Does the intervention of mindfulness reduce levels of burnout and compassion fatigue and increase resilience in pre-registration students? A pilot study.

Mid-point summary

Brief overview

Principal Aim of the study
To investigate the impact of the 5 week Living Mindfully 'Mindfulness Based Stress Reduction' (MBSR) programme on pre-registration students in one education establishment.

Primary Research question
Can a mindfulness intervention lead to a reduction in burnout and compassion fatigue?

Secondary Research questions
Can increased mindfulness enhance resilience?
Does the mindfulness intervention increase mindfulness in pre-registration students?

Outcomes
The outcome of the study will be to understand if there is a benefit to introducing a mindfulness programme to all undergraduate training programmes across UK Radiotherapy courses. The study is using a number of validated tools to measure the effect from the intervention. A positive outcome, showing a reduction in burnout and compassion fatigue and an increase in resilience, from the mindfulness programme then arms future practitioners with skills to enable a positive experience for students, practitioners, service users and carers within the health care environment.

Method
The study has used a convenience sampling and the maximum sample was set at 12 participants, as this is the maximum group size for the intervention. Participation in the study was offered to students at the beginning of the final year post graduate diploma (PGD) in one institution. The control group is the first year PGD students from the same Institution. The control group have been asked to complete the validated tools at the same intervals as the intervention group described above.

Data collection
At the start of the study the students were asked to complete; a demographic questionnaire, the five facet mindfulness short form questionnaire (to measure mindfulness), Maslach Burnout Inventory Student Survey (MBI-SS) (to measure burnout), Professional Quality of Life (ProQOL) 5 questionnaire (to measure compassion fatigue) and the Connor Davidson Resilience-short form scale (to measure resilience).

Data analysis
As a pilot study the aim was to recruit 12 students to the intervention group and 12 in the control group. Due to the small sample size for this study primarily descriptive statistics will be produced from the validated tools using SPSS (version 21). For each of the research questions the mean, median and standard deviation of the scores for each construct (mindfulness, burnout, compassion fatigue and resilience) will be calculated. The data will be collected at week 0, week 5, 3 months and 12 months after.

Recruitment
Recruitment for the study started as planned in early September with information being sent to the intervention cohort (year 2 PgD). Recruitment started in mid-September for the control group (year 1 PgD) as they had just started the course and we did not want to overburden them. Unfortunately, recruitment was a challenge, to begin with we had a number of students quickly sign up but then a very slow up take, meaning we were not near our target of 12 participants in each group. The project was continually promoted to the students to try and gain more participants, with little success as we were conscious of not over stepping the researcher/teacher power boundaries. Unfortunately, a week before the planned start date the Mindfulness teacher felt the sample was too small and wanted to move the course so we could gain a higher sample size. Due to the academic timetable and the wide geographic location of clinical placements it was not achievable to move things significantly. We then negotiated to delay things by a week to gain more participants. This additional week did mean that the final session of the course would be delivered on the first Monday of clinical placement and additional support was put in place i.e., arrangement for the day off placement and provision for expenses for those who would be out of pocket financially.

The final number of participants were 8 participants for the mindfulness course and 6 participants in the control group. As mentioned in the full CoRips bid, the mindfulness company does complete

orientations to support the students as they start the course. There were a number of issues with this as the students did not follow up meeting requests or arrange call backs. This is not detrimental to the study but would have been something that we would have preferred was completed.

Recruitment lessons learnt-
- Not everyone is as enthusiastic about the project as you are
- Recruitment via a workshop taster session with immediate recruitment after may have been more beneficial rather than trying to describe the course through information packs.

Week 0 data collection
The tools for data collection were e-mailed to the students for completion a few days before the commencement of the course, for the intervention and the control group. Some students were organised and completed the tools efficiently some needed reminders. In general the tools were completed fully, although the year 1 PgD students reported difficulty in completing the ProQol tool because they had not been in clinical placement at the point of data collection. This is not something we would have considered an issue but is the way that the tool was interpreted by the participants.

Week 5 data collection
As above the students were e-mailed the tools again and some required repeated e-mail reminders for completion in a timely manner. The tools were fully completed to a better standard at this time point.

Data analysis
The results from the tools were coded and analysed using SPSS. As expected at this point there is no statistically significant differences between week 0 and week 5 or between the control and intervention groups.

What is highlighted from the results is the concerning number of year 2 students (intervention group) who are reporting burnout (see tables below) at week 0 and 5. So aside from whether mindfulness works as an intervention or not, the intervention may have an impact on students feeling competent/incompetent as a therapy radiographer as this score (measured by Professional efficacy-PE) improved for those that showed burnout in this dimension at week 0, it doesn't appear at the moment to have much if any impact on feelings of exhaustion (stress) and students' interpersonal component (measured by cynicism) which was actually very low to begin with anyway.

Should this be replicated across all students it seems they are already suffering from burnout before the stresses of clinical practice on qualification? We can only see that this may deteriorate with the future additional pressures of part time working and debt as funding resources change.

We are about to send the tools out for the 3month time point at the end of this month, it will be very interesting to see what these results present.

Burnout- MBI- Student survey, Professional Efficacy sub scale

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Week 0

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	Mean (SD)	% suffering Burnout
Control	29.5 (1.97)	0
Intervention	23.38 (7.89)	**62.5**

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Week 5

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	Mean (SD)	% suffering burnout
Control	30.5 (1.38)	0
Intervention	26.25 (2.05)	**12.5**

All 5 (intervention group) that had low professional efficacy at the start of the study improved by week 5 and demonstrated high professional efficacy by week 5.