

CoRIPS Research Award 116
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Does the intervention of mindfulness reduce levels of burnout and compassion fatigue and increase resilience in pre-registration students? A pilot study.

£7899.16 awarded to this project

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 the benefits of introducing a mindfulness programme to all undergraduate training programmes across UK Radiotherapy courses. The study will use a number of validated tools to measure the effect from the intervention. A positive outcome 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.

Review of the literature and identification of current gap in knowledge

Mindfulness is the ability to pay attention to the present moment with awareness and without being judgemental (Kabat-Zinn, 1990). The MBSR programme was developed by John Kabat-Zinn in 1979 in the US as an intervention to aid in stress reduction. The original programme is an 8 week course of weekly 2.5 hour sessions covering a variety of meditation practices, reading and exercises (Raab, 2014). For the purpose of this study the principle investigator will be utilising the recently researched 5 week Living Mindfully MBSR programme which is based on the original Kabat-Zin course (Mitchell and Heads, 2015) (see appendix 1).

There is some research evidence examining the impact of mindfulness involving healthcare students (Dobkin and Hutchinson, 2013) that provide evidence of a positive outcome with this intervention. Shapiro, Schwartz and Bonner, (1998) were one of the first to investigate the benefits of mindfulness intervention in medical and pre medical students. The results showed that there was an increase in empathy $P < .001$ (also supported by a study by Beitel, Ferrer and Cecero, 2005) and a reduction in stress related issues (decrease in anxiety $P < .001$ and depression $P < .05$). Beddoe and O'Murphy (2004) investigated the use of mindfulness in increasing empathy and decreasing stress in nursing students. The results found 75% of students found mindfulness techniques beneficial in reducing their stress levels, with a 40-50% increase in empathy scores after the intervention. Many of these studies cover a variety of aims, a variety of professional areas and include a selection of validated assessment tools so it is not clear what benefit mindfulness would have on therapy radiography students who have very specific training demands. The studies were also primarily conducted in the US and Australasia limiting their application to the UK context where training is likely to be very different. .

In this study Burnout is referred to as: "a syndrome of emotional exhaustion, de-personalization and reduced personal accomplishment amongst individuals who work with people" (Maslach, Jackson and Leiter, 2000, pg 4). Recent studies into the therapy radiography workforce have highlighted that a substantial proportion of the workforce are suffering from burnout. Probst et al (2012) highlighted that burnout has consequences on therapy radiographers job satisfaction with subsequent effects on the potential to leave their job or leave the profession. This is further supported by Hutton et al (2014), who also indicate the negative effect this can have on the student population training in the clinical department. Both studies showed an average 38% burnout rate in qualified staff. The issue of burnout within the profession is not only linked with the UK but also the US (Akroyd Caison and Adams, 2002), Canada (Gillies et al, 2014) Australia (Poulsen et al, 2014) and New Zealand (Jasperse, Herst

and Dungey, 2013). These studies focus on the presence of burnout within the profession and many recommend the development of interventions to support staff (Akroyd, Caison and Adams 2002, Probst et al 2012, Hutton et al, 2014 and Jasperse, Herst and Dungey, 2013).

Furthermore, compassion fatigue is closely correlated with burnout. Compassion fatigue is a term coined by Figley (1995, pg 253) "a state of exhaustion and dysfunction (biological, psychologically and socially) as a result of prolonged exposure to compassion stress". There is little research looking specifically at the effects of compassion fatigue for therapy radiographers. Gillies et al (2014) examined the prevalence and potential for developing both burnout and compassion fatigue in therapy radiographers. However, their results mainly looked at those who would be at risk of developing these negative effects.

There is an inconsistency in the definition of resilience (Probst et al, 2014). For the context of this study resilience can be described as hardiness and ability to cope in adversity (Foureur et al 2013). The study by Probst et al (2014) investigated the development of resilience in early career practitioners, to combat burnout within the profession. Addressing the issues with an intervention to improve an individual's coping strategies will have a positive impact on attrition not only in the profession but if taught during training, as recommended by Probst et al (2014), this can improve attrition through the training programmes.

One of the main roles of the therapy radiographer is care of the patient throughout their radiotherapy pathway. This is very intense and can result in effects such as burnout, and compassion fatigue (Newsome, Waldo and Gruszka, 2012) the ability to avoid burnout and compassion fatigue will depend on organisational support and individual resilience (Probst et al, 2014). Compassion is high on the public agenda as service users have an expectation to be treated in accordance with NHS constitution and beliefs (DoH, 2012). As a profession it is recognised the importance of this aspect of the role as well as the recent technical developments in radiotherapy. Many studies have supported the inclusion of a self-care intervention (Probst et al, 2014, Gillies et al, 2014) in therapy radiography training. This is supported further by the indication of mindfulness training in undergraduate doctors (Mental Health Foundation, 2010) and the recommendation of mindfulness training in NHS staff (MAPPG, 2015). The mindfulness intervention research indicates its many benefits not only on a personal level but professionally. By investigating the intervention of mindfulness during training we can aim to seek support in the inclusion of self-care in UK training programmes.

Method

A pre/post test pilot study will be used to investigate the relationship between; the intervention of the 5 week Living Mindfully MBSR programme and its effects on burnout, compassion fatigue and resilience in pre-registration therapy radiography students. Data will be collected from validated tools (see below), at week 0, week 5, 3 months and 12 months post intervention.

Sampling and recruitment strategy

The study will use convenience sampling and will be limited to 12 participants, as this is the maximum group size for the intervention. Participation in the study will be offered to students at the beginning of the final year post graduate diploma (PGD) in one institution. The control group will comprise of the first year PGD students from the same Institution. The control group will be asked to complete the validated tools at the same intervals as the intervention group described above. No inclusion/exclusion criteria are set for this study all students in year 2 will be eligible to participate. The mindfulness practitioner will complete a pre course orientation with each individual participant to ensure they are able to complete the intervention.

Data collection

At the start of the study the students will be 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). It is acknowledged that there is a risk of participant fatigue with a number of tools. However, the aim is to measure a number of outcomes with this intervention.

Data analysis

As a pilot study the aim is to recruit 12 students in 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. The study design will allow for comparison between the intervention group and the control group via each of the tools for each of these timings. Assuming the data is not normally distributed (although the data will be tested for normality) a non-parametric test (for independent samples) will be used for example, the Mann-Whitney U test (or a t-test for independent samples if the data is normally distributed). Data will be compared at each time point and both actual scores and improvement in scores will be assessed over the period of the study

Potential Impact of the study

The potential for this study is the improved self-awareness and self-care in pre-registration students. These individuals will then embark on a career in radiotherapy where they will be better equipped to cope with the daily demands of working in a challenging health care setting. With increasing demands on services and the continued shortage of staff, future colleagues who would have previously left the profession due to burnout and compassion fatigue, may now be better supported in the longer term due to their mindfulness self-care strategies. A review of the proposal has been undertaken by current final year PGD students and a service user. The final year student found the proposal interesting and would definitely be something they would participate in. The student could see the benefit of developing coping strategies especially in terms of coping emotionally with patients and carers and in early qualification. A great point made by the student was around the need for coping strategies as they embarked on the start of their career with responsibilities and a lack of support from those they trained with and their professional development facilitator (PDF). The service user comments supported the need for compassionate practitioners to be able to support the patient and the carer and family through such a difficult time.

The intervention of mindfulness also promotes other positive benefits for the profession such as; better communication (Epstein 1999), reduced medical errors (Irving, Dobkin and Park, 2009), a more positive therapeutic relationship with the patient (Brady et al, 2012) and a more empathetic attunement (Thomas and Otis, 2010). These are potential future areas of research using the foundations of this study. In addition to future impact on the profession this intervention could also have a positive effect on the student experience, aiding student retention (Barbosa et al, 2013). In terms of future research this is a pilot study with the potential to also look at mindfulness further as an intervention with both pre-registration and post registration participants. Due to the interventions multi-faceted approach other areas of interest could also be investigated.