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Early career resilience: interdisciplinary insights to support professional education of Radiation Therapists

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Early career resilience: interdisciplinary insights to support professional education of Radiation Therapists.

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Abstract

Background

A number of studies across a range of countries have indicated a proportion of the radiotherapy workforce maybe experiencing burnout. Furthermore, current national attrition from UK radiotherapy training programmes is approximately 36%. The consequence is a potential shortfall in qualifying practitioners. The loss of skilled practitioners from the workplace through burnout and a reduction in the numbers qualifying at a time of rising cancer referrals has implications on the ability of radiotherapy services to keep pace with demand. A report from the College of Radiographers on the factors affecting attrition from UK training programmes recommends the development of emotional resilience as part of the educational preparation for Therapists, but failed to identify specific interventions that may help. Radiation Therapists (RTTs) are not unique in terms of their exposure to the potential of burnout and other professionals share similar concerns. In this paper we report on an interdisciplinary study of professional resilience, which indicates that there is much we can learn from other professions that are engaged in emotional labour.

The concept of 'resilience' is important in retention studies but research in this field is limited by a lack of detailed accounts of resilience in specific professional contexts; with few accounts of strategies in professional education to develop resilience.

Aim

To identify: what supports and hinders the development of professional resilience in early career professionals, in professions involving emotional and moral challenge, such as radiation therapy; what creative pedagogical approaches may help to develop resilience.

Method

Using a mixed method design over 50 participants were invited to participate from radiotherapy, social work and teacher education. A combination of survey research, interpretative interviews and innovative group activities were used across four key groups; early career professionals, current students, Higher Education lecturers and work based professionals who support students.

Purposive sampling was undertaken with codes, themes and texts used iteratively to develop understanding of professional resilience. Coding was informed by principles of constructivist grounded theory to allow for the identification of themes. Peer debriefing was used to agree the coding structure and member checking was used to confirm identified themes with research participants.

Results

Emergent themes indicate resilience is dependent on a complex interplay between individual and organisational (or situated) characteristics.

Key concepts were:

- Transitions- new identity demands

- Organisational and systemic issues- being treated unfairly, team culture, difficult cases, feedback and support, professional demands
- Personal Characteristics – personal actions, personal qualities (accepting, confidence, forms of reflection, interpersonal skills and positive psychology)

- Professionality- agency, commitment, moral purpose and value

Conclusion

By addressing issues of resilience course credibility is enhanced as a preparation for professional life; with a subsequent corollary of reduced attrition.

The data from this study can be used to inform a creative curriculum to enhance professional resilience in students and early career professionals.

Introduction

A number of studies across a range of countries have indicated a proportion of the radiotherapy workforce maybe suffering from burnout(1-5). With average Emotional Exhaustion (EE) scores (from the Maslach Burnout Inventory- MBI(6)) ranging from 22.9-30.3(1, 3, 4) reported across countries; MBI norm for EE is 20.9) . High levels of emotional exhaustion (EE) are indicated by EE score ≥27. In the UK survey over a third of respondents were classified as suffering from early stages of burnout (ie EE ≥27)(1). Furthermore, current national attrition from UK radiotherapy training programmes is approximately 36.5%(7) the consequence is a potential shortfall in qualifying practitioners. The loss of skilled practitioners from the workplace through burnout, and a reduction in the numbers qualifying at a time of rising cancer referrals has implications on the ability of radiotherapy services to keep pace with demand. A report from the College of Radiographers (CoR) on

the factors affecting attrition from UK training programmes(8) highlighted concerns about the student experience within the practice-based element of degree qualifying courses. This audit of practice highlighted areas where there was poor compliance with national quality standards for student placement education(9). Interestingly, the areas with least compliance were in 'managing placement capacity' and 'selection and preparation' the latter includes whether appropriate induction for the placement site is provided. Student concerns about placement experience fell into four themes:

1. Practical concerns about finance, transport and accommodation costs and the lack of a university experience,
2. The structure of placement learning and quality of learning opportunities,
3. The variability of arrangements for student support and assessment, and
4. Bullying and marginalisation.

The report recommends the development of emotional resilience as part of the educational preparation for Therapists, but failed to identify specific interventions that may help. Furthermore, we lack understanding around the factors that may help qualified Radiation Therapists (RTTs) avoid burnout and compassion fatigue.

Radiation Therapists (RTTs) are not unique in terms of their exposure to the potential of burnout (10-12) other professionals share similar concerns and there is much we can learn from other professions that are engaged in emotional labour.

The concept of 'resilience' is important in retention studies but research in this field is limited by a lack of detailed accounts of resilience in specific professional contexts; with few accounts of developments in education that develop professional resilience.

The concept of resilience has come to be widely used in relation to a wide range of issues, yet is subject to much debate about the meaning of the term, how and why it manifests(13). A variety of definitions are proposed (see (13-15) for reviews). In health and social care professions the notion of bouncing back from challenges or adversity tends to be stressed, possibly influenced by the use of the terms in relation to patients and client. In relation to professional resilience such as that of teachers, the importance of coping with on going stresses is also highlighted(14).   A common approach to resilience is to consider underlying characteristics that are taken to be component parts of resilience or protective factors. These include personal attributes, self-efficacy, coping skills(13, 14). In literature on professional resilience additional attributes identified are professional skills, reflection and an orientation towards professional development and growth as well as self-care(14). A common approach to researching resilience is to examine, through surveys, the relationship between different attributes or factors in order to develop resilience scales(16-18).

Dunn et al(19) propose an interesting reservoir model of resilience developed from the resilience literature and from experiences of the medical student journey to becoming a doctor. They identify a number of negative inputs including stress, internal conflict, time and energy demands and positive inputs such as psychosocial support, healthy activities,

mentorship and intellectual stimulation. These impact on the coping reserve by either adding to it, or reducing it. The coping reserve also includes personality and temperament factors. When the reserve is depleted burnout occurs, where it is of sufficient size, the outcome is a resilient response(19). This model may however be too simplistic to adequately embrace all dimensions of resilience and has not been validated with empirical evidence. Mansfield et al(15) based on a study of beginning teachers, identify four dimensions, the professional, emotional, social and motivational dimensions. Further, this study indicated that the different dimensions were interlinked and discussed in a complex way by participants.

Method

Aim

The aim of the study was to identify what supports and hinders the development of professional resilience in early career professionals, and what creative pedagogical approaches may help to develop resilience.

Taking a grounded theory approach we did not begin with a definition of resilience from literature but adopted a working definition of professional resilience:

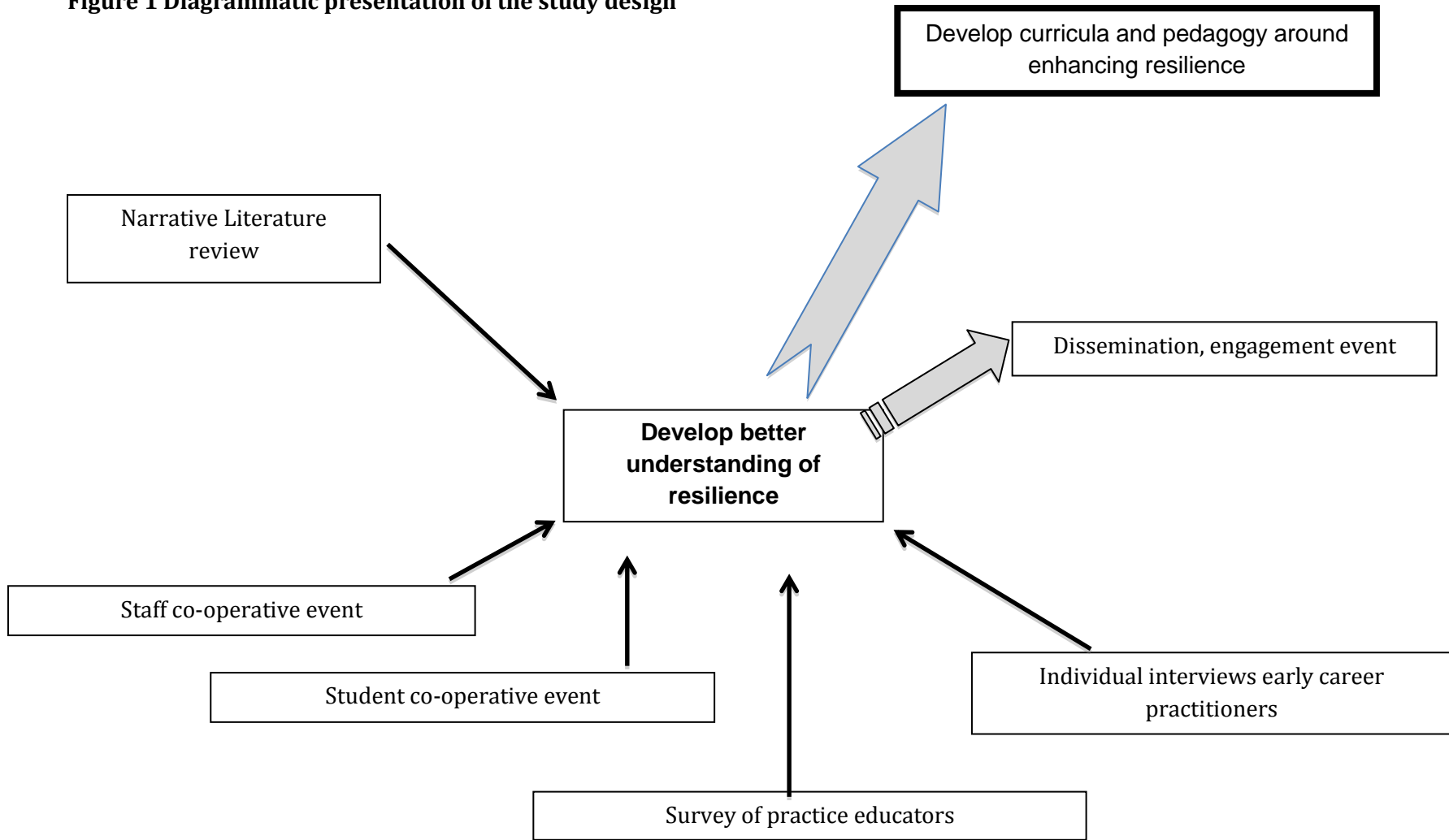Professional resilience is what supports people to stay in the profession and to stay professional.

Specifically we wanted to answer the following questions:

- As educators how should we be supporting the development of resilient behaviours in our students to enable them to cope better with the clinical placement experience?
- What supports and hinders the development of professional resilience in radiotherapy, social work and teacher education?
- What creative pedagogical approaches may help to develop professional resilience?

Study Design

A fixed mixed method design was utilised incorporating survey research, interpretive interviews and creative innovative group approaches (specifically co-operative inquiry). The latter more innovative and creative approaches were used to access tacit knowledge of Higher Education Institution (HEI) based educators, of current students and to support dissemination, validation and wider engagement at the end of the project. Figure 1 demonstrates the overall study design.

Figure 1 Diagrammatic presentation of the study design

Develop curricula and pedagogy around enhancing resilience

Narrative Literature review

Dissemination, engagement event

Develop better understanding of resilience

Staff co-operative event

Student co-operative event

Individual interviews early career practitioners

Survey of practice educators

The research design allowed for the perspectives of four key groups across the three disciplines (Radiation Therapy, Social Work and Teacher Education) to be accessed in an efficient manner. These groups were early career professionals, current students, Higher Education (HE) tutors and work based professionals who support students during placements.

Each part of the research was informed by appropriate methodological approaches and this informed data collection and analysis for each sub set of the data corpus generated. In addition, codes, themes and texts generated in different parts of the research were used iteratively to develop a theoretical understanding of professional resilience using principles informed by constructivist grounded theory(20). The co-operative inquiry events held with students and HE tutors were designed to investigate perspectives of resilience in a participatory way. Co-operative inquiry is a valid research design that has been used in the field of teaching and allows those that would normally be the research participants to act as co-researchers in the process(21). Members of the project team took notes at the co-operative events; these were supplemented with written outputs from participants. All of the individual interviews were audio recorded and transcribed verbatim. At the co-operative events a number of practical activities were introduced to allow participants to think and talk about resilience. For example, in both workshops participants were asked to select one postcard from the Herewood Gabriel© (22)storytelling cards that reflected what resilience means to them. The images helped to storify personal experiences of resilience that could be used in future training scenarios to initiate discussions around the topic of resilience.

Table 1 provides a summary of the different research activities, participants, time scale and analytical approach.

Table 1 *Summary of research activities*

Activity	Participants	Purpose & content:	Methodology & analysis
HE tutor co-operative inquiry workshop March 2013	N=13 Radiation Therapists n= 5 Education Tutors n= 4 Social Workers n= 3	To make explicit tutors tacit knowledge on issues of resilience as experienced by the teachers of undergraduate students. To gather narratives about experiences of resilience that could be developed into vignettes for future teaching. To inform interpretive interviews and other research activities	Co-operative inquiry protocols leading to summation of themes/outcome from workshop
Interpretive interviews March-June 2013	Early career professionals N=26 Radiation Therapists n=9 Teachers n=10 Social Workers n=7	- To generate narratives related to resilience themes To identify supportive behaviours and activities and any hindering factors Focus on issues before, during and after qualification	Narrative analysis followed by inductive thematic coding informed by constructivist grounded theory.
Survey (closed plus 3 open questions) Feb - March 2013	N= 27 Professionals responsible for work based training and early career induction Radiation therapy educators n=8 Teacher education n=10 Social work n=9 No response n=2	To identify perspective of mentors or supervisors working with students and early career professionals in the placement/clinical setting. To gather narratives about experiences of resilience that could be developed into vignettes for future teaching.	Quantitative generation of descriptive statistics Inductive thematic coding informed by constructivist grounded theory
Student co-operative inquiry workshop	N= 21 Post graduate or undergraduate. Student Radiation Therapist n= 6 Student Teachers=6	To produce a rich account of students currently engaged in professional education in the three professions	Co-operative inquiry protocols leading to summation of themes/outcome

April 2013	Social work students n= 9		from workshop

The activities in Table 1 were supplemented with:

a) A survey of student participants who attended the co-operative inquiry workshop (n=19 completed responses).

b) Further interviews with professionals responsible for work based training and early career induction. The purpose here was a respondent check of emerging themes and theorising. This is in keeping with grounded theory methodology(20). The second reason was that these professionals themselves represented a sub set of experienced professionals and so were potentially able to comment on the emergent issue of resilience development.

Sampling and Recruitment

Recruitment methods were similar across all data collection methods. All tutors and students attached to the three professional areas from one Institution were invited to participate in the co-operative inquiry workshops. The aim was to have equal attendance from each of the professional groups and a mix of students from a range of different placement sites to ensure a diversity of experiences was investigated. So while sampling was based on voluntary participation there was also an attempt to purposely include a range of different experiences across tutors from different learning cohorts and from students from a range of backgrounds, age groups (mature students and post-secondary education students) and placement experiences. All students that attended the co-operative inquiry workshop were invited to complete a post-workshop survey. Students invited to the co-operative events were recruited as participants and co-researchers to contribute to the development of the interview schedule that followed this stage; they were paid as casual researchers for the 2-hour workshop. All tutors involved in placement supervision for the professional areas were invited to participate in the online survey.

Purposive sampling was used for the interpretive interviews. Members of the project team identified known practitioners that were early career professionals within their professional area that they felt could contribute knowledge and understanding to the experience of developing resilience during training, through the process to qualification and in early professional life. In addition, recommendations were made by tutors that attended the staff co-operative event, particularly from radiotherapy, where they were aware of practitioners that were studying on the post-gradate masters programme who they felt could contribute to the aims of the study.

Pilot Study

In preparation for the interpretive interviews RWM conducted face-to-face interviews with each member of the project team (MB, HP and PN). The purpose was to test and refine the semi-structured interview schedule that had been developed from the narrative literature review and the co-operative inquiry workshops. The interviews were audio recorded and transcribed. These transcripts provided an opportunity for the project team to discuss the data analysis process to be adopted using Grounded Theory methodology. They also highlighted our tacit beliefs about resilience that might have influenced our interpretations. The actual data from these interviews was excluded from the main analysis

Data analysis

Open survey comments, themes from the co-operative inquiry workshops, and the interview transcripts were imported into NVIVO (version 10). Coding was informed by principles of constructivist grounded theory(20) to allow for the identification of themes. Codes, themes and texts were used iteratively to develop understanding of professional resilience. Peer debriefing was used to agree the coding structure. Coding of the interview transcripts followed a systematic approach. Each member of the project team was randomly assigned equal numbers of interviews to analyse. This first coding process resulted in over 160 nodes in NVIVO. Following the first coding a peer debriefing process was used to develop a codebook that was refined and codes were reduced through an iterative process. The coding then proceeded with a new refined codebook with analysis blind to any previous coding.

Ethics

The Sheffield Hallam University Faculty of Development and Society ethics sub-committee granted ethics approval. All participants were given an information sheet prior to participation in the study and all participants (except survey respondents) signed consent forms prior to involvement.

Minimising bias

Triangulation was used to combine data from both qualitative and quantitative elements in order to corroborate findings across the different data collection processes(23). Peer debriefing was used to minimise opportunities for bias in the qualitative analysis and all data was imported into NVIVO to allow opportunities for tracking and auditing the research process. We presented the interim findings at a dissemination event that was attended by survey, student participants, and potentially interviewees (anonymity protocols meant we cannot know for certain how many of the interviewees attended this event although they were all invited to attend or provide feedback without attending) where interim outcomes were presented for feedback and comment.

Results

Emergent themes indicate resilience is dependent on a complex interplay between individual and organisational (or situated) characteristics. Table 2 presents the key concepts and concepts identified across all data collection methods. The data presented to support the themes in this section focuses specifically on Radiation Therapists (RTTs) comments.

Table 2 Key concepts and Concepts

Key Concepts	Concepts
Transitions	Age- maturity Leaving home to go to University Qualifying Changing role
Organisational and Systemic Issues	Admin/bureaucracy Being treated unfairly Team culture Difficult cases Feedback and support Professional demands
Personal	Personal actions Personal qualities (accepting, confidence, positivity)
Professionality	Agency Commitment Moral purpose and values
Timing	Pre training, Training, post qualification, established

Transitions

There was evidence that periods of transition were times when RTTs felt under pressure and needed to demonstrate resilience. In particular, participants commented on the experience of being on placement for the first time as a student at only 18 years of age and experiencing 'shock' at the activities and experiences they suddenly found themselves in. As a students at the co-operative workshop and interview participants explained:

"You go from being a guy walking down the street to seeing very ill patients and lots of them all of the time, it's quite a thing to learn to adjust to" student A

"At 18 are you really emotionally mature enough to deal with the kinds of experiences students have to deal with?" Student B

"There are probably a couple of incidences where I had to speak to consultants or other senior members of staff which bearing in mind I was 18 when I first started so I was very young. I wasn't used to that work environment and that was quite intimidating" RTT 5

These periods of transitions occurred throughout the early career period as students went through qualification, changed jobs, were promoted or returned from maternity leave and needed to make adjustments.

"I moved to a much bigger department....I went into a senior role whereby I suddenly had responsibility for other people but I didn't actually necessarily know what was going on in the department itself" RTT5

Students at the co-operative workshop discussed the timeline of their course and the periods where they needed to demonstrate resilience. The early transition of being away from home was followed by the transition into the clinical setting and both were described as emotionally difficult times. As students progressed into year 2 they identified the increased expectations on them as learners and greater responsibility given to them in the clinical setting. This period when they needed to be resilient was helped to some extent by increases in confidence. As they transitioned into the final year and pressure increased with higher academic workloads, resilience was supported again by increases in confidence and the greater respect afforded to them by clinical staff during placements. As they got closer to the transition into qualified status fear and anxiety about taking full responsibility for radiation delivery, and not getting a job were counterbalanced by excitement about getting a job, and excitement about teaching students, these positive attributes helped the students to be resilient during a difficult transition period.

Organisational and Systemic Issues

Many of the study participants discussed issues inherent within their employing organisation that affected their ability to be resilient. While issues around transitions referred to stressful experiences that RTTs felt they needed to bounce back from, organisational issues were more about day-to-day challenges. These may be challenges imposed by organisational or government policies, or a result of financial cutbacks that challenged their ability to do their job well or cope with the emotional intensity of patient interactions:

"It's just got to the point where we're having to do more and more in the same amount of time....there is so much emphasis on treating as many people as you can rather than quality of care" RTT 1

Where cuts in services are apparent resilience issues appear in a range of forms. Reductions in the available staff base can lead to deficits in skills required for specific techniques or equipment and this can lead to RTTs fearing potential errors may occur.

"I've had a big worry that that's been potentially leading to- not errors- but there is potential there for errors in the fact we haven't got the right skill base. To start with I was really angry about it and then I was really frustrated, then panic set in" RTT 2

Poor team culture, lack of strong leadership and poor support or limited feedback were all factors that were identified across data collection methods as having a negative impact on an individual's ability to be resilient. Students in the co-operative workshop identified staff being too professional and lacking empathy or difficult to build a rapport with.

"'the people around you are important, what they say, it can be one comment from one person (especially if they are in a higher grade/position to you) it can crush you and suddenly your resilience seems to be crushed" Student workshop

Both students and early career professionals identified experiencing difficult cases as times when they felt their resilience was tested. For RTTs this was often patients that were of similar age to themselves or being involved in the care of children with cancer.

"In radiotherapy when you see very poorly children, sometimes it can get too much." Student workshop

" It can be difficult as a student in a short placement period (3-4 weeks) if you see a difficult case it can knock you but putting it into perspective helps, given the number of patients you see in a day one case where things didn't go well given how many other people you have helped you can see a different perspective" Student workshop

Good leadership was seen as enhancing an individual's ability to be resilient and as one might expect poor leadership was seen as detrimental to resilience.

"We just had a memo this morning off our managers to say....they recognise that there's a problem and things will pick up and suddenly people are thinking actually someone is taking notice and thinking about us. I always think that helps…" RTT 2

"I would like a clearer dialogue with management....you get told things by management and it comes down and you don't get chance to feedback or ask questions, you're just sort of dictated to" RTT 5

Personal

Participants in the study articulated a large range of personal qualities and attributes that they felt helped them be resilient and these can be found in Table 3. The most frequently mentioned attributes within the RTTs were confidence, calmness and empathy. Empathy

was closely linked to professional behaviour (professionality) and being professional in the presence of patients.

Table 3 Personal qualities identified by participants as beneficial to being resilient or developing resilience.

Personal Quality	Detail
Patience	*"I think patience is a big one. The ability to step back and think about what's happening and sleep on it and move on and come up with a strategy rather than acting on impulse and being very spontaneous about your reaction"* RTT5
Calmness	Described as developing through experience allowed participants to see work difficulties with clarity, enhancing their ability to bounce back or cope with day-to-day challenges. Example: *"I think you've just to be calm....I think there are more things to stress about or more important things that we need to be focussing worry on"* RTT3
Confidence	Mentioned across the data collection methods. Higher confidence described as beneficial to resilience. *"I'm a lot more confident with what I am doing because I've got so much more competent...I felt like I was constantly having to prove to everybody that I wasn't stupid and that I was competent. I haven't got that pressure over me now and I can just concentrate on doing my job."* RTT1
Ability to see the bigger picture	*"if you see a difficult case it can knock you but putting it into perspective helps, ie given the number of patients you see a day..."* student workshop A picture chosen in the student workshop

	with lots of rain, the student articulated the rain relates to bad days *"everyone has bad days, but not every day will be like that"*
Acceptance	*"Either accept it (the role) or do something else"* RTT4
Empathy	Mentioned by participants as a characteristic that helped them be resilient. *"empathy as best you can if you've not been in that position…that no matter what we're (RTTs) going through, we need to be really clear that they (patients) are important and it's business as usual"* RTT3
Positive	*"I just think if I don't do it (the job), it still happens (people need treating for cancer) and actually I do think I'm quite good at my job so that's a benefit for those people"* RTT2
Ability to reflect	In both individual interviews and at co-operative events participants commented on how those that were able to reflect on difficult situations were better able to cope with work stressors and retain resilience. *" I think they need a very good reflective ability…it can be quite a monotonous job sometimes and technically repetitive. You can slip in the mind-set that you're not doing much other than pressing buttons which isn't true, so I think only by reflecting can you establish how much you are continuously learning"* RTT1
Thick skinned	The ability to not take things too personally appears to allow individuals to be resilient.
Determined	An attitude of determination helped participants get through tough times. *"I think, sad as it sounds, the bottom line is that throughout my career I've remained very resilient and I think I probably always will be because it is too late to turn back. I've worked*

	so hard to get where I am and I still feel determined to make the most of my career" RTT1
Having purpose	Individuals that had a purpose for succeeding (either to do it for themselves or for those close to them) felt this helped them get through difficult periods in their work life. *"The one thing that kept me going was the thought of not letting my mum and dad down"* RTT1

Professionality

As identified above professionality was closely linked to the attribute of empathy. In the student workshop one of the storytelling pictures chosen was an image of people wearing masks and this was seen as representative of the professional mask that RTTs wear when at work, they hide their own feelings behind this professional mask and this in itself helps them to be resilient and to cope with the day to day pressures they may be experiencing.

Timing

It was evident that the ability to be resilient was fluid and changed in different circumstances and across different aspects of the career pathway. Resilience prior to starting training could be used as an anchor to support individuals during difficult periods of their training but the circumstances or situation (ie whether there was a specific team culture for example) meant the individual might need to learn new strategies, new skills or different perspectives to retain resilience.

"when I moved, career-wise, from a smaller department to a big department that was quite a shock as to how the working environment is." RTT 5

In the individual interviews participants discussed constantly developing skills as a way of buffering resilience. Competence and confidence appeared to be closely associated specifically during training through the transition into qualification. Both staff and student workshops identified increasing confidence levels as important for coping as students progressed through the early years of training into professional life. Specifically, tutors identified that those individuals that had confidence to act on what they know as they entered the profession were key qualities of a resilient practitioner.

Seeing resilience as a journey of development with many opportunities to develop resilience across the professional lifespan, is no more evident that when a practitioner experiences an error.

"I think (radiation) incidents are important in the fact that you learn lessons from them and you develop as a person and as a professional from them" RTT 5

Discussion

Resilience from this study can be defined by a number of key concepts that straddle personal attributes (patience, calmness, confidence, acceptance), the development of key skills (ability to reflect) and strategies (communication with peers or family, developing a good work-life balance) as well as being bound by organisational contexts (team culture or ethos, good or poor leadership, or policies that constrain practice) that are reflected in other elements of the resilience literature(19, 24). In addition, to the key concepts listed in Table 2 a number of interesting facets of resilience appeared to emerge from the data. Many qualities that are associated with resilience appear to be 'double edged'. For example, determination is an important quality for resilient responses. However, determination can also lead to continuing with a strategy when a more flexible approach would support resilience. Similarly, participants identified a sense of purpose as being important, for RTTs this is often placing the patient's needs as the central focus of work life. However, that same purpose could undermine resilience and lead to burnout when participants were not able to enact that purpose.

Figure 2 draws together the emergent themes into a proposed working model of professional resilience. As Figure 2 illustrates while participants discussed resilience in relation to bounce back, primarily the focus was centred on the need to be resilient in the day-to-day challenges of the work situation. While these two aspects of resilience are intertwined, the model we propose gives greater emphasis to the importance of on-going coping than those in literature pointed to earlier. Further, the study indicates that resilience is a quality that is fluid and situated, this moves beyond the findings in existing literature.

Two dimensions of professional resilience

Resilience bounce back from adversity

- **Events/Incidents**
  - Dealing with difficult cases
  - Treating children
  - Failing an assessment

Training   Training

Qualified   Qualified

- Errors
- New technology
- Transition in to role

Action strategies
- Ability to challenge
- Managing stress
- Positivity
- Communicating with others

- Reflection
- Having purpose
- Knowledge
- Perspective

- **Day to day challenges**
  - Lack of strategies
  - Negative feedback
  - constantly under a microscope

- High workload
- Responsibility
- Dealing with patient anger
- Worry of a radiation error
- Lack of support

Resilience Coping with continual demands

Figure 2 A proposed model of professional resilience

Across all data collection modes the clinical placement experiences for students was identified as an area where resilience was stretched but also developed. As the clinical placement experience has been identified in the UK as an area potentially of critical importance to student attrition rates(8) it is an area that needs future focus. Educators and placement staff alike need to look at the placement experience and look at ways of enhancing resilient strategies prior to the student's first clinical placement and then on-going support to enhance resilience as experiences develop throughout the course in preparation for professional life; we have listed in the section below what educational curricula may require for this purpose. This is supported by evidence in the literature as reported in the review by McAllister and McKinnon(24). However, while much work can be undertaken in preparing the students to be more resilient it is also important that individual departments or individual practitioners acknowledge the impact they can have on a student's ability to be resilient. For example, there were a number of occasions throughout the study that referenced how comments from staff 'shattered' confidence, or how individuals felt 'crushed' by comments made by staff when they were students. While McAllister and McKinnon(24) acknowledge the need for professional cultural generativity their recommendations focus on utilising resilient practitioners as positive role models or

encouraging this trait in new health professionals as a way of building this culture. While this will go some way to developing a healthy work environment that enables practitioners to be resilient it is perhaps necessary for all health workers (early career and expert practitioners) to be exposed to training on resilience in order that such 'shattering' interactions with students or early career professionals are minimised.

The concepts identified in this study were evident across all three professional groups. However, some specific differences were also evident. In particular, for RTTs the team and team culture was a dominant characteristic that had an influence on an individual's ability to be resilient. Support from team members was considered to be a positive facet that supported individual resilience strategies but also supported resilience through shared responsibility. In contrast, lack of support from team members could in itself be a stressor that required individuals to be resilient.

Limitations

The study was centred on one HEI institution in England involving students, ex-students, or those working in the immediate city region. Thus, data collected may be atypical compared to other sites. While every attempt was made to recruit participants across a range of ages and experience, those recruited to the student co-operative event may have been motivated to attend by negative experiences either on placement or at University that may negatively skew the resultant data. In addition, while many students articulated there desire to attend the co-operative event was a motivation to learn more about research, it is possible some may have been motivated by the payment as casual researchers; although not all claimed the payment.

Purposive sampling was used to identify participants for the interpretative interviews with inherent limitations on the ability to generalise from the findings. The sampling also led to some variance in the levels and amount of experience between early career professionals across the three professional groups*.*

Furthermore, the model for professional resilience was developed based on participants who were still working in their professional groups and has not be tested in a sample of professionals who have left their profession for other jobs. Hence the model may not be truly representative of the wider sample of professionals.

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Relevance/Impact

The data from this study will be used to inform a creative curriculum to enhance professional resilience in students and early career professionals. Specifically this study has identified the following maybe important to consider in a curriculum for developing resilience in RTTs.

- Developing understanding of professional resilience: sharing of resilience models including awareness of situatedness and 'double edge' issues

- Strenghtening professionalism, ensuring RTTs reflect on their role and work purpose as well as profesisonal agency.

- Exposing RTTs to a range of short and long term strategies for coping with stressors such as high workloads, conflict, and difficult cases. As well as strategies to buffer or reinforce resilience.

- Encouraging RTTs to audit personal qualities and build strengths (to build 'confidence')

- Developing reflective capabilities in RTTs to reflect on incidents and also to encourage seeing the 'bigger picture'.

- Developing or enhancing interpersonal skills (communication skills, team skills, and relating to others), as well as awareness of the importance of support networks.

- Encouraging RTTs to Develop intrapersonal understanding, models of emotions, self-care, and embodied resilience.

- Awareness of organisational dimension of resilience, developing knowledge of organisational and system issues that can undermine resilience.

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