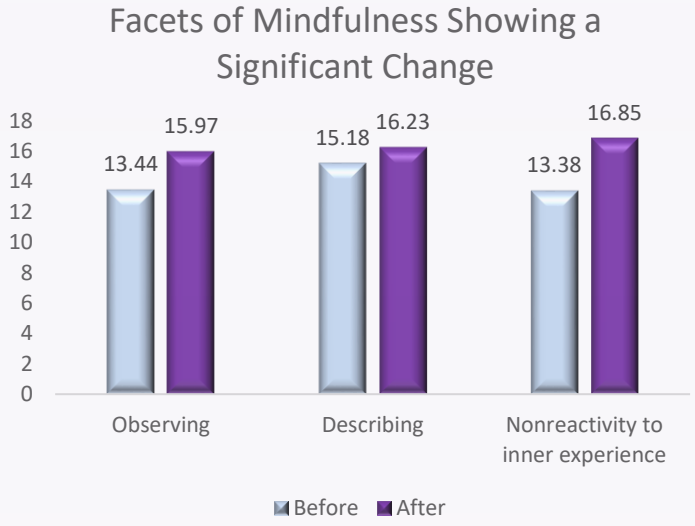
The mean scores for acting with awareness and nonjudging of inner experience did not vary significantly. In fact, on these scales participants were more likely to have a reduction in their scores than an increase. By contrast, 83% of participants had in increase in their scores for nonreactivity to inner experience and 77% had an increase in their observing scores. This is shown in Table 4.1.

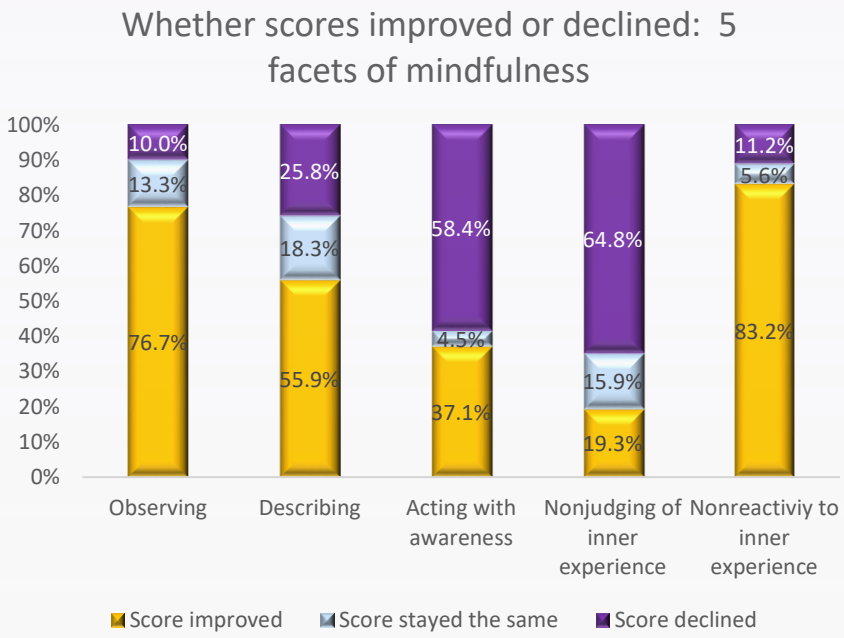
Table 4.1: Proportion of Participants Whose Scores Improved, Stayed the Same or Declined for Each Facet of Mindfulness

	% of Participants		
	Scores Improved	**Scores stayed the same**	**Scores Declined**
Observing	76.7%	13.3%	10.0%
Describing	55.9%	18.3%	25.8%
Acting with Awareness	37.1%	4.5%	58.4%
Nonjudging of Inner Experience	19.3%	15.9%	64.8%
Nonreactivity to Inner Experience	83.2%	5.6%	11.2%

Five Facets of Mindfulness

Mean scores showed improvements for 3 facets: Observing, Describing and Nonreactivity to inner experience





83% had an increase in score for Nonreactivity to Inner Experience

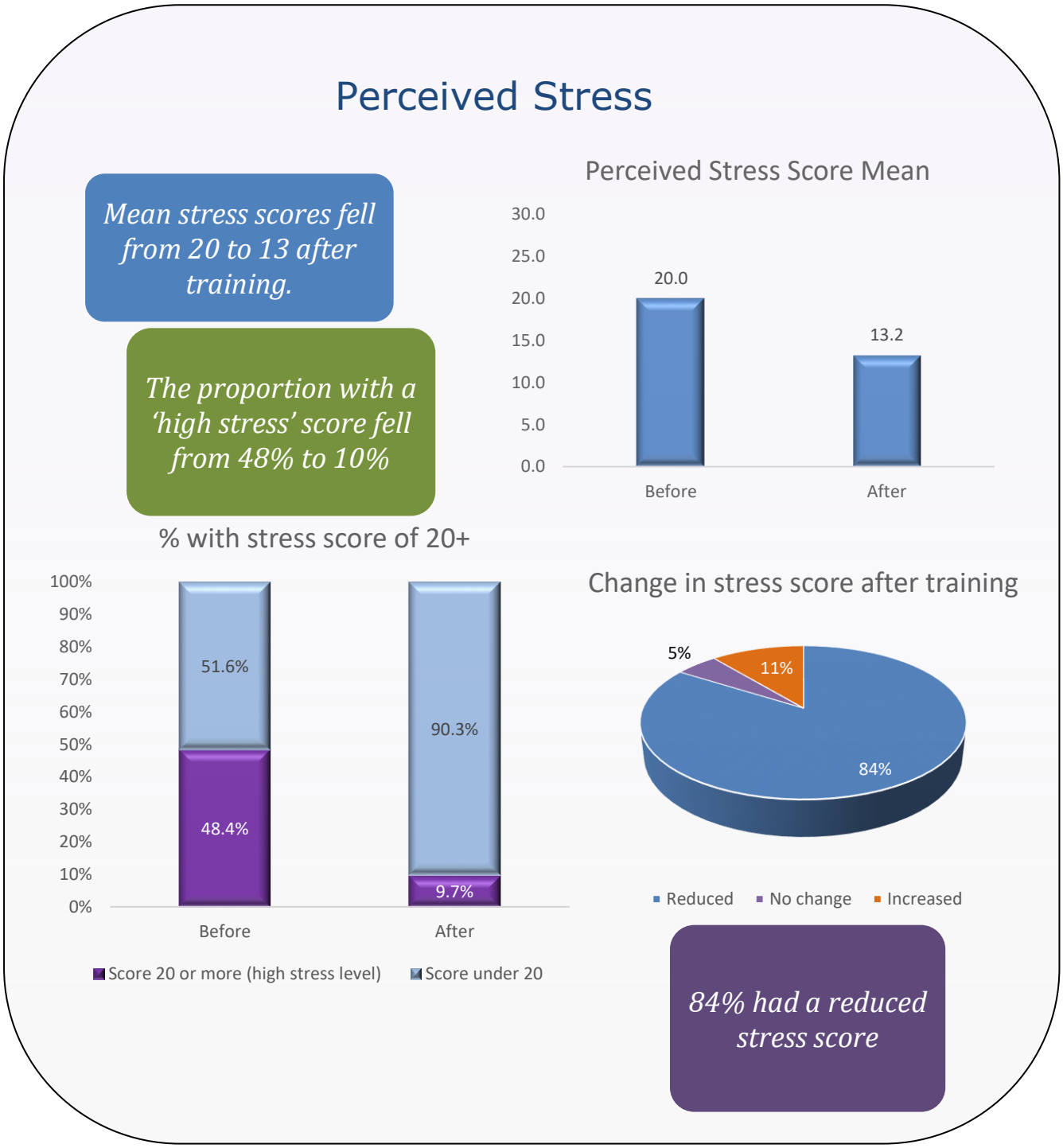
77% had an increase in score for Observing

Participants were more likely to have a <u>decline</u> than improvement for Acting with Awareness or Nonjudging of Inner Experience

4.5 Perceived Stress Scale

The Cohen Perceived Stress Scale was used to measure stress (See Appendix A, Page A19). On this scale, scores of around 13 are considered average and scores of around 20 points or more are considered indicative of high levels of stress.

Perceived stress scores were obtained both before and after training for 93 participants. Prior to training, the mean perceived stress level was 20.0. After training, the mean had reduced significantly to 13.2. Overall, 84% of participants saw a reduction in their perceived stress level after training.



4.6 Differences for Number of Sessions Attended

Of the 96 participants for whom pre- and post- training data were available, 79 (82%) had attended seven or eight sessions, while 17 (18%) had attended fewer than seven sessions. Analysis was conducted to explore whether there were any significant differences for changes to any of the measures for those who had completed seven or eight sessions compared to those who had attended fewer sessions. Due to the small number of participants who had attended fewer than seven sessions, there were few significant findings. However, there were significant differences in the level of change for the measure of resilience as measured by the RQ score, and also five of the sub-scale measures of resilience. The mean change in each of these scores are shown below. Those who attended seven or eight sessions saw a much larger increase in resilience than those who attended fewer sessions. Overall, those who attended seven or eight sessions had an average rise in their RQ score of 17.1, while those who attended fewer sessions had an average rise in RQ of 5.4.

Table 4.2: Mean Changes to Measures of Resilience for Those who Attended Seven or Eight Sessions and Those who Attended Fewer Sessions

	Mean Change Between Pre-and Post Training for Those who Attended 7 or 8 Sessions	Mean Change Between Pre- and Post Training for Those who Attended Fewer than 7 Sessions
Personal Vision	+2.00	+0.25
Flexible and Adaptive	+2.61	+0.19
Problem Solver	+2.21	+0.53
Interpersonal Competence	+1.73	-0.19
Active	+2.18	+0.59
Total RQ Score	+17.10	+5.40

4.7 Follow-Up Feedback

This section presents the key findings from analysis of further feedback provided by MBSR course participants via:

- Additional evaluation forms sent to participants of the physiotherapy MBSR course and one of the QEUH courses
- Unsolicited informal emails submitted by participants after the training
- Responses to an email inviting feedback 3-4 months after the training (specifically to inform this evaluation) from the participants of the last four courses delivered to NHSGGC staff

The findings are set out under the following headings:

- Acceptability of the course
- Continued practice of mindfulness techniques
- Impacts

Acceptability of the Course

Of the 13 participants who completed an evaluation form for one of the QEUH courses, **all** agreed or strongly agreed that:

- The venue was appropriate;
- The timing of the sessions was convenient;
- The information presented was understandable;
- The ideas discussed were relevant;
- They understood what was meant by mindfulness;
- They understood the purpose of the exercise sessions;
- The homework tasks were relevant;
- The materials provided were of a good quality;
- Homework tasks were beneficial;
- The composition of group members was appropriate;
- They benefited from hearing others talk about their experience;
- They felt comfortable with what was asked of them;
- The facilitators were approachable.

Further feedback in comments revealed that a key aspect of the sessions which participants found particularly helpful was listening to, and sharing experiences with other participants.

The only statement which any of the participants disagreed with was that 'the homework tasks were manageable'. Three of the 13 participants who responded disagreed with this statement. This was elaborated on by one participant in their comments:

"I found the volume of homework quite difficult and felt a bit stressed at not managing it some weeks but (the teachers) *were reassuring during classes that even a few minutes is enough".*

Comment on evaluation form, QEUH

All 13 QEUH participants, and 18 of the 19 physiotherapy participants said they would recommend the course to others. Some of those who provided feedback some months after completing the course indicated that they had already recommended mindfulness courses to others.

Some of those who provided follow-up feedback highlighted the difference that the teachers made. Most felt that the course was well-run and that the teachers had been helpful, interesting and engaging. However, one participant commented that they did not 'warm to' one teacher. Another participant commented that one teacher's 'dry and serious' approach was to the detriment of the course.

Continued Practice of Mindfulness Techniques

All 13 participants of the QEUH course who completed a course evaluation agreed that they felt motivated to continue practicing mindfulness, and all participants also agreed that they felt able to continue practicing mindfulness.

Among the 19 participants of the course for physiotherapy staff who completed the follow-up evaluation questionnaire, 16 said they were still doing any of the mindfulness techniques on a regular basis. The techniques still being used (in order of frequency) were:

- Three-step breathing space (10 participants);
- Body scan (6 participants);
- Sitting (6 participants);
- Movement (6 participants);
- Mountain (4 participants);
- Loving Kindness (2 participants);
- Walking (1 participant).

Fifteen of the 19 physiotherapy participants said they planned to continue to practice mindfulness on a regular basis.

Most of those who provided feedback some months after their training, indicated that they were still practicing the techniques they had learned, at least to some extent. Some had successfully managed to incorporate mindfulness techniques into their daily or weekly routines.

> *"I have continued with body scanning and the three minute time out. Possibly this is because I enjoyed these the most, and I also get the best from these experiences".*

Some indicated that they did not have time to practice as often as they would like or to practice as many of the techniques as they would like, but were continuing to some extent.

> *"Being completely honest, I have struggled to complete the body scans on a regular basis, but I can honestly say that for one minute every Monday to Friday I am completely mindful making my way to work".*

Some indicated that they were not routinely practicing the techniques, but would implement them when encountering stress or negative thoughts, etc.

> *"Although I don't practice daily, I do find that in particular situations the exercises return to me and I have found them useful".*

One participant indicated that they had continued to meet weekly with another participant from their group to continue practicing mindfulness relaxation together.

Impacts

All 13 participants of the QEUH course who were asked to complete a course evaluation agreed that they found the course helpful and that they had a better understanding of managing difficulty using mindfulness. Eighteen of the 19 physiotherapy participants said they got something of value from the course. Also, of the 19 physiotherapy participants, most said that specific measures were improved or much improved after training. These were:

- Self contentment/wellbeing (17 participants);
- Management of personal stress (16 participants);
- Taking care of self (14 participants);
- Skills for relating to others (14 participants);
- Management of work related stress (14 participants);
- Ability to say was is difficult (13 participants);
- Self confidence/self esteem (12 participants);
- Ability to stay focussed (12 participants);
- Energy levels and stamina (7 participants).

Many of those who provided feedback a few months after their training indicated that the course had helped them reduce stress.

> *"Before I started the mindfulness sessions, due to various family issues going on, I felt I was going to have to refer myself for counselling. However, whilst attending the mindfulness sessions, I felt much more relaxed and I was using the practice to*

let go of some of the issues constantly churning around in my mind and felt quite empowered and in control".

Some also felt they were generally more mindful, contemplative or content as a result of the course and their continued practice.

"I have to say that the gained perspective and awareness, short practices and mindful breathing often 'ground me' and help to bring me back from, or prevent, difficult emotions or situations. I find calm much easier. I gained the simple wisdom that I don't need to look for it, just allow it to be".

Two of those who provided feedback indicated that they felt the course had help to reduce or avoid stress-related work absence:

"I became ill in mid July. This was thought to be stress related. However, being off allowed me to return to the information and CDs. I feel that this was very instrumental in assisting me back to feeling better again".

"I have to say, I don't know how it worked but at the end of the course I was only on one tablet instead of eight for pain relief and I felt a lot better with the depression as well. In the past I may have considered taking sick leave, but to be honest after continuing the exercises after the course, I have not felt the need to be off sick".

Another commented on the perceived potential of the course to reduce stress-related absence:

"I have recommended the course to so many people and believe that if it was offered to all staff there would be a lot less stress in the workplace and thus decrease sickness absence".

Overall, several participants who provided feedback months after the training enthused about the scale of the impact the training had had on their lives:

"I am so grateful that I got the opportunity to participate in the course and know that I am happier and healthier as a direct result of the course".

"I have changed my life since the course. I cope better with stressful situations and issues that arise".

5 Discussion, Conclusion and Recommendations

5.1 Discussion

The main challenges in organising and delivering the MBSR courses have related to the somewhat overwhelming level of interest and demand among the NHSGGC workforce for both the taster sessions and the eight week course. A key learning point was that a longer period of preparation would have helped staff cope with the demands of sourcing suitable venues, procuring required resources, and dealing with applications to participate on the courses. Feedback from participants, however, showed a high level of satisfaction with the delivery of the courses and training appears to have been very successful.

For a statistical study, a dataset of 96 participants with before and after data is a small sample, and there was a risk that this would not be of a sufficient size to identify significant changes. However, the magnitude of change in most of the measures meant that even with this small number of observations, very significant findings were identified. Of course, participants are subject to many and varied influences over the course of eight weeks and not all observed changes in resilience, burnout, mindfulness and stress cannot be attributed to participation in the MBSR course or practice of mindfulness techniques. Changes in personal and work life/circumstances are also likely to affect scores on these scales as well as any other lifestyle changes or interventions. Nonetheless, the overall changes observed suggest that participation in the course is very strongly associated with reduced stress and increased resilience as well as reducing the likelihood of burnout and improving understanding of mindfulness.

The reduction in stress among participants was evidenced by the very significant change measured by the perceived stress scale. While nearly half (48%) had a score indicating high stress levels before training, only one in ten (10%) had a high stress score after. The reduction in stress is also further evidenced by many of the comments made by participants some months after training. These comments indicated that participants had experienced a very noticeable decrease in their stress levels which they attributed to the skills they acquired through the training, and many enthused about the difference, with some pointing to 'life changing' positive consequences.

Most participants attended all (or nearly all sessions). Because we have few observations for those who did not attend all sessions and no observations for those who dropped out, it is not possible to fully determine the differences between attending all sessions and attending only some. However, even with the limited number of observations, there was a clear statistical difference in the change in resilience for those who attended all (or all but one) sessions compared to those who attended six or fewer, with those attending all sessions being much more likely to see a sizeable change in resilience. Also, although the small numbers prevent observed changes being significant, the mean magnitude of change was smaller for all other measures for those who attended fewer sessions. Of course, it may have been stressful circumstances which prevented some participants from attending all sessions so this may have affected outcomes for these people, but overall indications are that outcomes are better for those who attend all sessions than those who do not.

Feedback from participants suggest that most were still practicing mindfulness techniques three months after their training, although it was common for participants to say they did not have time to do all techniques or practice as often as they would like.

Although there are no available data to compare levels of stress related work absences before and after training (and the scale of the pilot would be unlikely to have made measurable differences), there were anecdotal examples of participants who felt that the training had either prevented or curtailed absences, and others asserted that they felt confident that the training would make an impact on absences through stress.

5.2 Conclusion

The evaluation has clearly shown the effectiveness of the delivery of MBSR training to staff. The course has been largely beneficial in equipping participants to effectively employ mindfulness techniques and effective in reducing stress and burnout and improving resilience. It could be expected that wider scale participation in MBSR among NHSGGC staff could lead to a reduction in stress related absence.

5.3 Recommendations

The evidence leads to the recommendation of future roll out of MBSR training courses to staff. Some specific recommendations are:

- Work should continue to identify the most suitable venues across the NHSGGC estate in which MBSR sessions can be delivered – there are many constraints including availability, size, layout and heating. Where venues are identified they should be booked as far in advance as possible to ensure availability.

- Deliver future taster sessions to allow staff to make informed decisions about whether MBSR would be helpful/suitable.

- The extent of demand for future training course places should not be underestimated. Taster sessions should include options for participants to express interest in the course and provision of numbers of courses/places on courses should be tailored to accommodate the extent of expressed interest where possible.

- An extended lead time before courses would allow for more effective preparation including the identification/booking of venues, procurement of resources and administration of applications.

- Increased availability of further opportunities for continued practice of mindfulness techniques (e.g. lunch time or after work drop in sessions) would help participants continue to practice their skills, and also continue to meet with others (as sharing with others was a commonly cited beneficial aspect of the course).

- As the courses were very predominantly attended by women, a specific group provided for men only may help to encourage more attendance from men.

- The findings from this evaluation should be shared with staff to highlight the potential benefits of participation in an MBSR course.

Appendix A: Evaluation Tools

This appendix shows the questionnaire given to participants at the start and the end of their MBSR course.

Note that participants at the Glasgow City Council and physiotherapy groups were given a different (shorter) version of the Five Facets of Mindfulness Questionnaire than the one in this appendix. Only the questions common to both the shorter and longer versions were used to calculate the scores for all participants. These were:

	Question	Corresponding Question in Longer Version
1	I'm good at finding the words to describe my feelings	FFQM2
2	I can easily put my beliefs, opinions, and expectations into words	FFQM7
3	I watch my feelings without getting carried away with them	FFQM9
4	I tell myself that I shouldn't be feeling the way I'm feeling	FFQM10
5	It's hard for me to find the words to describe what I'm thinking	FFQM12
6	I pay attention to physical experiences, such as the wind in my hair or sun on my face	FFQM15
7	I make judgements about whether my thoughts are good or bad	FFQM17
8	I find it difficult to stay focussed on what's happening in the present moment	FFQM18
9	When I have distressing thoughts or images, I don't let myself be carried away by them	FFQM19
10	Generally, I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing	FFQM20
11	When I feel something in my body, it's hard for me to find the right words to describe it	FFQM22
12	It seems I am "running on automatic" without much awareness of what I'm doing	FFQM23
13	When I have distressing thoughts or images, I feel calm soon after	FFQM24
14	I tell myself I shouldn't be thinking the way I'm thinking	FFQM25
15	I notice the smells and aromas of things	FFQM26
16	Even when I'm feeling terribly upset, I can find a way to put it into words	FFQM27
17	I rush through activities without being really attentive to them	FFQM28
18	Usually when I have distressing thoughts or images I can just notice them without reacting	FFQM29
19	I think some of my emotions are bad or inappropriate and I shouldn't feel them	FFQM30
20	I notice visual elements in art or nature, such as colour, shapes, textures, or patterns of light and shadow	FFQM31
21	When I have distressing thoughts or images, I just notice them and let them go	FFQM33
22	I do jobs or tasks automatically without being aware of what I'm doing	FFQM34
23	I find myself doing things without paying attention	FFQM38
24	I disapprove of myself when I have illogical ideas	FFQM39

Mindfulness Training Course Pilot 2016

Evaluation Pack

About the evaluation

As part of a pilot study, we ask participants to complete the same four evaluation forms before and after attending the 8 week training programme.. We also request that each participant submit some demographic information to enable us to analyse the results. Participants also have the right not to take part in the evaluation process if they do not wish to

The results will form the basis of a report that will be taken to senior management which will recommend how Mindfulness might be implemented in the organisation for staff health and wellbeing.

This information will be treated with confidentiality, and no individual will be able to be identified in the report. Submission of completed forms implies consent for them to be used in this way.

Thank you for your assistance.

Evaluation tools

Below is a list of evaluation questionnaires that we would like you to complete 'pre' and 'post' course:

1. Demographic Information
2. Personal Resilience Assessment Tool
3. Maslach Burnout Inventory
4. Five Facets of Mindfulness
5. Cohen Perceived Stress Scale

Please note – the scoring systems for the questionnaires are provided for your information, although completing the scoring system is not required for our evaluation purposes.

1. Demographic information about you

Training Course venue .....

Training Course dates from ..... to.....

Participant code number (**to be provided by course tutor)** .....

Evaluation stage: ☐ **Pre** course evaluation (before the course)

☐ **Post** course evaluation (after the course)

Age: .....

Gender: .....

Job title: .....

Wage Band / Grade: .....

Employed by: NHS GGC ☐ or Council ☐

2. Personal Resilience Assessment Tool

Definition of Resilience

Resilience is:

The personal capability to cope with adverse events, and

The determination and drive to see something through to its conclusion

Eight dimensions of Resilience:

Self assurance. This involves a high level of self confidence and a self belief that one can meet any challenge. Self Efficacy includes the understanding that, while the world is challenging, one has the ability to succeed despite these challenges.

Personal vision. Resilient people know what they believe in and have a clear idea of what they want to accomplish or create in their life. With a personal vision, however blurred this may be, people use this as a guide through life challenges, and provides them with hope for the future.

Flexible and adaptable. Being adaptable and flexible enables people to respond flexibly to

unknown challenges by seeking out ways of overcoming events, and being able to adapt to the new reality. This reduces the impact of rigidity in the face of a constantly changing environment.

Organised. Creating a structured approach to tasks that need completing adds to an individual's ability to maintain personal control in the face of a seemingly chaotic existence, or uncontrollable external events.

Problem solver. The ability to resolve problems enables people to find causes and solutions to adverse events that impinge on daily life. Those who train themselves to enjoy problem solving will enjoy the challenge that adverse events present.

Interpersonal competence. A key dimension is an individual's ability to understand and empathise with others. Resilient people demonstrate the competencies of emotional intelligence: a high level of self and social awareness and the ability to use this awareness to effectively manage themselves and their relationships with others.

Socially connected. This dimension involves the quality of personal and professional relationships. Resilient people have a strong relationship with selected friends with whom they share ideas, problems, solutions, frustrations and hope.

Active in change. Resilient people actively engage in change. Faced with adverse events, resilient people will be assertive in stating their contribution to the changing situation and will maintain personal control through their assertiveness and maintenance of their self efficacy.

Personal Resilience Assessment Tool

Please read the statements below, and using the scale strongly disagree to strongly agree (1 – 5) indicate how the statement applies to your perception of yourself.

		Strongly disagree (1) - Strongly agree (5)				
1	I have the knowledge and skills and experience to deal with almost anything that happens to me	1	2	3	4	5
2	I know what's important to me	1	2	3	4	5
3	I approach new situations with an open mind	1	2	3	4	5
4	When faced with new challenges, I am able to take control of the situation	1	2	3	4	5
5	When I have a problem, I take time to define the problem before deciding what to do	1	2	3	4	5
6	I have the capacity to laugh at myself	1	2	3	4	5
7	I have a diverse network of good friends	1	2	3	4	5
8	I view change as an opportunity	1	2	3	4	5
9	I am able to think positively about myself when faced with challenges	1	2	3	4	5
10	When I look back I can see some clear patterns in my life about the types of choices I have made	1	2	3	4	5
11	I am able to adjust to changes	1	2	3	4	5
12	I start each day by working out what needs to be achieved during the day, and I end the day by	1	2	3	4	5

	reviewing what has been achieved, and what needs to be achieved on the next day					
13	I perceive the problems and challenges of everyday life as challenges I can solve	1	2	3	4	5
14	I can empathise easily with others' frustrations, joys, misfortunes and successes	1	2	3	4	5
15	I find it easy to form lasting relationships and friendships	1	2	3	4	5
16	When an unwelcome change involves me I can usually find a way to make the change benefit myself	1	2	3	4	5
17	When I face difficult challenges I can maintain confidence in my own ability to overcome the challenges	1	2	3	4	5
18	I know what I want to achieve at work and in life	1	2	3	4	5
19	I can easily find ways of satisfying my own and other peoples' needs during times of change and conflict	1	2	3	4	5
20	I keep a 'to do' list, and use it every day	1	2	3	4	5
21	I try to find the cause of a problem before trying to solve it	1	2	3	4	5
22	During stressful and challenging times I can maintain effective relationships with those involved	1	2	3	4	5
23	I share the frustrations in life, as well as the successes, with my friends	1	2	3	4	5
24	I am able to focus my energy on how to make the	1	2	3	4	5

	best of any situation					
25	When I face challenges I look to myself to find ways of rising to the challenge	1	2	3	4	5
26	I know what I need to do to achieve my ideas for personal and professional achievements	1	2	3	4	5
27	I am able to accommodate other people's needs whilst focusing on achieving my own ambitions	1	2	3	4	5
28	When I am uncertain about what to do I write down the choices and my thought about them	1	2	3	4	5
29	When I solve problems I identify the links between the problems and other issues that may be around	1	2	3	4	5
30	I value the diverse experiences, skills and knowledge that others have in their interactions with me	1	2	3	4	5
31	I regularly participate with friends in social activities where I can relax	1	2	3	4	5
32	I believe my own decisions and actions during periods of change will determine how I am affected by the change	1	2	3	4	5

Personal resilience: Your scores

					Score
Self assurance	1	9	17	25	
Personal vision	2	10	18	26	
Flexible and adaptable	3	11	19	27	
Organised	4	12	20	28	
Problem solver	5	13	21	29	
Interpersonal competence	6	14	22	30	
Socially connected	7	15	23	31	
Active	8	16	24	32	
				Overall score	

The maximum overall RQ Score is 160. The lowest possible overall RQ score is 32. For individual RQ dimensions, the maximum possible score is 20; the lowest possible score is 4.

Locate your overall RQ score in the range of RQ values below.

141 to 160 Very Resilient: You are consistently able to deal effectively with and even thrive on change. You have effective mechanisms in place that give you direction, structure, support and self-confidence.

116 to 140 Resilient: Most of the time you are able to deal with change in a positive manner. You have a number of mechanisms in place that help you deal with the uncertainty of change. You could strengthen your RQ by further developing your skills in your lower scoring RQ dimensions.

61 to 115 Somewhat Resilient: Change has a tendency to knock you off your best performance. You have some difficulty regaining your footing. While you have some

stabilizing mechanisms in place, you could work at developing and exercising more of them. Look to your lowest scoring dimensions as a place to start.

32 to 60 Not Very Resilient: Change creates major challenges for you. You are frequently unprepared for the uncertainty and lack of stability that change creates. While there are times when you are able to find stability and focus, you need to develop and enrich a broad range of resilience capacities.

Adapted from Derek Mowbray, 2010. Eight Steps to resilience.

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3. Maslach Burnout Inventory

The Maslach Burnout Inventory (MBI) is the most commonly used tool to self-assess whether you might be at risk of burnout. To determine the risk of burnout, the MBI explores three components: exhaustion, depersonalization and personal achievement. While this tool may be useful, it must not be used as a scientific diagnostic technique, regardless of the results. The objective is simply to make you aware that anyone may be at risk of burnout. (Thank you to the Association des médecins vétérinaires (AMVQ) en pratique des petits animaux for providing us with a copy of this tool).

For each question, indicate the score that corresponds to your response. Add up your score for each section and compare your results with the scoring results interpretation at the bottom of this document.

Questions	**Never**	**A few times per year**	**Once a month**	**A few times per**	**Once a week**	**A few times per**	**Every day**
SECTION A	**0**	**1**	**2**	**3**	**4**	**5**	**6**
I feel emotionally drained by my work.							
Working with people all day long requires a great deal of effort.							
I feel like my work is breaking me down.							
I feel frustrated by my work.							
I feel I work too hard at my job.							
It stresses me too much to work in direct contact with people.							
I feel like I'm at the end of my rope.							
Total score – SECTION A							

Questions	Never	A few times per	Once a month	A few times per	Once a week	A few times per	Every day
SECTION B	**0**	**1**	**2**	**3**	**4**	**5**	**6**
I feel I look after certain patients/clients impersonally, as if they are objects.							
I feel tired when I get up in the morning and have to face another day at work.							
I have the impression that my patients/clients make me responsible for some of their problems.							
I am at the end of my patience at the end of my work day.							
I really don't care about what happens to some of my patients/clients.							
I have become more insensitive to people since I've been working.							
I'm afraid that this job is making me uncaring.							
Total score – SECTION B							

Questions	Never	A few times	Once a month	A few times per	Once a week	A few times	Every day
SECTION C	**0**	**1**	**2**	**3**	**4**	**5**	**6**
I accomplish many worthwhile things in this job.							
I feel full of energy.							
I am easily able to understand what my patients/clients feel.							
I look after my patients'/clients' problems very effectively.							
In my work, I handle emotional problems very calmly.							

Through my work, I feel that I have a positive influence on people.							
I am easily able to create a relaxed atmosphere with my patients/clients.							
I feel refreshed when I have been close to my patients/clients at work.							
Total score – SECTION C							

SCORING RESULTS - INTERPRETATION

Section A: Burnout

Burnout (or depressive anxiety syndrome): Testifies to fatigue at the very idea of work, chronic fatigue, trouble sleeping, physical problems. For the MBI, as well as for most authors, "exhaustion would be the key component of the syndrome." Unlike depression, the problems disappear outside work.

- Total 17 or less: Low-level burnout
- Total between 18 and 29 inclusive: Moderate burnout
- Total over 30: High-level burnout

Section B: Depersonalization

"Depersonalization" (or loss of empathy): Rather a "dehumanization" in interpersonal relations. The notion of detachment is excessive, leading to cynicism with negative attitudes with regard to patients or colleagues, feeling of guilt, avoidance of social contacts and withdrawing into oneself. The professional blocks the empathy he can show to his patients and/or colleagues.

- Total 5 or less: Low-level burnout
- Total between 6 and 11 inclusive: Moderate burnout
- Total of 12 and greater: High-level burnout

Section C: Personal Achievement

The reduction of personal achievement: The individual assesses himself negatively, feels he is unable to move the situation forward. This component represents the demotivating effects of a difficult, repetitive situation leading to failure despite efforts. The person begins to doubt his genuine abilities to accomplish things. This aspect is a consequence of the first two.

- Total 33 or less: High-level burnout
- Total between 34 and 39 inclusive: Moderate burnout
- Total greater than 40: Low-level burnout

A high score in the first two sections and a low score in the last section may indicate burnout.

Note: Different people react to stress and burnout differently. This test is not intended to be a scientific analysis or assessment. The information is not designed to diagnose or treat your stress or symptoms of burnout. Consult your medical doctor, counsellor or mental health professional if you feel that you need help regarding stress management or dealing with burnout.

4. Five Facets of Mindfulness

Please rate each of the following statements using the scale provided. Write the number that best describes your own opinion of what is generally true for you.

Please rate each of the following statements with the number that best describes *your own opinion* of what is *generally true for you*.		Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
FFQM 1	When I'm walking, I deliberately notice the sensations of my body moving. (OBS)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 2	I'm good at finding words to describe my feelings. (D)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 3	I criticize myself for having irrational or inappropriate emotions. (NJ-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 4	I perceive my feelings and emotions without having to react to them. (NR)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 5	When I do things, my mind wanders off and I'm easily distracted. (AA-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 6	When I take a shower or bath, I stay alert to the sensations of water on my body. (OBS)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 7	I can easily put my beliefs, opinions, and expectations into words. (D)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 8	I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted. (AA-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 9	I watch my feelings without getting lost in them. (NR)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 10	I tell myself I shouldn't be feeling the way I'm feeling. (NJ-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 11	I notice how foods and drinks affect my thoughts, bodily sensations, and emotions. (OBS)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 12	It's hard for me to find the words to describe what I'm thinking. (D-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 13	I am easily distracted. (AA-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 14	I believe some of my thoughts are abnormal or bad and I shouldn't think that way. (NJ-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 15	I pay attention to sensations, such as the wind in my hair or sun on my face. (OBS)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 16	I have trouble thinking of the right words to express how I feel about things. (D-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 17	I make judgments about whether my thoughts are good or bad. (NJ-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 18	I find it difficult to stay focused on what's happening in the present. (AA-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1

		Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
FFQM 19	When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it. (NR)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 20	I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing. (OBS)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 21	In difficult situations, I can pause without immediately reacting. (NR)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 22	When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words. (D-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 23	It seems I am "running on automatic" without much awareness of what I'm doing. (AA-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 24	When I have distressing thoughts or images, I feel calm soon after. (NR)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 25	I tell myself that I shouldn't be thinking the way I'm thinking. (NJ-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 26	I notice the smells and aromas of things. (OBS)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 27	Even when I'm feeling terribly upset, I can find a way to put it into words. (D)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 28	I rush through activities without being really attentive to them. (AA-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 29	When I have distressing thoughts or images, I am able just to notice them without reacting. (NR)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 30	I think some of my emotions are bad or inappropriate and I shouldn't feel them. (NJ-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 31	I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow. (OBS)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 32	My natural tendency is to put my experiences into words. (D)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 33	When I have distressing thoughts or images, I just notice them and let them go. (NR)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 34	I do jobs or tasks automatically without being aware of what I'm doing. (AA-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 35	When I have distressing thoughts or images, I judge myself as good or bad depending what the thought or image is about. (NJ-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 36	I pay attention to how my emotions affect my thoughts and behavior. OBS)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

		Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
FFQM 37	I can usually describe how I feel at the moment in considerable detail. (D)	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
FFQM 38	I find myself doing things without paying attention. (AA-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
FFQM 39	I disapprove of myself when I have irrational ideas. (NJ-R)	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1

Scoring:
(Note: R = reverse-scored item)

Subscale Directions	Your Score TOTAL	Your score item Avg.
Observing: Sum items 1 + 6 + 11 + 15 + 20 + 26 + 31 + 36		
Describing: Sum items 2 + 7 + 12R + 16R + 22R + 27 + 32 + 37.		
Acting with Awareness: Sum items 5R + 8R + 13R + 18R + 23R + 28R + 34R + 38R.		
Nonjudging of inner experience: Sum items 3R + 10R + 14R + 17R + 25R + 30R + 35R + 39R.		
Nonreactivity to inner experience: Sum items 4 + 9 + 19 + 21 + 24 + 29 + 33.		
TOTAL FFMQ (add subscale scores)		

NOTE: Some researchers divide the total in each category by the number of items in that category to get an average category score. The Total FFMQ can be divided by 39 to get an average item score.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, *13*(1), 27-45.

5. Cohen Perceived Stress Scale

The following questions ask about your feelings and thoughts during THE PAST MONTH. In each question, you will be asked HOW OFTEN you felt or thought a certain way. Although some of the questions are similar, there are small differences between them and you should treat each one as a separate question. The best approach is to answer fairly quickly. That is, don't try to count up the exact number of times you felt a particular way, but give the answer that in general seems the best.

	Never	Almost Never	Sometimes	Fairly Often	Very Often
B.1. In the past month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
B.2. In the past month, how often have you felt unable to control the important things in your life?	0	1	2	3	4
B.3. In the past month, how often have you felt nervous or stressed?	0	1	2	3	4
B.4. In the past month, how often have you felt confident about your ability to handle personal problems?	0	1	2	3	4
B.5. In the past month, how often have you felt that things were going your way?	0	1	2	3	4
B.6. In the past month, how often have you found that you could not cope with all the things you had to do?	0	1	2	3	4
B.7. In the past month, how often have you been able to control irritations in your life?	0	1	2	3	4

B.8. In the past month, how often have you felt that you were on top of things?	0	1	2	3	4
B.9. In the past month, how often have you been angry because of things that happened that were outside of your control?	0	1	2	3	4
B.10. In the past month, how often have you felt that difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

Perceived Stress Scale Scoring

Each item is rated on a 5-point scale ranging from never (0) to almost always (4). Positively worded items are reverse scored, and the ratings are summed, with higher scores indicating more perceived stress.

PSS-10 scores are obtained by reversing the scores on the four positive items: For example, 0=4, 1=3, 2=2, etc. and then summing across all 10 items.

Items 4, 5, 7, and 8 are the positively stated items.

Your Perceived Stress Level was _____

Scores around 13 are considered average. In our own research, we have found that high stress groups usually have a stress score of around 20 points. Scores of 20 or higher are considered high stress, and if you are in this range, you might consider learning new stress reduction techniques as well as increasing your exercise to at least three times a week. High psychological stress is associated with high blood pressure, higher BMI, larger waist to hip ratio, shorter telomere length, higher cortisol levels, suppressed immune function, decreased sleep, and increased alcohol consumption. These are all important risk factors for cardiovascular disease.

6 Appendix B: Evaluation Framework

NHSGGC Mindfulness Programme – Logic Model					
Jan to March 2016		March to June 2016 (Pilot)	2016 to 2017		
Inputs	**Actions**	**Short term Outcomes**	**Medium term outcomes**	**Long Term Outcomes**	**Longer Term Outcomes**
Venues Staff time Literature Review Mapping of NHSGGC Trained People Local Promoters	ID Stress Hotspots suitable to pilot programme. (eg QEUH, Beatson, Cowlairs) Negotiate with local managers to Agree support for programme including staff time for participation Agree quality standards Organise sessions/ courses	Quality Standards of training achieved Training Approach/Pack agreed Taster sessions for participants delivered Courses made available to staff (7X8week courses)	Deliver Mindfulness training more widely within the organisation	"Mindful Culture" A "Mindful Organisation" "Mindful Managers"	Reduction in Staff stress
	Negotiate time for trainers	Support and Time for trainers agreed	Network of Mindfulness trainers		
Research/Evaluation Research Questions	What processes enable the mindfulness training to develop..eg negotiation, key players involved, organisational support? What are the barriers and how can these be overcome?	What are the challenges/ successes of offering mindfulness training to participants? Which Mindfulness approach is practical/ effective in NHSGGC? What effect does a mindfulness approach have on participants?	How many trainers are there in the organisation? Is the network flourishing?	To what extent is the organisation a Mindful organisation? Does NHSGGC have a mindful culture?..Should this be developed further? Do managers support mindfulness training?	Has there been a reduction in stress? To what extent could this be attributable to Mindfulness?