

Westminster REFRAME workshops for foundation year doctors 2016-2017: Evaluation report

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Executive summary

Introduction

The Foundation Programme is the postgraduate medical training that UK medical graduates undertake after finishing medical school and prior to choosing a speciality training. It marks the move from medical school into employment as a medical professional. Whilst this is often an exciting and rewarding time, it is also a key transitional time which brings with it feelings of uncertainty, anxiety and unpreparedness. This period is reported as the most stressful in a junior doctor's career. Resilience training has the potential to improve physician wellness by alleviating distress. The Westminster REFRAME workshop is a half day, intensive resilience-training event for Foundation Year 1 (FY1) doctors, which is designed to help them cope better with the personal and professional challenges of this demanding, transitional time. The workshop has been presented to FY1s at Guy's and St Thomas' Hospital since 2014, and this evaluation report, using a newly designed evaluation strategy to enhance questionnaire completion rates, presents findings for the 2016/7 cohort of doctors.

Methods

All FY1 doctors at Guy's and St Thomas' Hospital were asked to attend the course, and all attendees were invited to take part in the evaluation. Questionnaires were used to collect quantitative and qualitative data from participants at three time points: immediately prior the workshop (baseline), immediately after the workshop (post workshop), and two months after the workshop (follow-up). Outcome measures collected included perceived stress and positive well-being scales. Participants were also asked to rate six statements about the workshop (e.g. 'the workshop was useful to me'; 'The ideas and concepts were communicated clearly'). Open-ended questions sought participants' experiences and perceptions of the workshop and any changes made as a result of attending.

Key findings

- Of the 52 FY1 doctors attending a Westminster REFRAME resilience workshop 49 completed baseline and post-workshop questionnaires, and 43 completed a follow-up questionnaire.
- Participant ratings of different aspects of the workshop overall presented a positive impression of participants' experiences of the day. Many responses rated various aspects of the workshop with the maximum scores of 4 and 5.
- Two-thirds of participants said that the workshop was useful, with 21% unsure how useful the workshop had been and 11% reporting not finding it useful. Eighty-one percent of participants felt that topics covered were useful for their work. Over three-quarters of participants said that they intended to use some of the techniques they had learnt on the workshop.
- Participants particularly liked learning tips and practical solutions to reduce stress and improve well-being and resilience; and reported wanting to have even more of this in the workshop.
- Participants also valued sharing experiences of work stress with peers, having time to reflect on stress and coping, and learning about stress and resilience.

- Eighty-five percent of participants reported that they intended to do at least one thing differently as a result of attending the workshop; 76% of those who completed a follow-up questionnaire had actually done something differently. Changes made included using breathing techniques learnt in the workshop, meditation, taking more breaks/time out, adopting a different mental approach to stress/stressful situations, increased reflection on stressful situations, and accepting help.
- Changes resulted in participants reporting that they were managing stress more effectively, had improved focus/concentration, were able to think more clearly under stress, and had an improved work/life balance.
- Just over half of participants felt that their patients had benefited from their attending resilience training, because the workshop had enabled them to carry out their jobs more effectively and/or communicate better with patients.
- Participants reported high levels of stress at baseline.
- Comparisons between baseline and 2 month follow-up questionnaires revealed stress levels and well-being ratings improved, but that this change was not statistically significant.
- The Westminster REFRAME website intended to support FY1s to make changes was not used by participants. The main reasons for not doing so included not being aware that it existed, lack of time, and 'forgot about it'.
- The new evaluation strategy (e.g. new evaluation procedures, making participating in the evaluation mandatory, improved questionnaires) improved the questionnaire completion rate and provided more contextual data about how participants were experiencing the workshop.

Participant quotes

"Encouraged open discussion around issues of resilience. It was also nice to know that other people experience the same levels of stress, find out ways to deal with it."
P11

"Very much enjoyed breathing exercise and practising mindfulness techniques – found it very relaxing." P20

"Great tips on how to manage the many common challenges of being a Dr in the NHS today." P15

"The technique of slow breathing has helped me to calm down several times when I was under severe stress." P32

"Very busy days with more jobs than time - expected to be in attendance on ward a lot, difficult to take time for breaks." P20

"Introduced some calm into hectic days, clear my mind and focus on most important tasks." P20

Conclusions

The Westminster REFRAME workshop was generally well received by FY1 doctors. The workshop was able to instigate at least some behaviour change amongst a number of participants, who reported managing their well-being and stress differently as a result of attending the course. However, these changes did not translate into statistically significant changes in stress and well-being outcome measures.

Additional work to support and encourage behaviour change after the workshop may be useful, particularly additional promotion of the resilience website during and after the workshop.

The new evaluation strategy improved the questionnaire completion rate and provided more reliable data on the workshop's impact. Inclusion of a stress outcome measure was useful, as it identified this group's high perceived levels of stress. The stronger qualitative element of the evaluation was helpful in providing data on how participants were making use of what they had learnt on the course.

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Background literature

Foundation year doctors

The Foundation Programme is the postgraduate medical training placement that UK medical graduates undertake after finishing medical school and prior to choosing a specialty training. The two-year course (FY1 and FY2) comprises a series of supervised placements across different medical specialities. Foundation training allows medical graduates to put into practice what they have learnt at medical school and supports them to develop the skills and experience needed to work as an independent doctor. It marks the move from medical training into employment as a medical professional (Royal College of Physicians, 2015). With the relatively sudden transition from medical school to employment, new doctors in foundation year posts have clinical responsibility for patients for the first time.

There are many positives for foundation year (FY) doctors at this time in their careers; high levels of satisfaction with their training are reported (GMC, 2016), as well as enjoyment and reward from helping patients, feelings of making a difference, enjoyment from teaching medical students and satisfaction at being 'taken seriously' (Goodyear, 2014; Prince, Van De Wiel, Van Der Vleuten, Bsoshuizen, & Scherpbier, 2004).

However, the FY1 year has been identified as a key transitional time which brings with it feelings of uncertainty, anxiety and unpreparedness. FY1s report anxiety related to their additional responsibilities and potential repercussions their lack of experience might have on patient care (Bullock et al., 2013). Many challenges have been reported, such as dealing with new information, increased time pressure, prescribing, patient/relative communication, lack of consistent team structure, decision-making, time management, prioritizing tasks, the large administrative component of the role, working in multi-professional teams, and experiencing the sudden death of a patient (Brennan et al., 2010; Bullock et al., 2013; Goodyear, 2014; Kellett et al., 2015).

At this time FY doctors can feel unsupported (Brennan et al., 2010); whilst senior colleague support and feedback are much valued, some FYs report that it can be lacking and there may be too little time for discussion of critical incidents and difficult issues (Goodyear, 2014). Additionally, FY1 doctors should they need support, are still unfamiliar with how and where to access it appropriately (Kellett et al., 2015). FY doctors find this period is often characterised by a loss of work-life balance, with long working hours and shift patterns, which are accompanied by the additional pressures of studying for further qualifications and completion of the e-portfolio. Trainees regularly move workplaces, which for some leads to separation from friends and family. Inherently resilient though most trainees will be, having survived the rigours of medical school, they will be affected in various ways by the loss of leisure time and the buffering effects of being well-mentored and supported by family and friends. In short, the nature of the FY period and at times the pressures of a high workload can leave trainees feeling isolated (Goodyear, 2014; Rich, Viney, Needleman, Griffin, & Woolf, 2016).

Goodyear (2014) characterises the FY1 year as time when - in navigating this uncharted territory - new doctors establish professional identities and work habits. These personas and work-styles, in many instances lifelong, will sometimes be dysfunctional. While the

General Medical Council (GMC) might be correct in saying that FY1 doctors are aware of their duty to attend to their self-care and well-being (General Medical Council, 2009), nonetheless levels of work related stress in FY1 doctors are high. A GMC survey found that FY1s reported the most stress among all trainee doctors (foundation training and speciality training): over 25% of FY1s responded positively to the question 'During this post have you felt unwell as a result of work-related stress?' compared with the 20% average. Reports of work-related stress were most commonly associated with high workload especially when trainees were working beyond their rostered hours, were short of sleep and when the intensity of work was greatest (Bruce, Carlisle, & Smith, 2010).

The pressures FY doctors face seem likely to intensify. With demands on health and social care services increasing there is currently a state of 'unease' in the UK medical profession (GMC, 2016). NHS Providers, who speak for hospital trust chairs and chief executives, have warned that the NHS in England is 'under the greatest pressure in generations' (Campbell, 2016). The GMC annual survey of FY doctors shows that many and increasing numbers are reporting heavy workloads and decreasing work-satisfaction, along with concerns about the new contractual arrangements in the England (GMC, 2016; Rich et al., 2016). Though Foundation Programme students' drop out rates are relatively low, a growing number are failing to complete or intend to leave the NHS on completion of the Programme: in 2015 only 52% of doctors who finished the Foundation Programme said they would stay in the NHS – the lowest proportion in the health service's history and down from 72% in 2011 (Campbell, 2015).

Burnout

Burnout is a work-related syndrome involving emotional exhaustion, depersonalisation, and a sense of reduced personal effectiveness. There is growing evidence of burnout among medical students (Cecil, McHale, Hart, & Laidlaw, 2014) and qualified doctors in the UK (Imo, 2016). Doctors' high burnout scores have been linked with significant differences in self-perceived major medical errors (West, Tan, Habermann, Sloan, & Shanafelt, 2009) work hours (Shanafelt et al., 2016), and suicidal ideation (Shanafelt, Balch, Dyrbye, & et al., 2011). On the other hand, doctors who are more empathic, or who deal more effectively with the inherent challenges of a medical life, may be both safer and more effective (Newton 2013). If doctors are to go the career distance and effectively carry out the daily demands of their job without becoming workaholic or burning out, and be accessible to patients without losing appropriate boundaries, they need considerable personal resilience (Peters, Lynch, Manning, Lewith, & Pommerening, 2016).

Resilience

Resilience is individual's ability to adapt and manage stress and adversity. This is not a static trait but varies with circumstances, knowledge, skills, and attitudes (Lown, Lewith, Simon, & Peters, 2015). The dimensions of resilience (which include self-efficacy, self-control, ability to engage support and help, learning from difficulties, and persistence despite blocks to progress) are all recognised as qualities that are important in clinical leaders (Howe, Smajdor, & Stöckl, 2012). The GMC recommend that resilience training is one of the resources available to support the transition from student to junior doctor (Horsfall, 2014).

Resilience has the potential to improve physician wellness by mitigating distress, especially when used for prevention rather than as a response to existing problems (Johnson, Panagioti, Bass, Ramsey, & Harrison, 2016; Lee, Stewart, & Brown, 2008). Evidence suggests that resilient doctors deliver higher quality care, and are less prone to medication errors and getting sick/leaving practice, all of which have cost implications for the NHS (Epstein, 2014; Lown et al., 2015). The work setting, team dynamics, management attitudes and the organisational culture, all of which may either support or erode a doctor's resilience, will have a major influence on professional behaviour and career sustainability. Given that even the most basic requirements for good professional standards demand so much of a doctor, the need for individual resilience and its study become necessary (Peters et al., 2016).

The Westminster REFRAME workshop

The Westminster REFRAME workshop is a half day, intensive resilience-training programme for FY1 doctors. It was designed by Professor David Peters and Professor George Lewith at the Westminster Centre for Resilience. The workshop is highly interactive and focuses on self-regulation and self-care, as well as exploring work-habits, lifestyle, mind-set, strategies for controlling workload, setting goals, planning, prioritizing, and saying no to unreasonable requests. The event is designed for groups of up to 20. It aims to engage participants both in sharing experiences and solutions and, with the help of facilitators, to try out self-regulating techniques (e.g. mindfulness, slow breathing). Attendees are encouraged to set themselves SMARTER goals, for experimenting with small positive changes that could boost their resilience.

The rationale for the workshop is to reduce the negative impact on doctors and frontline health professionals from their work, and to promote more effective recovery from the adversity and set-backs that they may experience. Developing resilience during the critical FY years should enhance the well-being of these young doctors, improve their job satisfaction, enable their retention within the UK profession, and help them cope and perform safely and competently.

Westminster REFRAME workshops have been delivered to FY1 doctors at Guy's and St Thomas' Hospital since 2014. Initial evaluation data showed that participants valued the workshops and found them useful (Lynch, Peters, & Lewith, 2016). However, there have been challenges in obtaining follow-up data. Building on their learning from previous evaluations, the Westminster REFRAME steering group designed a new evaluation strategy in order to maximise response to follow-up and improve robustness of findings (e.g. new evaluation procedures, making participating in the evaluation mandatory, reworked questionnaires). This report presents the Westminster REFRAME workshop evaluation findings using the new evaluation strategy.

Methods

Participants

Attending a Westminster REFRAME resilience workshop was a mandatory part of FY1 training at Guy's and St Thomas' Hospital. All workshop attendees were invited to participate in the evaluation.

Data collection

Questionnaires were used to collect quantitative and qualitative data from participants at three time points: immediately prior the workshop (baseline), immediately after the workshop (post workshop), and two months after the workshop (follow-up). The following data were collected:

Baseline (immediately prior to the workshop)

Demographic data including age, ethnicity and sex.

Perceived stress was measured using the Perceived Stress Scale (PSS)(Cohen, Kamarck, & Mermelstein, 1983). The PSS was designed to measure the degree to which participants appraise situations in their lives as stressful. Thus, the authors designed it to be a direct measure of the stress experienced by the respondent, not a measure of psychological symptomology. The 10 PSS items explore feelings and thoughts during the last month and respondents are asked how often they felt a certain way. Each item is scored on a scale of 0 to 4, which are summed to give a total score of between 0 and 40. Higher scores indicate increased stress. The PSS has established validity and reliability (Cohen et al., 1983).

Positive well-being was measured using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Tennant et al., 2007). The WEMWBS is a measure of positive mental well-being encompassing items which assess both the hedonic (pleasure) and eudaimonic (virtue, using one's potential and skills) perspectives of happiness. We used the shorter seven-item version of the scale which not only is quicker to complete but may also be more robust than the 14-item version (Stewart-Brown et al., 2009). Items have five response categories (none of the time, rarely, some of the time, often, all of the time). Responses are scored from 1 to 5, providing a total score ranging from 7 to 35. The scale has established validity and reliability (Tennant et al., 2007).

Post-workshop (immediately after the workshop)

Participants' perceptions of the workshop were collected via open-ended questions collecting qualitative data. Questions included 'Please tell us what made you attend this course?'; 'What did you like about the course?'; 'What could be improved about the course?'; and 'Do you intend to try to do anything differently after attending this course?'

Participants ratings of the workshop were collected using the Westminster Quantitative Feedback Questionnaire, a 6-item measure of course satisfaction. Participants are asked to rate six statements on a 5-point Likert scale including 'The workshop was useful to me'; 'The ideas and concepts were communicated clearly'; 'The pace of the day was just right'; 'The balance between theory and experiential learning was just right'; 'The content and topics covered were useful for me for work'; and 'I will use some of the techniques learnt'.

Follow-up (2 months after the workshop)

Changes made by participants as a result of what they learnt on the workshop were ascertained using open-ended questions collecting qualitative data. Participants were asked

what they had put into practice from the workshop and how this helped them; about any barriers or facilitators to putting learning into practice; if they had used the REFRAME website and if they had found it useful; and if they felt that their patients had benefited from them receiving resilience training.

Changes in mental well-being were ascertained from a repeated administration of the PSS and WEMWBS scales.

Procedure

At the beginning of the Westminster REFRAME resilience workshop a researcher explained the evaluation to participants and invited them to participate. Evaluation packs were handed out, which included a participant information sheet, consent form, the baseline questionnaire and post-workshop questionnaire. Participants were given time to read the information, ask questions and to complete their baseline questionnaire and sign the consent form. Then the workshop commenced. At the end of the workshop participants were given time to complete their post-workshop questionnaire. They then placed both their completed questionnaires and consent form into an envelope and returned them to the workshop facilitator, who then returned all envelopes to the researcher.

Two months after the workshop, participants were emailed a link to complete their follow-up questionnaire online.

Data analysis

Quantitative data were analysed using SPSS version 22. Statistical significance was set at the 5% level. To ensure a conservative analysis, non-parametric tests (Mann Whitney-U, Wilcoxon Signed Rank, McNemar and Chi-square as appropriate) were used throughout. Initially, data were examined for differences between those who did and did not return their post-workshop questionnaire on baseline variables. To examine patient outcomes Wilcoxon Signed Rank tests were used to compare pre- and follow-up data for the PSS and WEMWBS. To explore differences in change in outcome for those who did and did not put into practice what they had learnt at the workshop, change scores for both the PSS and the WEMWBS were calculated and compared using a Mann Whitney-U test for those who reported making/not making changes after the workshop.

Qualitative data collected from open-ended questions on the questionnaires were analysed using thematic analysis (Braun & Clarke, 2006). The researcher (Dr Cheshire) immersed herself in the data, highlighting key sections of text and words. An initial list of themes/codes was developed and then organised into themes to create a final coding list. Typical quotes are used to illustrate findings.

Findings

Participants

Fifty-two FY doctors attended a Westminster REFRAME workshop during the 2016/17 academic year. Forty-nine (94%) agreed to participate and completed baseline and post-workshop questionnaires, and 43 (88%) of these completed their follow-up questionnaire.

Demographics

Participants who completed a baseline questionnaire (n=49) had a mean age of 26 years (range 22-34). There were more females (61%) than males (39%). There was a range of ethnicities, but the largest group were White-British (51%), see Table 1.

Participants reported elevated levels of stress: Participants had an average (mean) score on the Perceived Stress Scale of 19.5 (range 6-27). A score of around 13 is considered average on this scale, scores of 20 or higher are considered to reflect high stress (Table 3).

Table 1 – Participant demographics

Demographic	Mean (range)
Age	26 (22-34)
	Number (%)
Sex	
Female	30 (61)
Male	19 (39)
Ethnicity	
White – British	25 (51)
White – Other	8 (17)
Asian	4 (8)
Mixed race	3 (6)
Black/Afro-Caribbean/African	2 (4)
Arabic	2 (4)
Chinese	1 (2)
Missing	4 (8)

Experiences of the Westminster REFRAME workshop

Westminster evaluation scales

The Westminster evaluation scales overall presented a positive picture of participants' experiences of the workshop: the majority of responses rated different aspects of the workshop with the maximum scores of 4 and 5 (agree or strongly agree). However, some scores were in the lower score range (1-3). Two thirds of participants said that the workshop was useful, with 21% unsure how useful the workshop had been and 11% reporting not finding it useful. However, 81% of participants felt that topics covered were useful for their work. Over three-quarters of participant said that they intended to use some of the techniques they had learnt on the workshop, see Figures 1 to 6.

Figure 1 – The workshop was useful to me

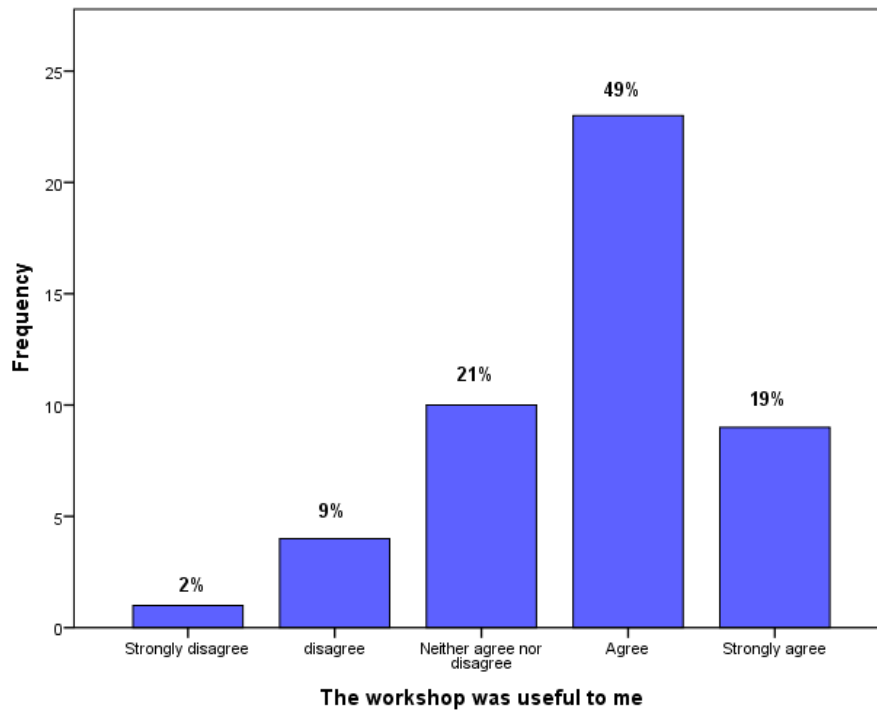


Figure 2 - The ideas and concepts were communicated clearly

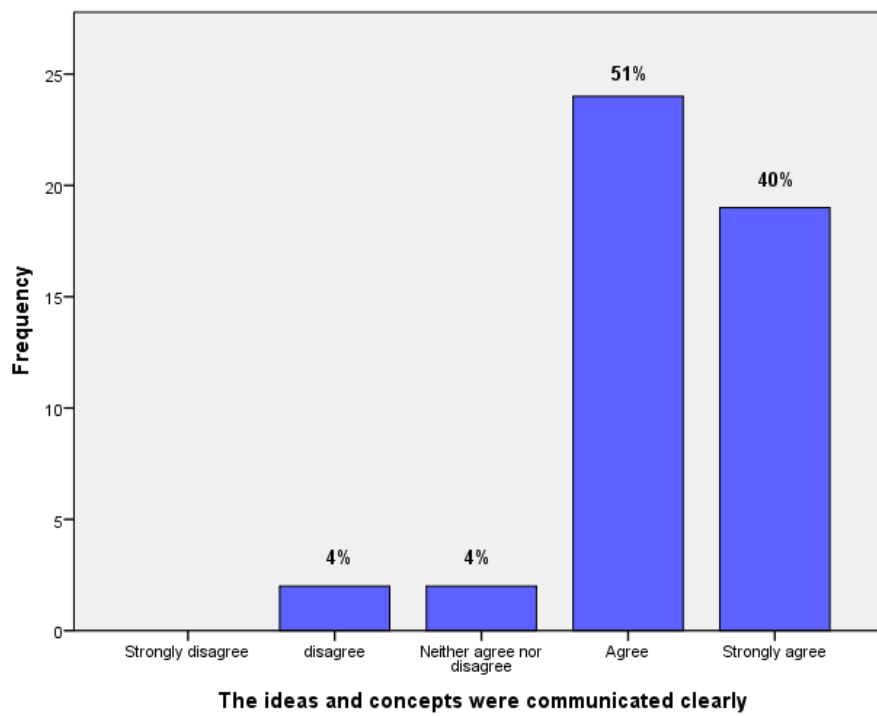


Figure 3- The pace of the day was just right

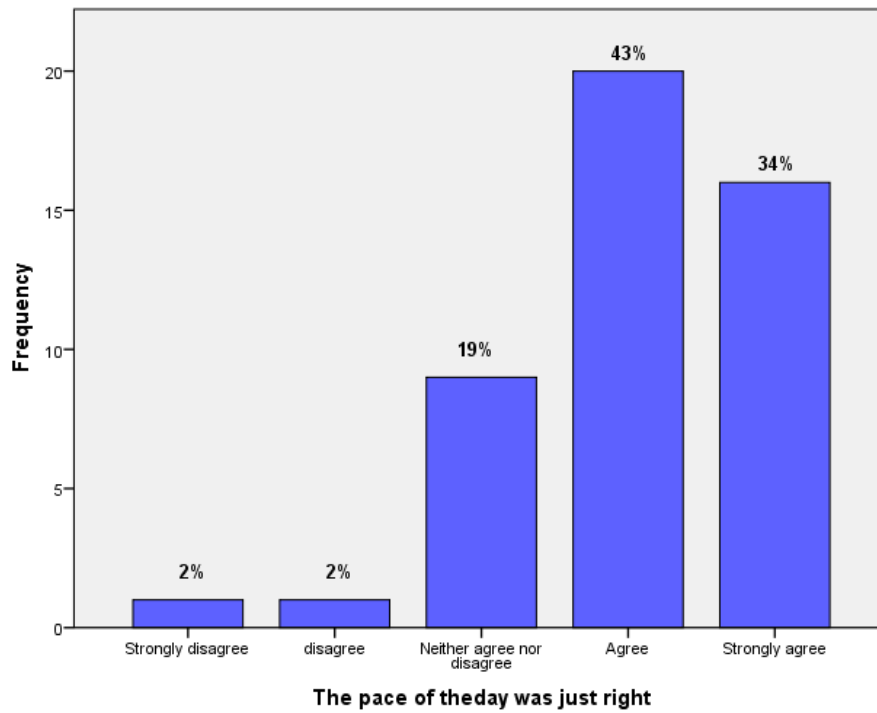


Figure 4 - The balance between theory and experiential learning was just right

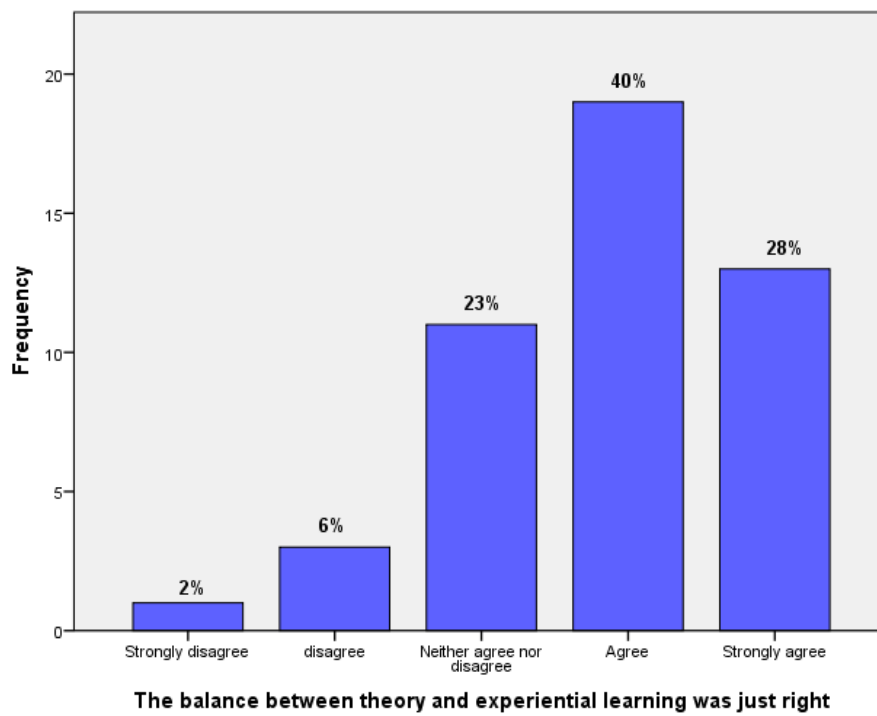


Figure 5 - The content and topics covered were useful for my work

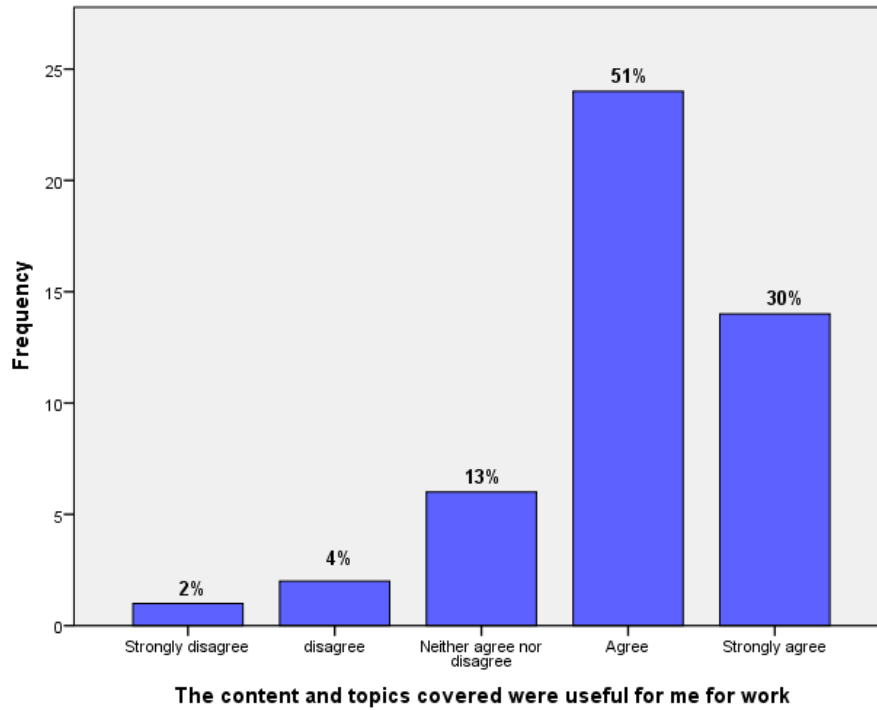
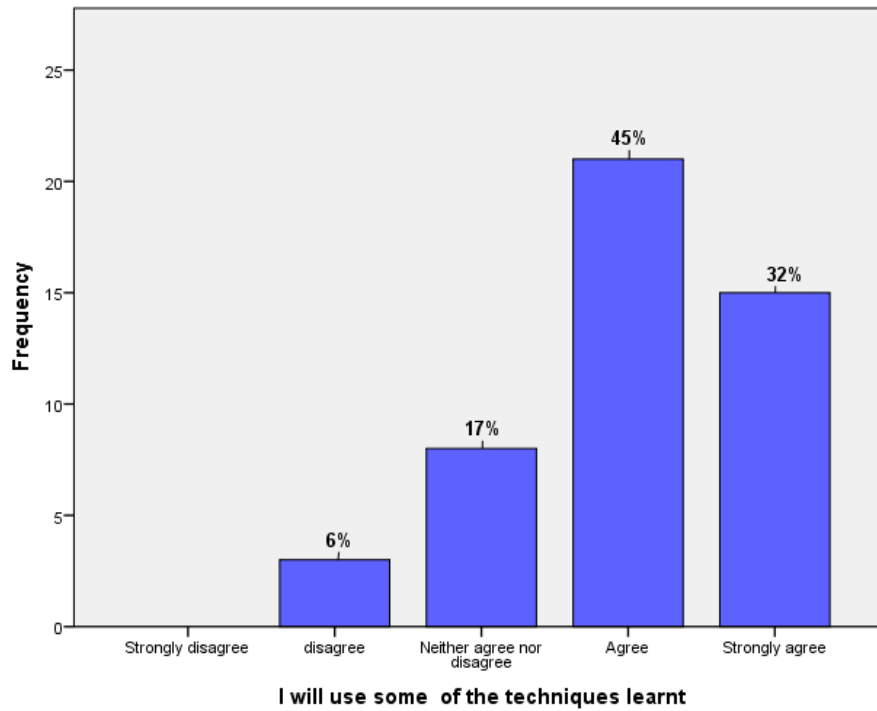


Figure 6 - I will use some of the techniques learnt



Qualitative feedback on Westminster REFRAME workshop

Open-ended questions provided insights into the participants' ratings of the workshop. There were a range of aspects which participants reported they liked about the workshop. A number reported that they valued being able to share experiences of work stress and coping with their colleagues. This sharing resulted in some participants feeling reassured when they realised many of their peers felt the same as them about work. Key to this sharing was the creation of an open environment facilitated by the workshop leaders:

"Encouraged open discussion around issues of resilience. It was also nice to know that other people experience the same levels of stress, find out ways to deal with it."
P11

"Reassuring to learn others are having similar issues." P18

Other participants reported that they appreciated the space and time the workshop provided for self-reflection around issues of stress and coping, which they felt they did not often have the opportunity to do. This had resulted in some participants reporting that the course had given them a greater self-awareness in terms of their own response to stress, well-being and resilience.

"It was really helpful to identify the areas where I was not taking proper care of myself." P24

"Encouraged self-reflection and identified areas which need to be addressed. Importance of different aspects which contribute to resilience. How to recognise stress in self and avoid burnout." P30

"Time to think about looking after yourself/oneself which is rare!" P54

Some participants reported that the information provided at the workshop on resilience and the neurophysiology of stress had been interesting. Learning about physiological monitoring of stress responses was highlighted as being of particular interest.

"How breathing affects heart rate and vagal response and knock on effects of this in thinking and decision making/emotions." P18

A number of participants specifically said that they valued learning tips and practical solutions to reduce stress and improve resilience: some spoke of 'practical' solutions generally, others mentioned specific techniques they liked including mindfulness and breathing. One participant said that they appreciated the solutions having a 'scientific' basis. Others particularly valued the demonstrations/practice of specific techniques, suggesting that it had allowed them to personally experience how effective they could be.

"Very much enjoyed breathing exercise and practising mindfulness techniques – found it very relaxing." P20

"Great tips on how to manage the many common challenges of being a Dr in the NHS today." P15

"Biofeedback incredibly useful. Have tried meditative breathing before and felt it didn't help. After today I realise that it does and with practice will only help more with day to day stress." P22

Other participants spoke about specifics of the course delivery saying that they had enjoyed the relaxed, open and interactive atmosphere of the course, or that they thought the facilitators had been good. Some had experienced the workshop as a relaxing 'break' from their day. Two participants said the workshop had been the right length, one noted that they would have liked it to have been shorter.

"Good speaker. Relaxing – nice break." p40

"I thought the guy in charge/facilitated a really comfortable atmosphere." P25

Whilst feedback on the course was generally positive, some areas for improvement were suggested. Requests for changes to the course predominantly related to wanting more practical ideas and solutions of how reduce stress and improve resilience and well-being. One participant requested more information on physiology.

"Possibly less theory about resilience and more real world examples of how to resolve problems." P10

"Would be good to have more specific coping mechanisms i.e. lots of problems were brought up without many solutions." P25

"More focussed on how to be resilient from earlier on." P38

One participant felt pessimistic about the workshop's ability to help with what they felt was an intrinsically stressful profession, and had found that the information provided on the course was nothing new.

"I think the course did not give me any info/knowledge that is going to change my life much because of the kind of profession we are in. I appreciate this is an effort to help us destress but it was stuff we've been told time and again which hasn't helped much." P17

A small number of participants suggested that they would like fewer slides and more discussion. Suggestions to facilitate discussions included having fewer participants in the group or putting 'suggestions' in a hat so that they were anonymous. One participant said that they would like the workshop to have been more tailored to FYs, another requested some information about course content prior to the workshop.

"When asking for suggestions/input might be better to have it in a hat or something, more anonymous?" P37

"Lots of slides were rushed through, perhaps consider having fewer than 68." P42

Two participants highlighted that the timing of the course could be improved, for example having it in the morning so that they did not need to leave the ward on time in order to attend. One participant would have liked tea and biscuits.

"It would be great to have it in the morning because I struggled to get away from the ward to attend." P32

Eighty-five percent of participants said that they intended to try to do at least one thing differently as a result of attending the Westminster REFRAME workshop these included putting specific well-being boosting techniques into practice, making lifestyle changes or making cognitive/behavioural adjustments, see Table 2 for more details.

Table 2 - What participants intended to do differently after attending resilience training

	Number	(Percent)
Use of specific techniques		
Breathing exercise	12	(24%)
Goal setting	5	(10%)
Meditation	3	(6%)
Relaxation techniques (at work & in personal life)	2	(4%)
Take time out	1	(2%)
Lifestyle changes		
Exercise more	8	(16%)
Lifestyle change (not specified)	6	(12%)
Drink more water	2	(4%)
Improve self care	1	(2%)
Give up smoking	1	(2%)
Cognitive/behavioural adjustments		
Be more self-reflective/aware	4	(8%)
Be more disciplined/organised	3	(6%)
Self-acceptance	1	(2%)
Think about the big picture	1	(2%)
Be more assertive	1	(2%)
Ask others for support at work	1	(2%)
Be more positive	1	(2%)

Changes after the Westminster REFRAME workshop

Changes to participant well-being

Of the 49 participants who completed a baseline questionnaire, 43 (88%) completed a follow-up questionnaire. Examination of responder/non-responder data (for some variables it was not possible to conduct statistical tests due to the small numbers of participants in certain groups) revealed that White-British participants were more likely to complete a follow-up questionnaire compared to other ethnicities. All statistical analyses were based upon the 43 completed data sets.

Participants' scores on the Perceived Stress Scale (PSS) and the Warwick and Edinburgh Mental Well-Being Scale (WEMWBS) at baseline and follow-up were compared (n=43). Comparisons revealed that although scores improved, there were no statistically significant

changes in either the PSS (p=0.113) or the WEMWBS (p=0.191), see Table 3. Additionally, there were no statistically significant differences in change found between those reporting that they had used some of the techniques they learned on the course at follow-up (74%) and those who had not (26%).

Table 3 – Stress and well-being scores at baseline and follow-up

	n	Pre-workshop Median (interquartile range)	Post-workshop Median (interquartile range)	p-value
PSS (range 0-40 ↑ = worse)	43	18.5 (15.8-22.3)	17 (13.0-20.0)	0.113
WEMWBS (range 7-35 ↑ = better)	43	23 (21.0-26.0)	25 (22.0-27.0)	0.191

Putting REFRAME techniques into practice

Participants who responded to the follow-up questionnaire (n=43) were asked if they had been able to put anything into practice that they had learnt at the workshop: 74% said ‘yes’, 26% said ‘no’. Participants described what they had been doing differently as a result of attending a workshop, these were often simple things not requiring much time. Many participants said that they had been using the breathing techniques that they had learnt on the workshop, particularly in the midst of stressful work situations or, for one participant, if they were still feeling stressed once they got home from work. A number of other participants had been using mindfulness techniques or meditating, either during high stress times at work or as a regular ongoing practice.

“The technique of slow breathing has helped me to calm down several times when I was under severe stress.” P32

“I use Headspace almost daily.” P47

Other participants described how they were now trying to take more breaks at work or time out to relax outside of work, this could mean planning social activities, leaving work on time, or having time to themselves without technology.

“Planning social activities after work.” P22

“More resilient - giving myself breaks.” P19

Taking a different mental approach had been important for some participants, for example acknowledging when a situation was out of their control and accepting that they were unable to change it. Others said that they had been taking more time to reflect on the stressful situations that they found themselves in, often with the goal of increasing their

awareness of the situation and how they were responding to it. This could allow participants to take steps to change their response to the situation.

"Identifying source of stress and reflecting on why they are stressful." P10
"Tried to not allow the things which are out of my control affect me too profoundly."
P14

Two participants described how they were accepting help more often. One participant was paying more attention to their eating and sleeping routines, and another was taking time to 'ground' themselves.

"More attention to eating and sleeping well which impacts the working day." P28
"Making sure I leave on time and don't be afraid to handover appropriate jobs. Accept help." P35

Participants described how making these simple changes had affected them. The most common affect was to feel calmer and/or less stressed. Others felt that they were managing/coping with stressful situations more effectively. Some participants described how they had an improved focus and concentration, were reflecting more, or were able to think more clearly when under stress.

"Calming effect, relieves some of the anxiety and stress that can follow me home."
P21
"I have managed to reduce my stress levels in acute situations." P32
"Allowed me to manage stress and pressure better. P12
"Introduced some calm into hectic days, clear my mind and focus on most important tasks." P20

Another key impact was on participants' personal lives; many described how they were prioritising their personal life more resulting in an improved work/life balance; others found that they were more relaxed in their personal life because they were not taking their work stress home with them. One participant noted that their improved personal life meant they were more productive at work. One participant said that their sleep had improved.

"Able to prioritise my personal life - ensuring I meet friends." P19
"Time to relax in evening therefore more productive at work." 35

Participants also discussed barriers and facilitators to putting changes into practice. A key barrier cited was a lack of time as a result of a high workload, others found their high stress levels prohibitive to making changes. Two participants honestly acknowledged that they themselves were barriers to making any changes and that it was difficult to change habits.

"Very busy days with more jobs than time - expected to be in attendance on ward a lot, difficult to take time for breaks." P20
"Workload. Very difficult to have any time to myself." P24
"Pressure. Relentless pressure." P26
"Myself: not putting the time in to put the things learnt into practice." P38

Few participants described facilitators to making changes, those who did said that friends and colleagues had been helpful, particularly for one participant who had attended the workshop with a friend. Others highlighted that the demonstration of techniques in the workshop had helped to highlight how effective the techniques could be and understand the importance of making changes. Some participants reported finding it easier to put ideas into practice with certain rotations. One participant had found the Headspace App useful.

“The demonstration in the class - to see how effective it is.” P40

“Culture of handing over on Paediatrics is MUCH better than General Medicine.” P35

The Westminster REFRAME website

The Westminster REFRAME website was intended to support participants to make changes to improve their resilience, details of how to access the website were emailed to participants after they attended their workshop. However, none of the participants had used the website, key reasons for not doing so included not being aware that it existed, lack of time, and forgot about it (see Table 4)

Table 4 - Reasons why participants had not used the REFRAME website

Reason	Number	percent
Not aware it existed	13	(30%)
No time	10	(23%)
Forgot about it	8	(19%)
Not felt need/or that it would be useful	7	(16%)
Planning to but haven't yet	1	(2%)
No reason given	4	(9%)

Benefit to patients

Participants were also asked if they felt receiving resilience training had potentially benefitted their patients. Fifty-three percent of participants agreed that it did benefit their patients (or at least had the potential to). Many participants said that they felt because resilience training had helped them to be less stressed/calmer, they were able to carry out their job more effectively and/or better communicate with their patients. One participant felt their calmness might transfer to the patient.

“Yes because I am more able to work rather than stress out.” P32

“I'm calmer and probably better communication skills and more time to be empathetic / build relationships.” P35

Other participants said they were unsure (9%) or did not feel their patients benefitted (14%) from their receiving resilience training. This was because some participants had not felt the course had personally benefitted them. One participant felt that the effects of the course were predominantly related to their personal, not professional life.

“Patients benefit from having resilient doctors, but unclear how much individual training sessions benefits patients.” P23

“For my patients no, as I do not believe the course has changed my practice or resilience mechanisms.” P45

“More a personal benefit as the stress relief is temporary and as I only use it at home, the effects don't carry to work.” P21

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