Final report

February 2017

Innovating for Improvement

Optimising Strength and Resilience: Integrated physical and psychological health programme for patients, families and NHS staff

Royal Brompton and Harefield NHS Foundation Trust

The Health Foundation

About the project

Project title:

Optimising Strength and Resilience: Integrated physical and psychological health programme for patients, families and NHS staff

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Royal Brompton and Harefield NHS Foundation Trust

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King's College London

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Abstract

Optimising Strength & Resilience is an organisational intervention designed to promote an integrated approach to physical and psychological health through the application of biomedicine, cognitive science and behavioural theory in an acute NHS Trust. The intervention is aimed at staff, patients and families in recognition of the health benefits for all. Whilst medicine places an excellent, sustained and vital focus on the physical body, it is recognised that cognitive, emotional and behavioural factors play a significant mediating role in a range of health conditions.

The programme sought to address three key challenges: firstly, psychological distress and stress for patients and families diagnosed and living with long-term health conditions; secondly, physical and psychological health problems in NHS staff; thirdly, the challenge of strengthening a compassionate organisational healthcare culture. Employing a strengths-based, reflective practice framework, the programme was delivered through multi-media communication platforms and work streams including training workshops, committee work, lectures, change champions and the development of strategy linked to policy.

During the programme, 91 patients, 22 family members and 90 NHS staff attended strength and resilience workshops and completed pre- and post-intervention measures. Findings indicated that the programme was well-received by patients, family members and staff and resulted in significant improvements in wellbeing, knowledge of stress, confidence managing stress, feelings of resilience and self-compassion. Participants identified a range of physical and psychological health-related goals to help optimise health and wellbeing. Results also showed a significant reduction in psychological distress and mental health stigma. Future plans include further development of training materials and promotion of the programme across the local region in collaboration with local stakeholder organisations.

Progress and Outcomes

Introduction

The programme is an organisational intervention designed to promote health and well-being in patients, families, NHS staff and healthcare teams as part of a strategy to strengthen positive organisational culture within an acute NHS Trust. The demanding nature of healthcare has been highlighted (Boorman, 2009; Francis, 2013) and research has demonstrated a clear relationship between staff well-being and the quality of patient care, supported at policy level by the Five Year Forward View (NHS England, 2014) and the NHS England initiative to improve staff health and well-being (2015).

The concept of integrated health is defined as combined physical and psychological health and well-being. In medicine, there is often an excellent and sustained focus on the physical body, however, not infrequently, cognitive, emotional and behavioural determinants of health receive less attention, in spite of these factors playing a significant role as mediators of physiological functioning in a wide range of health conditions.

The intervention is aimed at patients, families and staff within the NHS Trust in recognition of the potential benefits for all. An aim of the inclusive approach is to address what is defined in social identity theory as a process of 'othering' (Tajel & Turner, 1979), whereby groups identify those thought to be different from themselves as 'other' creating a 'them' and 'us', with associated less favourable treatment of 'them' . The aim is to normalise physical and psychological health problems and reduce associated stigma and discrimination.

The intervention is based upon developments in third wave cognitive and behavioural theory and the application of these to an organisational context in the form of education and skill development to foster health and resilience. The empirically based intervention is based on cognitive strategies such as acceptance, mindfulness, cognitive diffusion and self-compassion, together with behavioural change strategies linked to values.

The programme offers a critical analysis of the concept of resilience and considers the rise of resilience within the current organisational, national and global healthcare context. Overall, the intervention aim is to promote a positive organisational culture designed to place a focus on staff health and well-being and strengthen staff commitment to NHS constitution values through actions consistent with the delivery of high quality, safe, compassionate healthcare for patients and families.

Programme Design and Analysis

The programme involved a range of activities with patients, family members and NHS staff including lectures, focus groups, interviews, committee work, web-based media, training workshops, change champions and development of strategy linked to policy. The work was based on education, awareness-raising and behavioural change activities set within a reflective practice framework. During the programme, seven patient and family workshops and five staff workshops were held between May and November 2017.

A mixed measures sequential exploratory design was used to allow a more in-depth and meaningful interpretation of the data, providing a dynamic and more efficacious representation of the intervention (Teddlie & Tashakkori, 2003).

Quantitative and qualitative data was collected through questionnaires completed before and after the workshop. The workshop evaluation involved collection of demographic data (age, gender and ethnicity) and level of impairment in functioning (Work and Social Adjustment Scale). Primary outcome measures included the General Health Questionnaire, the Warwick-Edinburgh Mental Wellbeing Scale and the Self-Compassion Scale (see further details below). Supporting outcomes included three self-report items rated on a likert scale designed to assess change in participants' knowledge of stress management, confidence managing stress and feelings of resilience. Selected items from the Time to Change national survey (Llic *et al.*, 2014) of attitudes towards people with mental health problems were used to evaluate mental health stigma. A paired sample t-test was used to compare the standardised measures mean values before the workshop (Time 1) and after the intervention (Time 2). Where the data was not normally distributed, a Wilcoxon signed rank test was used.

Standardised outcome measures

The short form of the General Health Questionnaire (Goldberg *et al.,* 1997). This measure is well validated and used as a screening device for identifying psychological distress in the general population and within community, primary care and general medical out-patient settings (Banks *et al.* 1980; Foureur & Yu, 2013).

The Warwick-Edinburgh Mental Wellbeing Scale (Tennant *et al.*, 2007) This is a 14-item scale to measure positive mental health. This measure has been shown as responsive to changes that occurs in a range of mental health interventions for a variety of population groups (Maheswaran *et al*, 2012)

The short form of the Self-Compassion Scale *(*Raes, Neff & Van Gucht, 2011). This is a 12-item scale to measure self-compassion.

Results

Demographic data

A total of 203 people attended the workshops (91 patients, 22 family members and 90 staff). The demographic information is shown in Table 1 below.

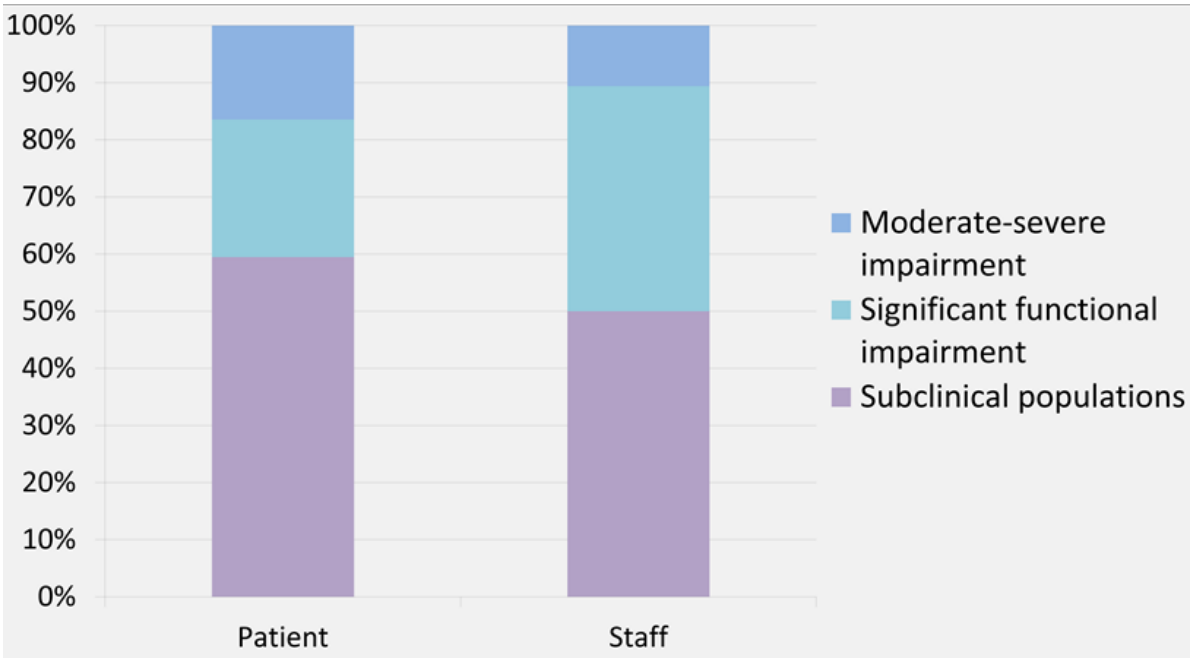
Table 1. Demographic data

	Patient/Family	NHS staff
Sample Size	113 attended (91 patients, 22 family) 82% completed measures	90 attended 70% completed measures
Gender	46% Female, 54% Male	84% Female, 16% Male
Ethnicity	White/White other 86% Asian 7% Black 2% Mixed/other 5%	White/White other 53% Asian 17% Black 5% Mixed/other 7%
Age Range	18-79	25-65

Health and functioning

Results from the Work and Social Adjustment Scale are shown in Figure 1 below. Results indicate that the NHS staff group showed higher levels of functional impairment than the patient and family group.

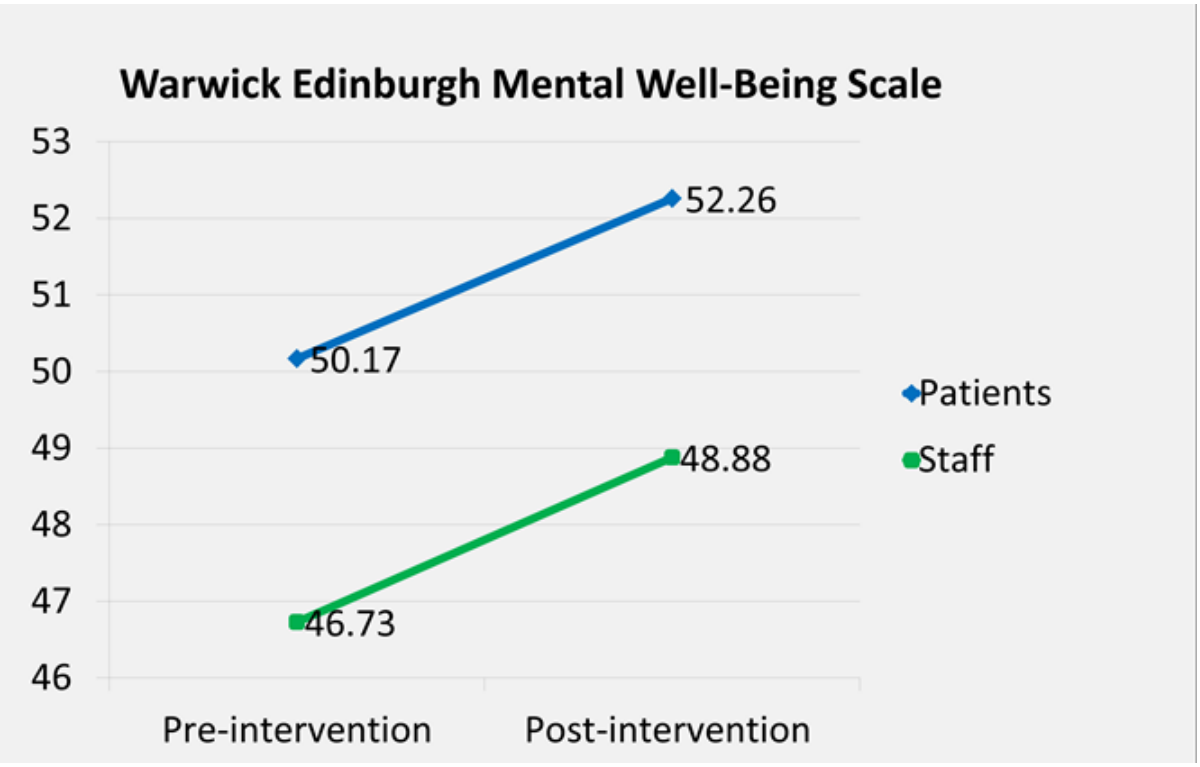
Figure 1. Work and Social Adjustment Scale results



Psychological well-being

Warwick Edinburgh Mental Well-being Scale (WEMWBS): A paired sample t-test was carried out on the WEMWBS, t (146) = -5.611, p < 0.001. Due to the means of the two time points and the direction of the t value, we can conclude that there was an improvement in mental well-being after the one day workshop intervention from 48.55 ± 8.88 to 50.84 ± 8.88 (p<.001); an improvement of 2.29 ± 4.94. This is significantly positively correlated (r=.845, p<.001), higher scores indicate better mental well-being.

Figure 2. Warwick Edinburgh Mental Well-being Scale results

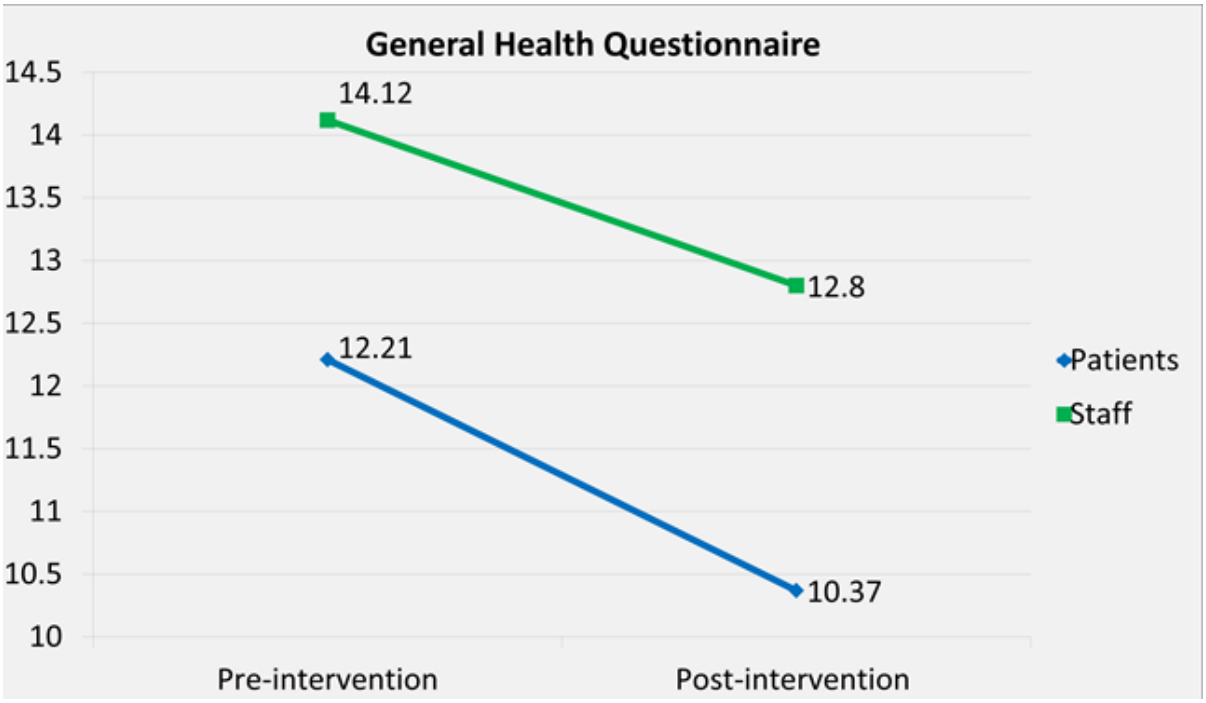


Psychological distress

General Health Questionnaire (GHQ-12): A paired sample t-test was carried out on the GHQ, t (148) = 5.524, p < 0.001. Due to the means of the two time points and the direction of the t value, we can conclude that there was a significant improvement in the GHQ-12 after the one day workshop intervention from 13.09 ± 6.19 to 11.50 ± 6.05 (p<.001); an improvement of 1.60 ± 3.53, as lower scores indicate better general health. This is significantly negatively correlated (r= .834, p<.001).

Using a GHQ-12 cut-off score of 3/4 indicates that 51% of staff members and 37.5% of patients and family members were over the threshold of distress before attending the workshop. It was noted that the levels of staff distress were higher than the levels of patient/family distress.

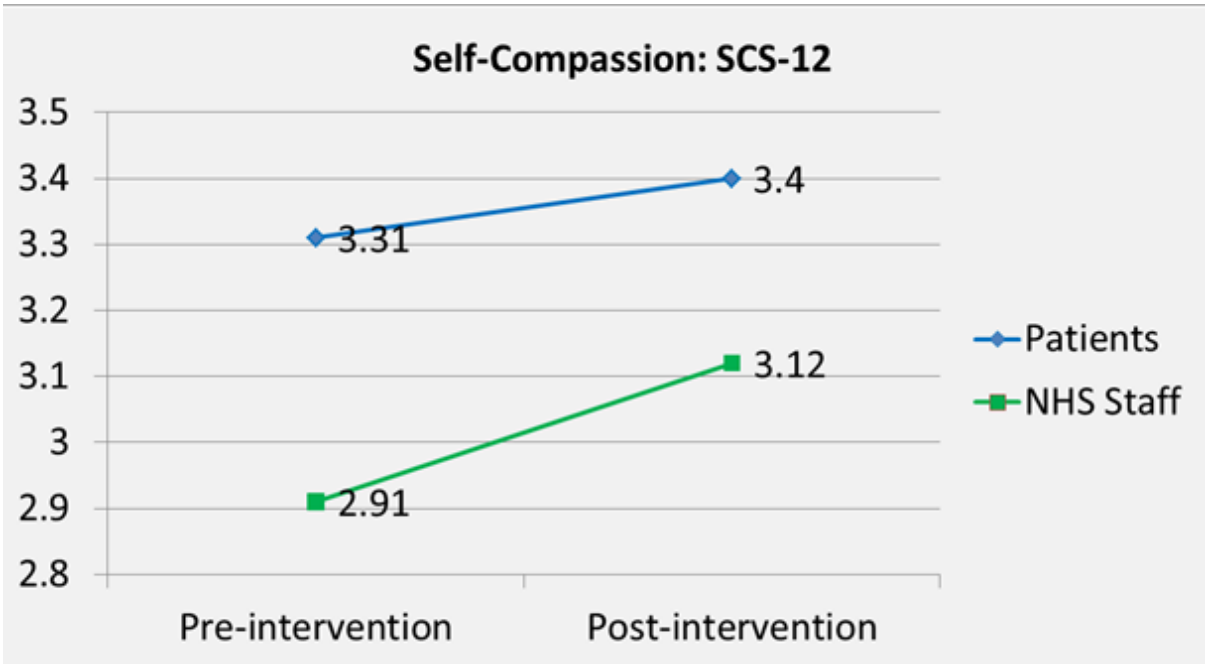
Figure 3. General Health Questionnaire results



Self-Compassion

Self-Compassion Scale (SCS-12): A paired sample t-test was carried out, t (146) = -2.895, p = .004. This indicated that there was a significant improvement in self-compassion after the one day workshop intervention from 3.14 ± 0.75 to 3.27 ± 0.71. (r=.758 p<.001). An improvement of 1.22 ± .511, higher scores indicate higher levels of self-compassion.

Figure 4. Work and Social Adjustment Scale results



Separate analyses on the two groups indicate that the patient/family scores were initially higher than the staff group and did not significantly increase after the workshop. The staff cohort did show a significant increase in self-compassion.

***Patients/family (SCS-12)*:** A paired sample t-test was carried out, t (76) = -1.461, *p* = .148. There was no significant improvement in self-compassion after the one day workshop intervention from 3.31 ± 0.76 to 3.4 ± 0.7 (r=.7 p = .206)

Staff (SCS-12): A paired sample t-test was carried out, t (68) = -3.254, *p* = .002. There was a significant improvement in self-compassion after the one day workshop intervention from 2.95 ± 0.70 to 3.12 ± 0.66 (p<.005); an improvement of 0.21 ± 0.56. This is significantly positively correlated (r=.796 p <.001) higher scores indicate higher levels of self-compassion.

Resilience and Stress Management

The following evaluations were based on three self-report items rated on a Likert scale from 1 (low) to 5 (high). Both groups showed significant improvements in knowledge of stress, confidence managing stress, and feelings of resilience after the workshop. See analyses below and figures 5 and 6 overleaf showing results of the NHS staff group and patient/family group respectively.

Knowledge of stress: As the data was not normally distributed a Wilcoxon Signed-rank test was used. There was a significant increase from time 1 (median = 3) to time 2 (median = 4) in levels of stress knowledge, *Z* = -9.107, p < .001, and the increase was medium (r =-.52).

Confidence managing stress: As the data was skewed a Wilcoxon Signed-rank test was used. There was a significant increase from time 1 (median = 3) to time 2 (median =4) in confidence in managing own stress, *Z* = -7.793, p < .001, and the increase was medium (r =-.45).

Resilience: As the data was not normally distributed a Wilcoxon Signed-rank test was used. There was no increase in median from time 1 (median = 4) to time 2 (median = 4) however there was a significant difference found for scores of resilience, *Z* = -5.968, p < .001, with a medium effect size (r =-.34).

Resilience and Stress Management

Figure 5. Staff knowledge and confidence managing stress and feelings of resilience

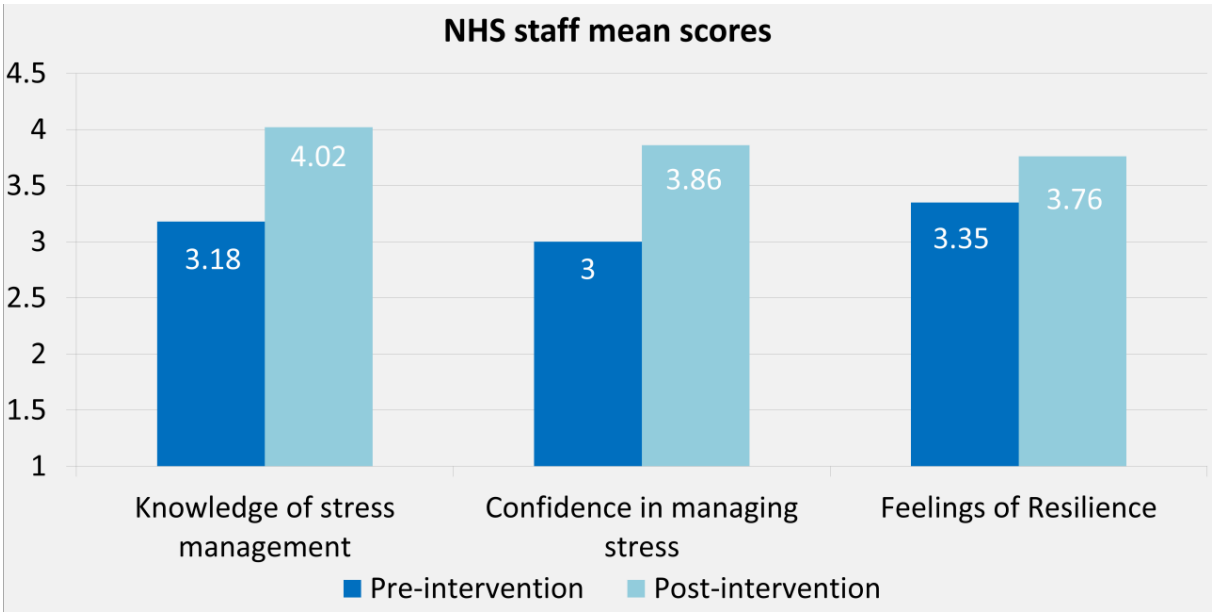
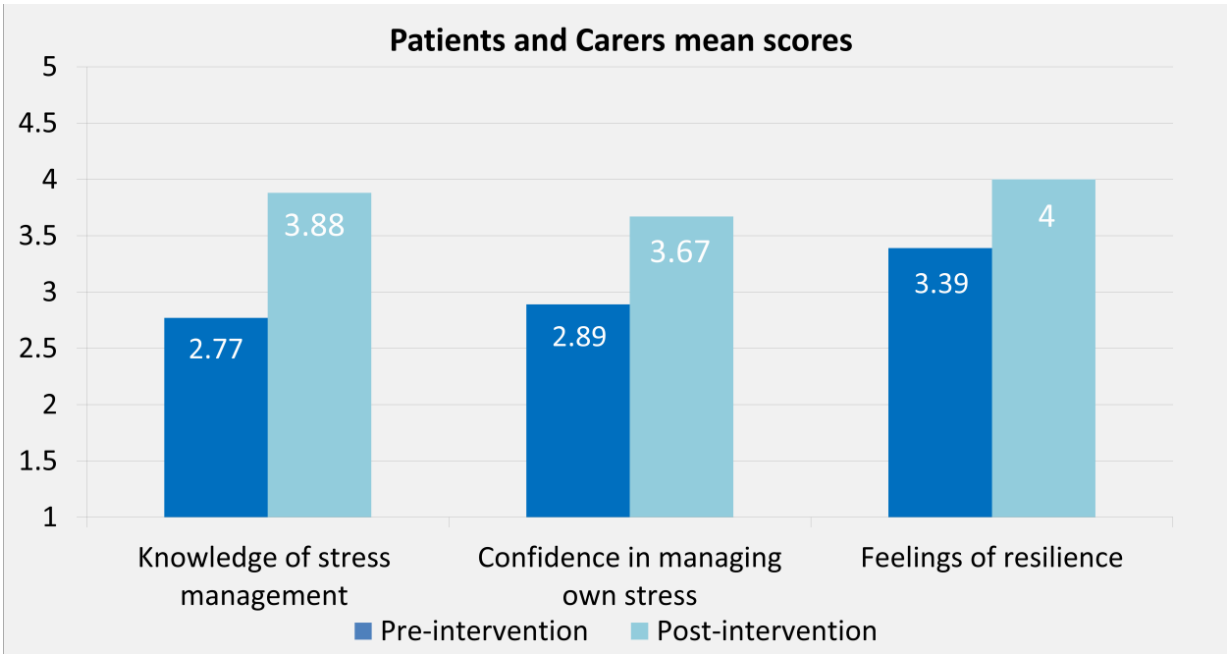


Figure 6. Patient and family knowledge and confidence managing stress and feelings of resilience



Mental Health Stigma

Selected items from the Time to Change national survey (Llic *et al*, 2014) of attitudes towards people with mental health problems were used to evaluate mental health

stigma. Willingness to work with someone with a mental health problem increased after the workshop indicating a reduction in stigma in both patient/family and staff groups. A Wilcoxon signed rank test showed that this change was statistically significant (Z=-4.804, P<0.001) with 56 individuals scoring that they would be more willing to work with someone with mental health difficulties after attending the programme.

Participants' feedback

The programme was well-received by patients, family members and staff. Patient and carer feedback was positive with mean usefulness scores of 4.4 out of 5. Staff scored the programme on a scale of 0-7, results showed: 6.2/7 for overall usefulness, 6.3/7 for overall satisfaction, 6.3/7 for meeting training needs and expectations, 6.4/7 content relevant to your practice and 6.6/7 for style of presentation. Staff results are shown in figure 7 below.

Figure 7. NHS staff programme evaluation

Qualitative results

Both patients and staff identified goals and behavioural intentions at the end of the workshop. These related to a range of activities including improving: physical activity, nutrition, management of unhelpful thoughts, mindfulness, relaxation practices, and compassion to self and others. See results of participants' comments in tables 2 and 3 overleaf.

Table 2. Qualitative data: Examples of patients' and family members' comments about their goals

Examples of quotes of patients and family members post intervention
Stop worrying as much and to put in place some of the techniques…to pat myself on the back a little more
Be kinder to myself, reduce my stress, being more organised to prevent the stress building up so I can enjoy life more and be more helpful to others
Be more compassionate towards myself as much as I am for others
Stay in touch with people and get involved with more heart related opportunities. Also take care of myself in way of stress and mindfulness
Actively seek to be more compassionate and recognised it in others
Be kinder to myself, work on the compassionate self
Find time for yoga and walking and relaxing
Increase exercise frequency, practice mindfulness, socialise
Be kinder to myself and give less. Accept where I am in life and help and kindness from others, exercise, Pilates

Table 3. Qualitative data: Examples of NHS staff comments about their intentions and goals

Examples of quotes of NHS staff post intervention
Be more self-aware, take care of myself more, accept thoughts creeping in
Apply more focus & determination in my goals and achievements without the language of the "passengers on the bus"
To be able to manage stress at work
Clarify and live by my values (try to!) look after myself a bit better physically and be appreciative of the good/positive things I have
Attempt to use some mindfulness in dealing with difficult situations
Become more aware of things that make me stressed and learn ways of handling them better
Clarifying values-being more in tune with my beliefs and values- prioritising my goals and aims
Life work balance, protected time to reflect and look after myself
Pursue and achieve my goals, acknowledge others problems, other than focus on mine, diffuse
Be more caring to self and colleagues at work
To be more self-caring
Observe thoughts, describe thoughts but don't be ruled by them. Smile more!

Follow up

Eight weeks post-attendance, participants were contacted to find out if there had been any ongoing behavioural changes since attending the intervention and whether these had been related to the goals and intentions set on the day. The quotes shown in table 4. indicate some of the changes that resulted. There is a clear correlation between intentions and goals set during the intervention and the feedback related to reported changes made in participants' lives. These can also be categorised into: improving physical health, mindfulness, nutrition, sleep, and compassion for self and others. See table 4 overleaf for examples of participants' comments.

Table 4. Qualitative data: Examples of comments made at the 8 week follow-up

Behavioural changes by NHS staff
I have started going to the gym regularly. I have made more time for exercise, sleep, eating better and less for emails! I have lost 1 and ½ stones in weight as a consequence.
I have joined a gym with my daughter and we went for the first time last night even though it is cold and dark, it's nice to do it together and I have told her some of the techniques we learnt.
I have started meditating more often (I use the Headspace and the Buddhify apps which are very helpful).
It was interesting to hear about the relationship between resilience, managing and safety for patients. Mediation/relaxation helpful and learning about sleep and daytime 'peaks' god to know and recognise – this has helped me with how I manage my day.
Instead of snacking on numerous chocolates and biscuits at work; I make my own healthy packed lunch and eat at regular intervals throughout the day to maintain energy levels. These changes have not only made me feel better but have had a positive impact on my family, friends and flatmates as well, as they are also making similar changes to their routine and lifestyle.
I've now got into the habit of managing my time more effectively and not switching on the TV or my phone, listening to relaxing music instead before going to bed earlier and getting more hours sleep before my shift starts the next day. This has definitely made a difference to how I feel and given me more energy instead of the previous tiredness I sometimes experienced.
After the workshop I really made a mental note to do something every day and also opening up to people, talking more and recognising it in other people, we are so used to watching others floating about and we think they are fine but we don't know what's going on for them.

Cost impact

The key costs for the programme were staff costs with non-pay costs being minimal and related to room hire, telecommunications, refreshments, workshop materials and copyright. The total programme estimated cost was £74,341 and the final cost was £64,171 with plans for the remaining funding to contribute towards publication, conference and video costs.

A financial evaluation was not planned as part of this programme. Research has shown that the combined impact of long-term conditions and mental health problems impacts on healthcare use and that the costs on the healthcare system are significant (Naylor *et al.* 2012). It is also recognised that this programme impacts on systems and operates at an individual, group and organisational level, both in relation to health promotion/prevention and at an active intervention/treatment level, with potential health gains in both areas. Improvements in health can potentially lead to cost savings in the acute secondary and tertiary healthcare sector and it has been recognised that any reductions in NHS staff health sickness rates will also reduce costs. It is known that NHS staff sickness rates are higher than in the public sector (Boorman, 2009) and Public Health England reported that the cost was about 2.4 billion in 2015. Further work in this area could usefully evaluate patient and staff health outcomes over a more extended time period.

Part 4: Learning from your project

The programme achieved its main aim to help optimise the health and wellbeing of patients, families and NHS staff, using an integrated approach to physical and psychological health. Additionally the programme is contributing towards organisational culture change through placing a focus on staff health and well-being and highlighting important links with leadership, team effectiveness, patient experience, and quality and safety. The work has been based on innovation in the context of quality improvement and has not been without its challenges, these are outlined below.

Innovation – new ways

The initial stages of the project involved new ways of thinking, for example linking together patients' and staff needs; this approach did not easily fit within existing organisational structures in which patients' needs were often considered separately from those of staff. With any innovative project which influences the boundaries of existing organisational structures, there is the potential to encounter resistance to change; this was recognised and worked through as part of a process of stakeholder engagement. The key challenge was to find a home for the programme and in the process to carve out new ways of working supported by stakeholder collaborations. As part of the work, we established a new project team and a new member of staff was recruited. The issue of the programme establishing itself within the organisation and the process of 'finding a home' was reflected in the experience of the new member of staff who did not have an allocated desk space for several months!

Strength and resilience

In relation to the original project plan, we found that most stages of the project took longer than we had anticipated, for example the process of recruitment and the application for research ethics approval, and this led to early delays. Overall the project involved a great deal of time and work; at times this was stressful as we were under pressure to design, deliver and evaluate a new programme and meet agreed deadlines. Both the support within the team and the positive feedback we received from patients, staff and families was helpful in sustaining the work and giving us the energy to continue delivering and improving the intervention.

Recruitment to the training workshops was a straightforward process as there was a great deal of interest, at this final stage of the project we continue to receive emails from patients and staff asking for dates of future workshops. We recognise that there is a real need for support focusing on integrated health.

Teamwork and human factors

As a team we were highly motivated and the challenges we encountered encouraged us to be creative in maintaining good communication, not only within our team but with other teams and colleagues. This positive mind-set helped us to work well together and effective teamwork was integral to the success of the project. We used a human factors approach in our work so that we took a ‘no blame’ learning approach to making mistakes; we used any problems that arose as important moments for learning, developing and improving the project. Additionally, feedback from participants around the workshop organisation was continually taken into consideration and used as a tool to improve later workshops. We spent a good amount of time researching appropriate outcome measures. During the course of the project we continued to learn and discovered new outcome measures that we think would be very relevant to this area of work, whilst it was frustrating that we hadn’t used these in the original design, we hope to be able to use these in future work.

Acknowledgements

It was a privilege to undertake the work and we are very grateful for the support we received from all involved. Special thanks to: all the patients, families and staff who supported the work at the Royal Brompton & Harefield NHS Foundation Trust; Myra Hunter at King’s College London; Richard Edgeworth and Louise Howell at Springfield Consultancy; and the Inspiring Improvement team at the Health Foundation - Alanna Rodrigues, Viv Little, Anna Markland, Frances Wiseman, Sarah Henderson and Will Warburton.

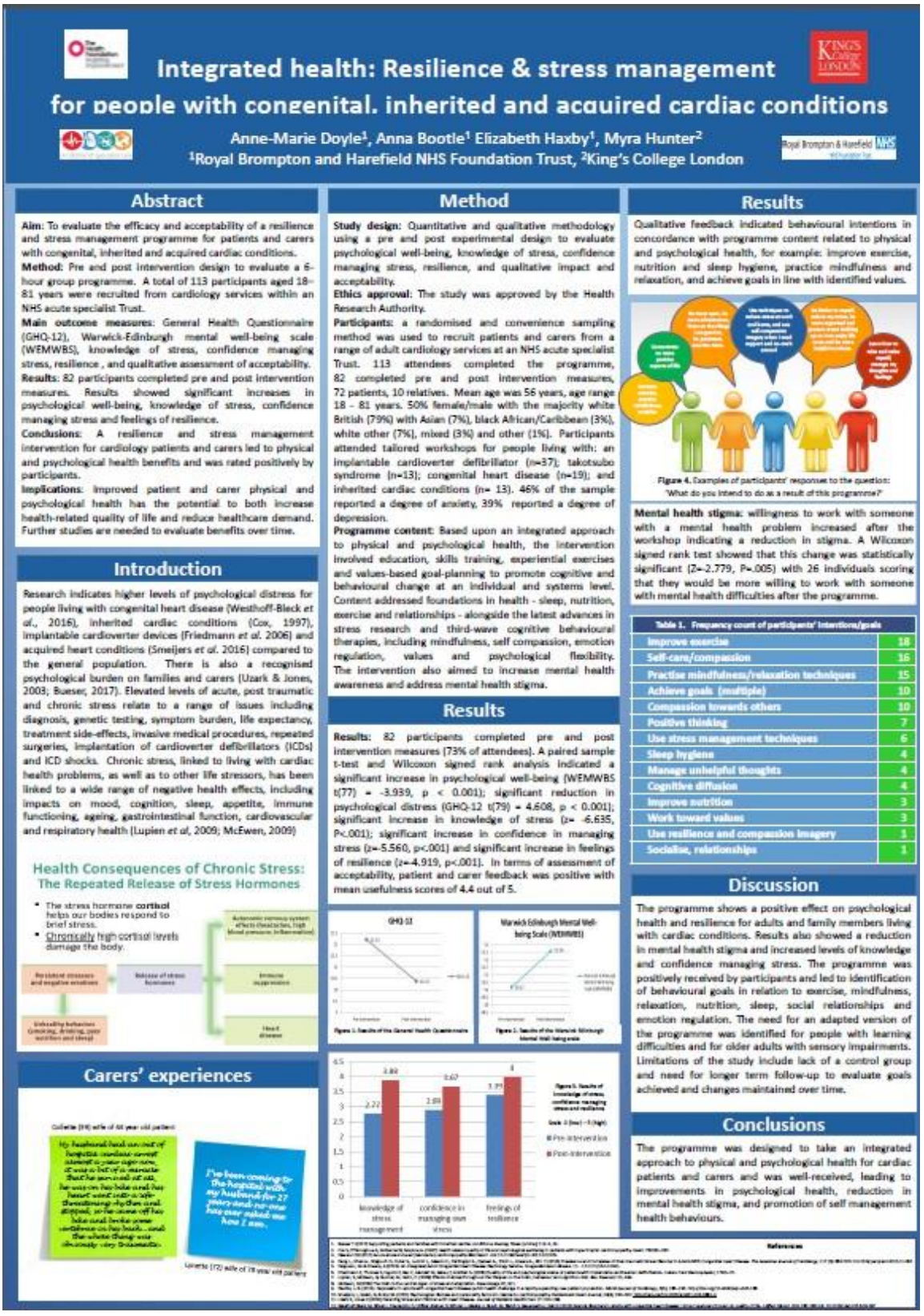
Part 5: Sustainability and spread

Plans for the future include further development of the training materials and ongoing delivery and evaluation of the programme within the Royal Brompton and Harefield NHS Foundation Trust. We recognise that whilst the programme is of potential value for all healthcare staff, that in particular, ward nurses and junior doctors are two professional groups that would be likely to benefit from further tailored input. In addition, we aim to establish a network of stakeholders in the local area and trial the programme within healthcare organisations within the region. This will contribute to the existing data set and allow us to further analyse impact and efficacy. Other aims include the publication of journal articles and presentation of the work at an international quality improvement conference in 2018.

Through our experiences and contact with families, we recognise that there is a need for tailored support for individuals with learning difficulties and for their families. Future work could usefully develop the programme to design and evaluate specialist resources in this area.

In the future we hope to undertake an economic analysis and evaluation to examine the impact of the intervention on health outcomes in relation to organisational costs and the impact on the quantity and quality of life. This will be invaluable in helping us understand the cost and benefits of the intervention. We would also like to develop possible collaborations with organisations in the exercise and nutrition field to help develop the content and hopefully provide a greater range of resources for people. We are committed to developing this work in support of a wider drive to increase the quality of healthcare provided to patients and families within the UK.

Appendix 1: Cardiology poster presented at the 11th Allied Health Professionals, Healthcare Scientists and Nurses' Research Showcase at the Royal Brompton and Harefield NHS Foundation Trust - winning a highly commended award for the work.



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