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Enhancing the well-being of front-line healthcare professionals in high pressure clinical environments: A mixed-methods evaluative research project

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ABSTRACT

Background: The last few years have witnessed a growing concern with the well-being of healthcare professionals internationally because of increasing recognition of its impact on patient outcomes and staff retention. The COVID-19 pandemic, which has placed additional and substantial pressure on frontline healthcare professionals, gives added urgency to the topic.
While numerous, and successful, interventions have been developed to address compromised well-being among healthcare professionals, they have not always been able to support the needs of frontline staff, specifically those working in high-pressure environments.
Objective: This paper presents findings of an evaluative research study of an intervention, named the Resilience and Well-being Training Programme, developed and implemented within an Acute Assessment Unit in a hospital in the UK. The 8 week-long programme followed a combined approach (both person-directed and work-directed), with mindfulness training as well as lectures and discussions to deepen participants' understanding of organisational life. The training, delivered from January to July 2018, involved a total of 72 healthcare professionals from a wide range of levels (UK bands 2–8), trained in three cohorts.
Design: The research followed a pre-post design to explore participants' experiences of working on the Unit, the programme and its impact on themselves and their working life.
Setting: The study was conducted in a large NHS district general hospital in South London, UK.
Participants: Participants included healthcare assistants and nurses who had completed their preceptorship, worked in the hospital's acute assessment unit, and had undertaken the resilience and well-being training programme.
Methods: The study employed mixed methods (online questionnaire, face-to-face focus groups/interviews) to collect data.
Results: Findings showed participants' positive experience with the programme, however it had limited positive impacts on aspects of compromised well-being at the personal level and a statistically significant enhancement of the quality of relationships and communication on the Unit, with medium effect size (Cohen's D). The programme had a positive impact on the culture of the Unit.
Conclusions: Results highlight the demand for and value of programmes designed in ways that enable this group of professionals to take part, because these professionals are often not able to participate in such programmes. A strong commitment from the leadership to enable staff attendance in time-protected programmes is one approach that works well in the short-term. However, this may be challenging to accomplish and raises issues of sustainability.

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What is already known

- Combining person- and work-directed interventions are an effective way to enhance healthcare professionals' well-being.
- Frontline ward-based staff are often under-represented in combined interventions (i.e. comprising both person and work-directed elements) due to time pressures and lack of autonomy.
- The impact of well-being interventions on healthcare professionals in high-pressure environments is unclear.

What this paper adds

- Combined interventions have the potential to positively impact the well-being of nurses in high-pressure environments.
- Positive impact on well-being depends on leadership commitment to provide protected time to nurses to attend sessions during work-hours.

1. Introduction

Well-being is a multidimensional phenomenon and here refers to an overall life experience characterised by overall satisfaction with life, including professional life, and the higher occurrence of positive emotional states (e.g., Waldron, 2010, Oates, 2018, Achour et al., 2019, Grabbe et al., 2019). Buffet et al. (2013) further include physical well-being, and social, communal, financial and career well-being as aspects of this concept. 'Well-being' is broader than the related condition of 'burn-out' (e.g., Maslach et al., 1996; Coetzee & Klopper, 2010) and while it is linked to 'resilience', understood as the ability to maintain well-being in spite of setbacks, frustrations and personal tragedies (Jackson et al., 2007; NHS England, 2020), these two concepts are not identical. In a nutshell, well-being is a state and resilience a factor contributing to well-being.

The importance of well-being of healthcare professionals is now well recognised internationally as a value in itself and also because of its impact on patient care (Christodoulou-Fella et al., 2017; Letvak et al., 2012; Sarafis et al., 2016), and organisations world-wide have been encouraged to invest in healthcare professionals' well-being (Zhang et al., 2020). The need to support the well-being of staff has become all the more salient with the COVID-19 outbreak, as evidence has emerged of the pandemic's adverse impacts on the mental health of healthcare professionals, and notably those on the frontlines, across the world (e.g. Quilter-Pinner et al., 2020; Chen et al., 2020).

Three broad types of interventions have been identified in the literature. The first type is person-directed, i.e. focusing on individual physical symptoms, problematic emotions, unhelpful responses and thinking, for instance through massage, nutrition, exercise or music classes (e.g., Ploukou and Panagopoulou, 2018; Romano et al., 2013) or skills training (e.g., Grabbe et al., 2019; Slatyer et al., 2018; Orly et al., 2012). The second type of interventions is work-directed, i.e., they focus on changing the work environment, for instance, improving staff access to basic resources such as linen supply, medication and equipment (e.g., Hall et al., 2008) or developing work conditions and training (e.g., Rickard et al., 2012); or supporting professional growth (e.g., clinical supervision, Koivu et al., 2012a, 2012b). The third type, the central focus of this paper, combines both person and work-directed elements to support well-being, reducing criticisms of stand-alone interventions (e.g., Taylor, 2019; Virkstis et al., 2018).

Research into interventions' effectiveness in supporting healthcare professionals' wellbeing at work has not been consistent, as highlighted by a recent systematic review (Rompannen and Häggman-Laitila, 2017). In addition, stand-alone person-focused interventions have been criticised on the grounds that they are likely to be ineffective where the work environment itself is not conducive to well-being (Taylor, 2019; Virkstis et al., 2018).

Among the few studies of combined approaches that have demonstrated a positive impact on well-being are studies of the Integrated Health Program (Tveito and Erisken, 2009); the Civility, Respect and Engagement at Work (e.g., Leiter et al., 2011); and Schwartz Rounds® (e.g., Maben et al., 2018; Adamson et al., 2018; Deppoliti et al., 2015). Integrated Health Programs were found to have a statistically significant impact on the subjective experience, perceived improvement in physical fitness and health, and the ability to manage their stress and maintain their health. The Civility, Respect and Engagement at Work programme was shown to have had an overall positive impact on job satisfaction, trust in management, co-worker civility, supervisor incivility, absences, respect, cynicism. The Schwartz Rounds® have consistently found to have a range of positive impacts on staff psychological well-being, increased quality of communication and teamwork, better social support networks, greater openness and understanding of colleagues.

However, here too, questions remain: specifically, existing studies leave unclear whether these interventions are more effective for some rather than other professionals, an important consideration given the varying nature of the work and working conditions faced by different groups of healthcare professionals. Studies of Schwartz Rounds® show that frontline staff, i.e., those directly involved in patient care, have been underrepresented among participants due to time pressures and the lack of autonomy to make the decision to attend (Deppoliti et al., 2015; Maben et al., 2018) while studies of other combined approaches have not, to date, provided disaggregated data along professional categories and provide limited commentary on potential barriers to participation.

This paper presents the results of an evaluative study of a combined intervention in an acute hospital setting developed and implemented for nurses and healthcare assistants, in an Acute Assessment Unit. The programme, described below, deliberately sought to remove a principal known barrier to the participation of frontline staff in wellbeing initiatives, and providing protected time, during work hours, to attend.

The study begins to answer what difference can a combined work- and person-directed intervention make to nurses and healthcare assistants?

The study explored programme participants' perceptions of the value and sustainability of the programme, together with participants' level of engagement. It also sought to gauge the programme's impact on participants' well-being at the personal level as well as at the level of the work environment, as detailed in Section 2.1. The study did not measure the programme's physical or physiological impact on participants, nor did it seek to identify the contribution of each component of the intervention. Rather, it looked at the overall experience of participants on the programme and its impact.

1.1. The intervention: the Well-being and Resilience Training programme

The Resilience and Well-being Training programme, delivered and facilitated by a team from Tavistock Consulting (the 'training team'), part of the Tavistock and Portman NHS Foundation Trust, aimed to attend both to the emotional and cognitive aspects of well-being as well as issues related to the culture of the organisation through a systems-psychodynamic lens (Obholzer and Roberts, 1994).

The Tavistock systems-psychodynamic model was built on seminal work undertaken to address poor levels of retention of newly qualified nurses in a London hospital in 1960s (Menzies, 1960). Its approach fits with the current thinking on the importance of building individuals and teams' capacity to respond to the emotional challenges of the work-task alongside building confidence in their technical skills (Crooks et al., 2005; Ebrahimi et al., 2016). While there has been a tendency within the nursing profession to avoid exploration of difficult feelings in case they become overwhelming (Menzies, 1960), this programme aimed to expand participants' capacity to manage the difficult feelings provoked from being around illness, injury, death and limited recovery, and maintain the feelings of pleasure and satisfaction that also comes with the role.

The Resilience and Well-being Training programme included the following components:

- *Mindfulness Training*: This included a psycho-educational element, highlighting research evidence for the effectiveness of mindfulness practices. Elements such as Compassionate Mind approaches and psychoanalytic/therapeutic angles were also included (e.g., Music, 2014).
- *Understanding Organisations*: This consisted of lectures covering concepts to deepen participants' understanding of organisational life, such as group dynamics; the emotional aspect of nursing; and the impact of change on individual and team behaviours. Structured exercises and facilitated discussion provided opportunities to build a shared understanding of experiences on the ward from different perspectives and roles, and to explore changes that might be introduced.
- *Work Discussion Groups*: Sub-groups of seven or eight members were formed within each cohort. Each week a member would present a specific challenge which other group members would then reflect upon, using the Tavistock signature Work Discussion Group (Jackson, 2008). The themes from the subgroups were then discussed in plenaries.
- *Plenaries*: Plenaries offered opportunities to share updates about events on the ward that might impact the group and how they worked together. At the end of the day the focus was reviewing and reflecting on what had been learnt, shared and explored.
- In addition, a *coaching programme* was undertaken by eight members of the senior management team to enable nurse leaders to embed a culture of support and inclusion in the unit.

Seventy-two healthcare assistants and nurses who had completed their preceptorship participated in the programme between January 2018 and July 2018. Participants were trained in three groups of 24 individuals. Each participant attended seven or eight days with sessions held off-site with full catering. Participants attended out of uniform during normal working hours.

1.2. The setting

The programme was implemented in the Acute Assessment Unit of an NHS district general Hospital caring for around half-a-million patients in South London. The Acute Assessment Unit is a 50-bedded unit whose primary role is to provide definite assessment, investigation and treatment for patients admitted from the Emergency Department and/or referred by their General Practitioner. Patients are admitted 24 h a day, seven days a week. The patient will either be discharged after assessment and treatment or transferred to another speciality ward if anticipated length of stay exceeds 72 h.

2. Research methods

2.1. Research design

In this study, a convergent parallel mixed-methods design (Creswell and Plano Clark, 2011) was used to explore the following research questions:

1. What is the participants' level of engagement with the programme?
2. What are the participants' perceptions of the value of the programme?
3. What is the perceived impact of the programme on participants' working life?
4. What is the perceived sustainability of the Resilience and Well-being Training programme?
5. What is the perceived sustainability of the impact of the programme?

In this paper, we report on the impact of the programme, specifically on participant well-being. We consider the impact of the programme on the professional quality of life (staff burnout, compassion satisfaction and secondary traumatic stress); on staff strategies to cope with various stressors; on the quality of personal and professional relationships within the unit (including the ability to manage conflict).

The focus groups explored the impacts on the work environment in more detail, highlighting perceived changes in the quality of professional relationships, communication, day-to-day interaction and self-understanding. The quantitative and qualitative components addressed the same research questions, were conducted simultaneously, given equal weight but were analysed independently. The data were merged during the interpretation of the findings. External validity was obtained through the study of the programme taking place in its natural setting (ecological validity, e.g., Andrade, 2018). Reporting in this paper has been guided by the well-regarded statements on the transparent reporting of evaluations with non-randomised designs (Tong et al., 2007; Des Jarlais et al., 2004).

To increase the validity of the findings, a participatory approach was used where members of the hospital and the programme team were consulted about the format (online versus face-to-face) and content (wording of the questions) of the data collection tools and processes (timing, location).

2.2. Recruitment

All programme participants were invited by email to complete anonymous online questionnaires and participate in focus groups. At each data collection stage, one reminder email was sent to all participants. The emails were composed by the research team and forwarded to the participants by senior members of the unit (the 'hospital team'). The latter also organised the timing and location of the interviews and focus groups. Convenience sampling was adopted for all data collection procedures; participation was voluntary. Prior to the study, there had been no contact between participants and the research team.

2.3. Data tools and collection

2.3.1. Questionnaires

Pre- and post-questionnaires were developed by the research team. Both questionnaires included Likert-scale questions and open-ended questions. The Tailored Design Method (Dillman et al., 2014) was used to develop the questionnaire with the aim to minimise the burden on participants while increasing response rates and the validity of the questionnaire data. The hospital and training teams were consulted about the phrasing of specific questions to ensure relevance and comprehensibility and concerning the timing of the questionnaire administration. The questionnaires were administered online using SurveyMonkey®.

2.3.2. Professional Quality of Life questionnaire

As part of understanding how well-being at work had been impacted by participation in the Resilience and Well-being Training programme, the Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL) (Stamm et al., 2020) questionnaire was included in both online questionnaires. The ProQOL questionnaire measures the perceptions of staff in the helping industries regarding their professional quality of life. Each questionnaire item relates to one of three constructs, namely 'compassion satisfaction'; 'burnout' and 'secondary traumatic stress' (e.g., traumatic events experienced by patients). Each construct contains 10 questionnaire items in the format of 5-point Likert scale and participants are asked how frequently they experience a range of feelings or situations: never, rarely, sometimes, often and very often. The ProQOL 5th edition was developed in 2009 and is the most used measure of the positive and negative effects of working with people who have experienced extremely stressful events (Stamm, 2010). It is based on the Compassion Fatigue Self-Test developed by Charles Figley in the late 1980s. The constructs have high levels

of internal consistency, as determined by a Cronbach's Alpha of 0.927 for compassion satisfaction, 0.809 for burnout and 0.723 for secondary traumatic stress, giving confidence that the questionnaire provides a reliable measure of each construct.

2.3.3. Interviews and focus groups (FGs)

Interviews were conducted with five senior members of the hospital team and three focus groups were conducted with fifteen programme participants at the end of the project allowing them to reflect on their experience and the impact of the programme. The interviews and focus group topic guides were developed by the research team, and the guiding questions checked for comprehensibility with the hospital team and training team. The interviews and focus groups took place face-to-face at the hospital and took no longer than 1 h each. A 2-hour focus group was also conducted with the training team at the consulting agency's premises. All interviews and focus groups were digitally audio-recorded and transcribed in full and verbatim by an independent transcriber who signed a confidentiality agreement. Participant verification was conducted for the qualitative data, as researchers checked their understanding during the focus groups with those taking part (Silverman, 2013).

2.4. Data analysis

The quantitative data from questionnaires were analysed using SPSS versions 23 and 24. Descriptive and inferential statistical analyses were conducted, reporting on frequencies of responses and the means (by assigning a numeric value to the Likert items, from 1 to 4, with the highest value representing the most positive response), and measuring statistically significant differences between the pre- and post-questionnaire data using T-tests. The analyses were used to identify strengths and areas for improvement of the programme and to identify and measure magnitude of impact.

Psychometric analysis of the questionnaires (using Cronbach's Alpha) was also conducted to assess the quality of the questionnaires and improve them for future use.

Analyses of the pre and post ProQOL questionnaire data were conducted following Stamm (2010).

The qualitative data collected through the open-ended questions on the questionnaires, the interviews and focus groups were analysed thematically (e.g., Schreier, 2012). This data was coded manually, developing categories and themes from the data under the broad areas of interest agreed by the research and hospital teams. In consideration of the time pressures on healthcare professionals, focus group participants were not requested to comment or correct transcripts. However, the training and hospital teams were given the opportunity to feedback on the findings towards the end of the study with a presentation of a draft report. Findings were not amended in the light of this feedback but, where necessary, were clarified.

3. Results

3.1. Study participant profile

Fifty-two participants (out of 72 programme participants) completed the pre-questionnaire (72%) and 37 completed the post-questionnaire (51.3%). Reasons for the decreased response rate are not known. The samples included male and female participants with a wide age-range, and High-level (band) nurses were slightly overrepresented. Focus groups included participants from a range of bands and age groups but, in contrast to the questionnaire data, weighted towards lower-band professionals. The high proportion of females in the samples reflects the preponderance of females in the nursing profession (Table 1).

Members of the hospital team interviewed are not described to preserve anonymity but included four senior members of the unit and the hospital nursing management team.

Table 1
Study participants' characteristics, pre- and post-programme.

Respondent characteristics		Pre-programme	Post-programme
Questionnaire respondents			
Total number of participants		n = 52	n = 37
Band	Band 2–4 (unqualified)	n = 10; 19%	n = 4; 11%
	Band 5-8a (qualified)	n = 33; 64%	n = 23; 62%
	No response	n = 9; 17%	n = 10; 27%
Gender	Female	71.1%	63.3%
	Male	28.9%	36.7%
Age range		21–51 years	24–47 years
Focus group participants			
Band	Band 2–4 (unqualified)	NA	n = 11
	Band 5-8a (qualified)	NA	n = 4
Gender	Female	NA	n = 12
	Male	NA	n = 3
Age range		NA	24–49 years

3.2. Results from PROQOL: impact on professional quality of life

The majority of participants' scores on the PROQOL questionnaire indicated that, pre-training, they experienced average levels of compassion satisfaction, burnout and secondary traumatic stress (Supplementary Table 1). None of the participants' scores suggested that they experienced high levels of burnout or secondary traumatic stress, and more than a quarter of participants' scores suggested that they had high levels of compassion satisfaction (Table 2).

The programme appeared to have had a minor impact on participants' perceptions of the quality of their professional life. Independent Sample *t*-tests were used in order to compare pre- and post- results and measure the impact of the programme on the constructs of 'compassion satisfaction', 'burnout' and 'secondary traumatic stress' on participants. The comparison showed a minor but not statistically significant improvement on all three constructs (Table 2).

3.3. Results from research-team questionnaire

3.3.1. Participant overall perception of the programme

Participants were asked to rate their satisfaction with the programme overall, its delivery and contents. Respondents were very positive towards the programme: they felt it had been a good investment of their time, were keen to recommend the programme to others as well as engage in similar programmes in the future. The specific strengths of the programme were felt to be it allowing sufficient time for questions and the facilitators' passion for the programme. Participants identified as notable areas for improvement the usefulness of the exercises and the facilitators' understanding of challenges faced by staff on the unit (Supplementary Table 2).

Qualitative data from the focus groups provided deeper insight into the comparatively lower rating by questionnaire respondents of the usefulness of exercises during the programme. Participants questioned the necessity of mindfulness training for themselves either because they did not feel they experienced stress or because they had developed alternative ways to cope with the conditions on the unit. This is illustrated by the following quotation:

Table 2
Pro QOL scores of the three constructs pre- versus post-programme.

	Pre programme mean	Post programme mean	*p*-Value
Compassion satisfaction	36.84	38.14	0.381
Burnout	31.11	28.11	0.497
Secondary traumatic stress	25.06	24.00	0.343

No statistically significant difference at alpha <0.05

> "I am not really… struggling at the moment… I just want to like 'OK, we just need to work, finish the things and then move on' – that's it. I don't need to…put it…deep inside me."
>
> (Junior staff)

Consistently, with the exception of one individual, focus group participants expressed that the mindfulness techniques introduced during the training programme could not be used at work due to lack of time in the very high-pressure environment of the unit and also due to lack of space. For example:

> 'You can't actually do Mindfulness here because… You can't have 5 minutes out and do it… It's really impossible, there is just never any time, but we can do it outside work.'
>
> (Junior staff)

3.3.2. Areas of most and least impact

Questionnaire results indicated that participants felt the programme had had a positive impact, especially with the social dimension of their working lives. Less impact was felt on health and well-being, including the somatic/physical, cognitive and emotional dimensions of well-being.

Participants were asked to rate the extent they felt the programme had had a positive impact on themselves and on the work environment at the unit. Means were computed to identify the areas of most and least positive impact. Overall, participants felt that all aspects were positively impacted by their engagement with the programme. The most positively impacted aspects were perceived to be related to teamwork, such as 'how we work together in the Acute Assessment Unit', 'how we relate and communicate on the Acute Assessment Unit' followed by 'I feel more willing to support colleagues because of the programme' (Table 3).

This finding was supported by answers to an open-ended question in the questionnaire regarding the most significant difference for participants because of engaging in the programme. The emphasis in the responses was clearly on differences in the social dimension of working life, for example, highlighting the development of greater understanding of colleagues since participating in the programme or noting an improvement in the quality of relationships with colleagues, rather than, for instance, greater self-awareness or self-understanding. By contrast, the number of responses relating to how participation in the programme had improved personal resilience, attitude or working style, was smaller (17, compared to 27 responses) (Supplementary Table 3).

Finally, in responses to an open-ended question about changes on the unit as a result of the programme, social factors once again dominated. While two respondents commented on personal level changes ('calmer', 'more organised'), 13 chose to highlight the improved quality of relationships and teamwork as results of the programme (Supplementary Table 3).

3.3.3. Impact of programme on stress coping strategies

Participants were also asked in the questionnaire developed by the research team to rate the extent to which they felt the programme had impacted how they coped with stress caused by a range of factors. Results showed a greater perceived impact on how staff coped with social compared with personal-level sources of stress. The greatest impact of the programme was on how participants coped with stress caused by unit colleagues and/or the low level of support from colleagues, while the programme was felt to have least impacted how they coped with personal stressors such as finance or situations at home. Overall, all aspects with the exception of Financial Concerns were perceived to have been positively impacted by the programme (Table 4).

In a follow-on open question, participants were asked if their stress coping strategies had changed due to the programme, and if so, how, or if not, why they felt that this had been the case. Twenty participants responded to the question, of which 12 reported a change in their stress coping strategies and provided examples (e.g., they had become more aware of their own stress responses, they had learnt to be more forgiving towards themselves, they had learnt new breathing and relaxation techniques). Seven reported not to have changed their strategies explaining, for instance, that they already had adequate coping strategies, or that the strategies taught in the programme were not relevant to them (Supplementary Table 4).

3.3.4. Impact on understanding and resolving conflicts at AAU

The programme appeared to have had a significant positive impact on perceptions of how unit staff resolved conflict. In the questionnaire, participants were asked to rate the extent to which they agreed with statements relating to how they understood and managed conflict on the unit. Independent sample *t*-tests were conducted to measure statistically significant differences in pre- and post-programme responses. The results demonstrated a statistically significant improvement with

Table 3
Impact of the programme on participant and the Acute Assessment Unit (means and standard deviations).

	n	Mean (SD)
This programme has had a positive impact on how we work together in the Acute Assessment Unit	31	3.45 (0.56)
I feel more willing to support colleagues because of the programme	31	3.26 (0.80)
This programme has given me an opportunity to express my concerns relating to the Acute Assessment Unit	31	3.23 (0.94)
I relate to people better as a result of the programme	31	3.16 (0.88)
This programme has had a positive impact on how well we communicate across the unit	31	3.13 (0.87)
This programme has had a positive impact on me personally	31	3.10 (0.93)
This programme has had a positive impact on my job	31	3.06 (0.84)
This programme has made me feel more positive about working at the Acute Assessment Unit	31	3.06 (0.98)
This programme has had a positive impact on how we manage conflict and differences on the unit	31	2.97 (0.86)
This programme has helped me to manage the emotional impact of working on the Acute Assessment Unit	31	2.97 (0.93)
This programme has helped me to take up my role more effectively	31	2.90 (0.96)
This programme has helped me manage my stress better	31	2.87 (1.04)
I like being able to talk about my emotions at work better because of the programme	31	2.81 (1.12)
I have seen some changes at AAU as a result of this programme	31	2.71 (1.08)

Coding scheme: No impact = 1; Minor impact = 2; Impact = 3 and Major impact = 4.

Table 4
Impact of programme on how participants cope with stress caused by a range of factors (means).

	n	Mean (SD)
Acute Assessment Unit colleagues	31	3.03 (0.59)
Low level of support from other Acute Assessment Unit staff	31	2.65 (0.78)
Your level of self confidence	31	2.61 (0.955)
Your line manager	31	2.55 (0.94)
Keeping up the quality of care	31	2.55 (0.91)
Confidence in skills of your colleagues	31	2.52 (0.91)
Low level of support from management	31	2.48 (0.98)
Mental conditions of patients	31	2.45 (0.91)
Your own mental health	31	2.45 (1.01)
Keeping professional boundaries	31	2.42 (0.94)
Personal situations at home	31	2.39 (0.97)
Patients' relatives	31	2.35 (0.86)
Colleagues outside the Acute Assessment Unit	31	2.32 (0.89)
The tasks you need to perform	31	2.29 (0.89)
Skill mix of staff at Acute Assessment Unit	31	2.29 (0.99)
Workload	31	2.23 (1.10)
Your own physical health	31	2.23 (1.07)
Physical conditions of patients	31	2.16 (0.92)
Lack of equipment and resources	31	2.03 (1.0)
Lack of necessary skills among Acute Assessment Unit staff	31	2.00 (0.88)
Financial concerns	31	1.74 (0.91)

Coding scheme: No impact = 1; Minor impact = 2; Impact = 3 and Major impact = 4.

regard to all four items related to conflict, with medium effect size (Cohens' D) (Table 5).

In an open-ended question, participants were also asked to give examples of how they managed conflict with colleagues on the unit had changed, through participating in the programme. Nine participants provided examples, including: having developed more empathy and a better understanding of colleagues, more compassion towards colleagues and better communication as a result of increased understanding of colleagues (see Supplementary Table 5).

3.4. Results from focus group discussions

3.4.1. Impact on understanding of self and others working on the unit

The qualitative analysis highlighted a common perception that participants had developed a better understanding of themselves and their own somatic responses to stressful situations, and a greater appreciation of themselves. This was illustrated by observations such as

> "to know … when my body feels like 'this is it' – … when the situation is too much, and I just have to realise that 'come on, I know the pressure is getting on' and to know when... to… relax."
>
> (Junior staff)

A second notable theme related to the deepening of participants' understanding and tolerance of colleagues' behaviour, for example:

> "We have had the chance to talk with each other outside work on a more personal level…so we tend to understand... 'oh I am a mother of two', so now I know that she needs to go home early, or she is in a hurry to go home after work because she has two daughters at home. But before that… I am just thinking 'where are you going? The job is not yet done'."
>
> (Junior staff)

Similarly, perceptions and attitudes towards staff at different levels of seniority became more positive. A change in attitude towards more junior staff is illustrated by the two quotations that follow. Particularly striking here was the change observed in participants' willingness to hear and learn from staff from lower professional levels:

> 'The whole programme has helped me think differently…I have seen … where they are coming from.... Although I have come up through those ranks and I have been in their shoes, it was quite a long time ago, and things are very different now.'
>
> (Senior staff)

> "[One member of staff] before she had come on the cohort she had said about the groups, 'just don't put me in a group with that HCA'… but at that moment [during training] she …leant across to the group and said to the HCA 'I would like to hear from you, what is your opinion about this issue?'"
>
> (Member of the training team)

Changes in perceptions and attitudes towards senior staff was also reported, for example:

> 'I also understand that [senior staff] are not doing it to bother me … they are actually doing this because it's something they also have responsibility to do…That kind of made me more chilled when I get told to do patients and transfers.'
>
> (Junior staff)

This quote illustrates how junior staff's understanding of their senior colleagues was enhanced through the programme.

3.4.2. Impact on the quality of communication, interaction, and relationships among staff and across levels of seniority

The focus group data enhanced our understanding of the nature of the impact of the programme on communication, relationships and interaction on the unit. For senior staff, participation enabled communication, providing an opportunity to explain their actions to junior staff while also allowing junior staff to raise concerns and be heard, for instance:

> 'When [junior staff] said yes [to telling the Matron about staff concerns] we … implemented it straight away … - at least [junior staff] know that they have raised some concerns and that we have taken action promptly.'
>
> (Senior staff)

Additionally, both senior and junior staff reported that they had become more mindful of how they spoke to others, for example:

> 'I have learnt to word things differently …to turn a negative into a positive…I now think about things a bit more before I open my mouth.'
>
> (Senior staff)

According to both senior and junior staff, staff interactions on the unit had also improved, becoming more respectful, open, and less characterised by fault-finding:

> "now when you are receiving handover… [colleagues] will be able to appreciate and encourage somebody 'go home, I will do it'.… When you have not done something... even if it's just fluid, someone will be like 'It's fine, just go home, I will put it out.' …Before, you [would] be answering questions why – why was this not done?"
>
> (Junior staff)

In addition, relationships were found to be closer and more supportive. For example:

> 'The main thing that it gave us, is that we got to know our colleagues better. …As a result, when you are at work, …there is a better support network because you have shared like details with each other about, you know, you might struggle with one thing and then you might see someone struggling and offer them some help.'
>
> (Junior staff)

More succinctly, 'We became more than colleagues; we became friends as well.'

(Junior staff)

Table 5
Perceived impact of the programme on understanding and managing conflict in the unit (means).

	Pre-programme Mean (SD)	Post-programme Mean (SD)	*p*-Value	Cohen's D effect size
I feel confident in my current role	3.45 (0.61)	3.60 (0.49)	0.236	
AAU manages workload challenges well	2.77 (0.88)	3.10 (0.75)	0.083	
AAU staff have a good understanding of conflicts between individual AAU staff members	2.72 (0.84)	3.13 (0.81)	0.039[a]	0.495
AAU staff have a good understanding of conflicts between the different AAU staff groups	2.68 (0.88)	3.17 (0.86)	0.021[a]	0.562
AAU is successful at resolving conflicts between individual AAU staff members	2.62 (0.76)	3.07 (0.77)	0.016[a]	0.589
AAU is successful at resolving conflicts between the different AAU staff groups	2.62 (0.79)	3.07 (0.81)	0.022[a]	0.564

[a] Significant difference at alpha <0.05.

3.4.3. Positive changes in day-to-day behaviour on the unit

Focus group participants further found that behaviours on the unit had changed. They reported greater expressions of care towards colleagues, for example:

> "We also make it a point to not only check ourselves but also check our colleagues and how they are doing – just ask 'are you OK and do you need any help?'"
>
> (Junior staff)

They also noted that levels of stress and distress among unit staff had decreased:

> 'Before if you see us, we are just stressed, we have a straight face, we are just like robots walking up and down doing our job, but now we are able to smile and talk to people.'
>
> (Junior staff)

3.4.4. Impact on group boundaries and sociability within the unit

Furthermore, both junior and senior staff suggested that participation in the programme had contributed to changing patterns of relationships within this unit, relaxing group boundaries and expanding support groups:

> 'I have seen an improvement, like people are helping other nurses not included in their group.'
>
> (Junior member of staff)

However, despite a positive impact on group boundaries, cliques were not felt to have disappeared:

> '[I noticed] because the group that we went in [the programme], they're always going on their break together now and yeah, they are always together now.'
>
> (Junior staff)

Implications for new staff coming into the unit were raised as a matter of concern by some participants, as the following illustrates:

> "I have asked [the managers] 'are we going to continue the training?' because … some are leaving and... every month there's like three or four nurses coming in, so I don't know if they will feel out of place because we have gone through this training, we have known each other on a personal level."
>
> (Junior staff)

However senior staff were not concerned about the sustainability of the impact, observing that this greater openness had been extended to newer staff joining the unit after the end of the programme:

> 'None of [the newer staff] came to me saying that they feel like they're struggling here, they are not welcome. I can see them working with good rapport, so I guess that's another change, this Mindfulness.'

4. Discussion

The study population included a range of levels and ages, and, pre-programme, average to low levels of burnout and secondary traumatic stress, and average or above average levels of compassion satisfaction. More than a quarter experienced high levels of compassion satisfaction. Additionally, the majority reported pre-programme already having a range of personal strategies to cope with the stressful environment of the unit. Only a minority felt, post-programme, that the programme had changed or added to their stress management toolkit.

For this population, the training had a minor yet not statistically significant positive impact on aspects of compromised well-being at the personal level, namely negative emotions such as anger, frustration, depression (included in the concept of 'burnout') and stress. Likewise, the data did not indicate a statistically significant positive impact on positive emotions (greater satisfaction with or enjoyment of working life, overall experience at work). A few participants expressed they had benefitted from learning new ways of coping with these negative emotions during the programme (i.e., regulate anxious emotional states, identify and modify problematic thinking), and that the programme had helped them become more aware of their own responses to stressful conditions (i.e., identify symptoms of compassion fatigue, burnout, stress). These gains may positively impact well-being in the long run.

By contrast, participants strongly emphasised that the training had enhanced the quality of group relationships on the unit. We found a notable and positive impact on how groups perceived and related to each other, including how they resolved conflict and coped with stress caused by unit colleagues or low levels of support from colleagues. This stood out from both the questionnaires and the focus group data. In other words, participation in the programme was found to have a considerable positive impact on the less formal aspects of organisational culture in the unit. This is significant as workplace culture is known to play an important role in ensuring staff well-being over time, possibly even enabling other interventions such as resilience or mindfulness training. The added value of the facilitators was not directly recognised by all participants during the period of the study, though some clearly linked their broadened understanding and changed perspectives to the programme. Arguably, it is questionable whether the same impact would have been achieved without the facilitators' intervention.

The study further showed that mindfulness techniques, although found valuable by some, were generally not drawn upon due to lack of time and space to practice these. This was a reminder that while mindfulness training has been found to be a valuable method to improve nurses' well-being and help retain nurses elsewhere (Penque, 2019), its value may depend on the setting. High-pressure settings may not lend themselves well to this approach as a stand-alone intervention, though it may benefit some individuals. This is also a reminder of the unique conditions faced by frontline staff and a caution that programmes that are shown to be effective for healthcare professionals in general should not be assumed to benefit this group of professionals.

In common with other complex interventions adopting a combined approach, the Resilience and Well-being Training programme was found to positively impact participants' negative emotions while also enhancing the quality of group relationships, everyday interactions and communication. In particular, the Resilience and Well-being training programme afforded similar benefits to its participants as has been reported for Schwartz Rounds®. Schwartz Rounds, developed by the Schwartz Center for Compassionate Healthcare, are on-going, organisation-wide and multidisciplinary forums, in which participating healthcare professionals are invited to reflect and openly discuss the social and emotional issues they face in their work, following a panel presentation on a given theme. In common with the Resilience and Well-being programme, Schwartz Rounds have been found to improve teamwork, social support among staff, and the quality of communication among colleagues; to increase openness, tolerance and understanding of colleagues, willingness to learn from others, self-compassion and compassion towards others (Maben et al., 2018; Adamson et al., 2018). Unlike Schwartz Rounds, the present programme did not also have a noticeable impact on compassion fatigue, but this could be a function of the small sample size in the present study, its timeframe and the characteristics of participants.

In terms of focus, the Resilience and Well-being programme and Schwartz Rounds are comparable, however these programmes differ in terms of how they are delivered and their reach. One key feature of the Resilience and Well-being programme was the involvement of frontline staff, who were often missing from Schwartz Rounds. The participation of this group was enabled by the requirement for regular attendance and the provision of protected time (absent from Schwartz Rounds, which are ongoing, voluntary sessions often run on a monthly

basis). The present study clearly indicated that a requirement to commit to regular attendance, together with protected time, can allow frontline staff to draw comparable benefits from combined programmes as more senior staff enjoying greater autonomy in their work.

These requirements, however, which must be built into the programme and budgeted for, add to the costs of the programme, raising questions of sustainability.

The other combined programmes mentioned here such as the Integrated Health Program or the Civility, Respect and Engagement at Work, had a different emphasis (for example, emphasising physical health and fitness, or civility and respect) and cannot be easily compared with the Resilience and Well-being programme.

The main strength of this study was the fine-grained detail, enabled by the focus on a single unit and group of professionals, together with the use of a mixed-method approach allowing for triangulation of data and thereby enhancing the credibility and validity of the findings (e.g., Noble and Smith, 2015). In addition to the dropout of participants in the post-questionnaire, the principal limitation derives from its focus on a single programme in a single institution: this approach means that the specific findings may not be generalizable without qualification. This study has sought to provide sufficient contextual detail, however, for readers to assess the transferability of the findings presented in this paper to other settings and programmes. A second limitation concerns the short timeframe of the study, meaning that the broader impact of the intervention was not discernible during the study period. Longer-term research will be necessary to uncover the depth of impact of the programme, including exploring spin-off initiatives from the programme proposed during focus group discussions (but not reported here for lack of space) as well as the sustainability of the changes initiated through the Resilience and Well-being Training programme in individual and group attitudes and behaviours.

This paper contributes to the existing literature by its focus on frontline healthcare professionals' experiences with combined programmes, which is under-researched to date. The presentation of detailed data may enable future comparative work to further understand what works for these professionals and may enhance evidence-based development of new initiatives to support their well-being.

5. Conclusion

The results of this fine-grained evaluative study of a combined approach to well-being at work suggest that the Resilience and Well-being Training programme is a model of a well-being intervention that is valuable to frontline nurses in high-pressure environments. Participants experienced comparable – though, unsurprisingly given the different nature of the programmes, not identical – benefits to those taking part in other documented combined programmes such as the well documented Schwartz Rounds. The following features of the Resilience and Well-being Training programme seemed particularly important in terms of enabling participants to accrue these benefits:

- A strong leadership commitment to regular attendance with time protection, meaning that staff were able to participate and felt authorised to do so.
- A focus on building an awareness of organisational life through lectures and discussion, meaning both the social fabric of the Acute Assessment Unit and individual capacity to cope with stressors, where needed, were supported and developed in well-being enhancing ways.

However, unknowns remain: the longer-term impacts of the programme, specifically, the extent to which the positive impacts on relationships and teamwork in the unit as staff turnover; and how these gains can be sustained, given the resource-intensive nature of programmes such as the Resilience and Well-being Training programme.

Participants made suggestions about future initiatives; future research could seek to explore and further develop these, drawing on the lessons of the Resilience and Well-being Training programme and similar initiatives.

Data availability

Data will not be available. The research team will deposit metadata describing the dataset only in the Kingston University Repository.

Ethical approval

As this was an evaluative research project, ethical approval was not sought.

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This study was funded by a grant obtained by the Hospital from the Burdett Trust. The funder (the Hospital) had no role in the overall study design; collection, analysis and interpretation of data; or in the writing of the report. Members of the Hospital were, however, consulted regarding the design of the data collection tools (for appropriateness of the phrasing of questions) and the timing of data collection. The funder further contributed to the decision to submit an article for publication. The research team was independent from the funding source and all authors had access to the anonymized data as it appeared in the final report.

CRediT authorship contribution statement

Ann Ooms: Conceptualization, Methodology, Validation, Formal analysis, Investigation, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration. **Celayne Heaton-Shrestha:** Conceptualization, Methodology, Validation, Formal analysis, Investigation, Writing – original draft, Writing – review & editing, Visualization. **Sarah Connor:** Conceptualization, Validation. **Siobhan McCawley:** Conceptualization, Validation, Writing – review & editing. **Jennie McShannon:** Conceptualization, Validation, Writing – review & editing. **Graham Music:** Conceptualization, Methodology, Validation, Writing – review & editing. **Kay Trainor:** Conceptualization, Validation, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ijnurstu.2022.104257.

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