

Personal Resilience for Diagnostic Radiographer Healthcare Education: Lost in Translation?

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Abstract

A research study was undertaken to gain a better understanding of the concept of resilience from the perspective of the undergraduate students on a BSc (Hons) Diagnostic Radiography programme; and the impact of resilience 'training' interventions (based on some resilience coaching principles) prior to their first clinical placement. This article sets out the findings from a qualitative research study, analysed using thematic analysis, where students were asked about their definition of personal resilience. Few students used an approximation of the 'traditional' definition of resilience; indeed, some seemed to view resilience as a weakness or something to be guarded against. In terms of what students thought affected their resilience, there was no clear pattern; thus seeming to confirm that resilience is personal, and therefore questioning a one-size approach in relation to resilience 'training'. There could be some merit in encouraging discussion around resilience in the academic setting, but there are some considerable caveats. At the outset fostering an understanding of resilience as a positive trait seems important, otherwise discussion about resilience in a class or tutorial setting may not be received by the learner in the way we may hope or expect.

Keywords: healthcare education; personal resilience; training

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Introduction

This research set out to explore the effectiveness of a coaching for resilience approach within a three-year undergraduate programme for diagnostic imaging. This research looked at the student perspective of this approach as a method of training and personal development in preparation for professional diagnostic imaging practice. The first part of the research study set out to better understand student perceptions of resilience, and the findings from this research form the basis of this article. The subsequent 'resilience' training/development sessions were embedded in the year one clinical practice module. Students begin clinical placement approximately four months after the start of the programme of study, so these training sessions sit in the very early stages of the curriculum.

Why resilience?

Discussion about a resilient workforce seems to be high on the current healthcare workforce and education agenda. The United Kingdom (UK) *NHS Health and Wellbeing* report ([Boorman 2009](#)) talks about 'resilience' training as part of a staff wellbeing strategy, and there is an "explosion of interest" in the teaching of resilience within medical curricula ([Passi 2014: 329](#)). In terms of other healthcare professionals, many articles suggest that there is a benefit to the healthcare service, and to delivery of care, from individuals being resilient. For example, resilient social workers are said to be more empathically accurate, and are able to develop effective relationships with clients without emotional over-investment ([Grant and Kinman 2012](#)). [McAllister and McKinnon \(2009\)](#) assert that resilient nurses make better decisions under pressure, are better able to handle change, are less likely to take sick leave and are more likely to stay in an organisation. [Hart, Brannan and de Chesnay \(2014\)](#) would agree, stating that resilient nurses demonstrate better health and also that they are more likely to effectively use the coping strategies they have. However, there appears to be little published research in terms of resilience and radiographers/radiography. [Bleiker, Knapp, Hopkins and Johnston's \(2016\)](#) literature review of compassionate care considered resilience as an essential component in radiographer wellbeing, linking this to the ability of practitioners to deliver compassionate care. This review again makes the case that resilience should be a key element in an education programme but makes no comment on what or how this should be delivered.

People entering healthcare professions tend to do so because they wish to care for others, this requires a degree of self-sacrifice at times and whilst this can be a positive experience in terms of opportunities for personal growth, it can also be something which can cause emotional suffering ([McAllister and McKinnon 2009](#)). This seems important because links have been made between distress and empathy decline in student healthcare practitioners, with the ability to demonstrate empathy being linked to patient-centred care ([Neumann et al. 2011](#)). Other authors also appear to be making links between resilience, stress, and workplace wellbeing ([McDonald et al. 2012](#), [Oken, Chamine, and Wakeland 2015](#), [Scholes 2008](#), [Smith 2015](#), [Sood et al. 2014](#)).

As an experienced clinical practitioner, and as an experienced academic, listening to students' stories there is no doubt that clinical practice can be a demanding and, at times, a stressful working environment. Imaging practice is fast-paced and unpredictable; in this environment a student's resilience is often tested. The UK NHS service is also undergoing a period of huge, and sometimes rapid, change as it moves towards the ideal of seven-day service, and to accommodate rising demand for imaging services. Resilience could therefore be seen as 'increasingly valuable' in this rapidly changing healthcare landscape. Employees learning and utilizing effective and positive coping strategies are viewed as more and more important in the delivery of a safe and caring healthcare environment for staff and patients ([Pipe et al. 2012](#), [Schneider, Lyons, and Khazon 2013](#)). Thus enabling personal resilience seems something of an obvious skill to place within the contemporary curriculum. But, there are some dissenting voices in the need to 'train' healthcare professionals to be resilient ([Oliver 2017](#)).

What is resilience?

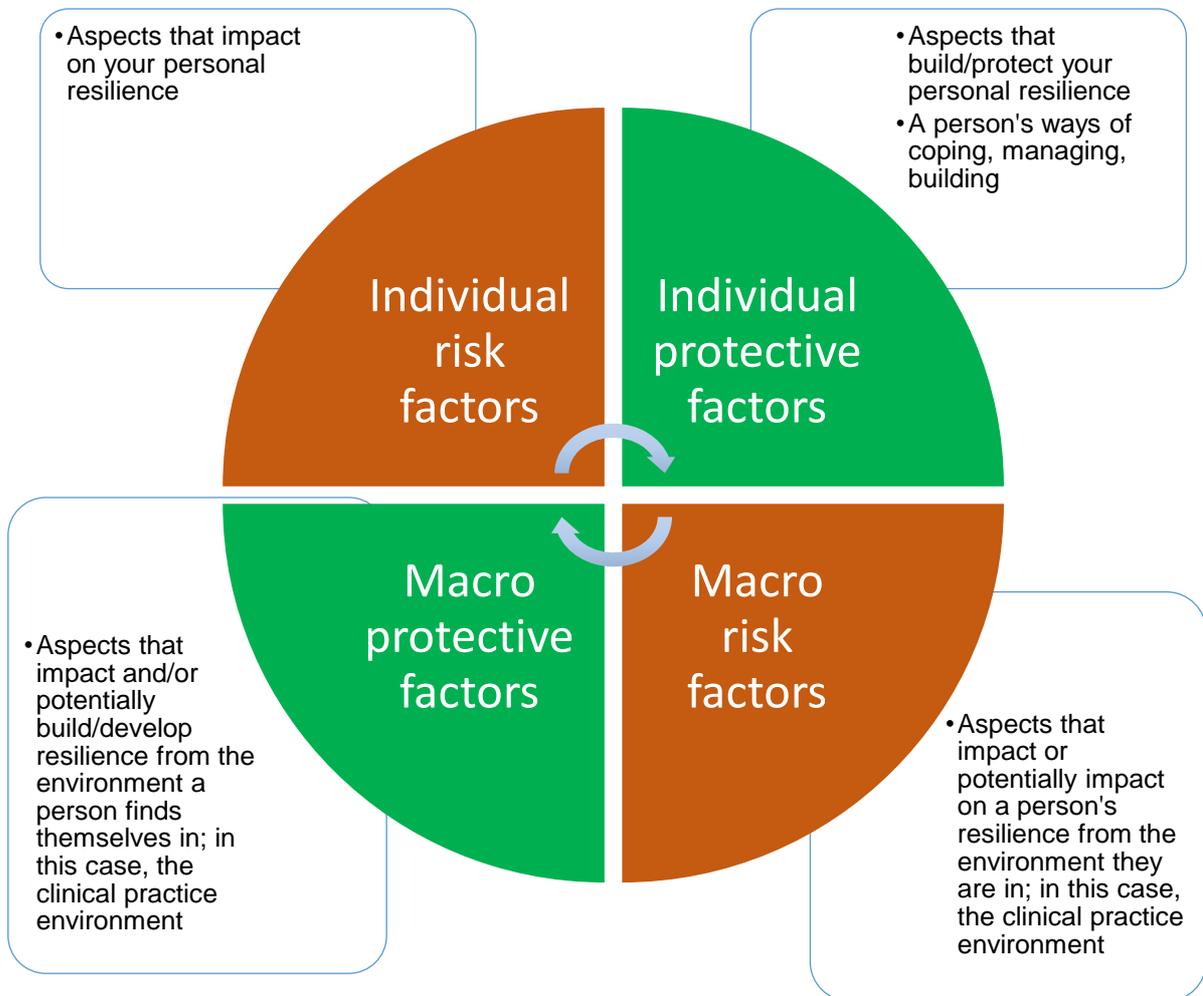
Before placing 'resilience-building' in the curriculum, it is important to consider what resilience is, and what it is to 'be' resilient. [Robertson, Cooper, Sarkar, and Curran's \(2015\)](#) systematic review of resilience training concluded that there was inconsistency in how resilience was defined and conceptualised: they indicated that this then made assessment of efficacy across studies somewhat troublesome. [Passi \(2014\)](#) agrees and comments that resilience is a key aspect of medical professionalism, but that there is no consensus on a definition. [Kolar \(2011: 423\)](#) goes a step further in describing resilience as "conceptually fuzzy", full of judgements and the 'benchmark' of being 'resilient' as based on a white middle-class interpretation of that term.

This said, definitions of resilience often have the words 'bounce back from adversity or set-backs' or similar. For example, [Health Education England \(n.d\)](#) use the definition "the ability to bounce back—a capacity to absorb negative conditions, integrate them in meaningful ways, and move forward". The use of the word 'bounce' in relation to personal resilience seems to have foundations in the properties of a material to return to its original state after stress is applied to it ([Pemberton 2015](#)). However, in the human context the use of the word 'resilience' seems to be much more nuanced than simply returning to an original state. Some definitions seem to allude to the fact that resilience was not just about recovery, but about finding personal meaning ([Grant and Kinman 2012](#)). However, [Pemberton \(2015\)](#), challenges that this concept of 'bounce' is actually not helpful at all, she asserts that the "get on with it" attitude does not acknowledge the stresses and strains many face. It seems to belittle how tough it can be to 'bounce' back sometimes. She also suggests that this definition can encourage resilience to be seen as bitter determination in the face of adversity and that this is not resilience ([Pemberton 2015](#)). The use of this type of language may lead an individual to consider that being personally resilient means being 'hard'/'manning up' or creating emotional barriers in response to stressors; this seems incongruous with the values of a caring service such as the NHS.

Therefore, if we accept that a definition of resilience, in this context, must have some linguistic features of 'recovery' or 'bounce', what is that process of recovery or bounce? [Kolar \(2011\)](#) questions whether resilience should be viewed as a process, an outcome, or a dynamic process; preferring the latter as it assumes a shared responsibility not only with the individual but also with other societal factors too, this is taking an ecological view of resilience. In this context, the process of resilience rejects the reductionist approach where an individual is supposed to learn to cope or adapt. [Kocalevent et al. \(2015\)](#) also describe personal resilience as representing an interaction between what they term 'resource' (protective factors) and 'vulnerability' (risk factors). In applying these principles to student radiographers, the resilience 'landscape' could be seen as depicted in [Figure 1](#).

Understanding the concept of a resilience is important, as resilience should be seen as a dynamic phenomenon. This dynamic aspect of resilience can be seen (for example) in someone who is resilient in one situation but struggles in another, or where resilience varies from day to day, or even hour to hour ([Aburn, Gott, and Hoare 2016](#)). [Howe, Smajdor, and Stockl \(2012\)](#) would agree, and comment that as a dynamic capability resilience can allow one to thrive but that this depends also on the social and personal contexts being satisfactory. In a study of medical students, [Dunn, Iglewicz, and Moutier \(2008\)](#) use the metaphor of a reservoir in describing the dynamic nature of resilience, the reservoir being able to be 'topped up' or emptied by events or protective factors. This may actually be useful in describing the dynamic, changing nature of personal resilience. Disruptions to one's world view or understanding initially tends to lead to introspection, but it is the way a person then re-integrates back to a state of homeostasis (their comfort zone) that it important ([Richardson 2002](#)). However, in order to reintegrate in a resilient way, in Richardson's definition, a person has to learn from and grow from the disruptive experience. This tends to strengthen a person's resilience as a type of positive feedback loop. In the context of professional practice, this process of learning usually comes through personal reflection which emphasises the importance of time and the skills to reflect.

Figure 1: Resilience 'landscape' for healthcare students; in this case student diagnostic radiographers



In conclusion, this study was undertaken to ascertain how this group of students define resilience which was seen as important because of the differences identified in the literature with respect to the definition. An understanding of this is also important pedagogically, because if we are talking to students about resilience we should be doing this from a position of shared understanding. Finally, to date, there are no published works looking at the perception of resilience from the diagnostic radiographer student perspective, and therefore this study potentially adds to the collective knowledge base.

Research method

The research study set out to discover personal opinions from the perspective of the student. This sits within a naturalistic, qualitative (interpretivist) paradigm, as opposed to taking a positivist stance (Cohen, Manion, and Morrison 2007). Phenomenology sits within an interpretivist epistemology; one that is concerned with understanding how people, as individuals, understand their world (Bryman 2016). This of course is subjective, and therefore can be critiqued as providing a narrow viewpoint; so as researchers we need to be mindful that the responses will be context specific (Bryman 2016). Gray (2014) suggests that a qualitative

approach can be useful when there is little known about a phenomenon, or where a new perspective on a phenomena will give insight into a different category or from a new angle.

Ethical approval was gained from the University of Derby, College of Education Research Ethics Committee, and principles of good research practice were followed. This included ensuring there was consent obtained, that there was no deception intended, and that participation was voluntary. It also meant that all entries on the transcripts were anonymous, that no student or placement area would be identified on the resultant transcript, that data would be kept secure and password-protected, and that if any student wished to discuss any sensitive personal issues around resilience (as a result of being asked these questions) that they would be directed to appropriate student support services (per University of Derby Policy and Code of Practice on Research Ethics: [Hutchinson 2013]).

This stage of the study involved an in-class activity, with 44 Year 1 undergraduate diagnostic radiography students, exploring concepts of resilience. The sample was therefore a purposive, non-probability sample, which was important for the study because we wished to gather opinion that was as 'raw' and authentic as possible. The students had been on the programme for only three weeks, and they had not yet had any teaching/discussion around resilience. Consent was gained by means of a participant information sheet which explained the purpose of the study, and participation was voluntary. Students were asked to complete a response sheet containing three open questions. These asked 'what does the term resilience mean to you?', and also asked about potential barriers and enablers to being resilient in a healthcare environment, and finally there was an invitation to add anything else they wished about resilience. If the student wished to participate, they were asked to complete the open questions prior to the first 'resilience' teaching session. The students were asked to place the question sheet and signed consent sheets in a box in the class-room. Students were assured that it was their choice to fill the question form in, or not. To ensure there was no coercion, the lecturer left the room while students filled the form in, and only returned to collect the box once all the students had left the room (this was timed to coincide with a break period). The question sheet and consent form were collected separately, in two boxes, to ensure anonymity. Target for return of response sheet was 75% ($N = 33$); actual return was 100% ($N = 44$).

There are, of course, limitations with research of this nature. This was a qualitative study, based in one higher education institution, and with one group of trainee healthcare professionals; so there has to be some caution about generalizability, although generalizability is usually not the goal of qualitative research. The process of thematic analysis can also be influenced by the researcher (as an insider researcher), but that was hopefully mitigated by following a rigorous approach to reading and re-reading the data to ensure themes were considered carefully/were representative in light of the student responses. Being an insider researcher and known to the students, could also influence the responses given to the open questions; however, in ensuring anonymity in the responses this was hopefully mitigated. It was important the students responded honestly rather than giving what they thought may be the accepted answer. This was why we felt it important to ask these questions early on in the programme of study, before teaching has influenced their thinking. The research was undertaken by one researcher as part of an MA Education programme, and data analysis was overseen by an experienced academic.

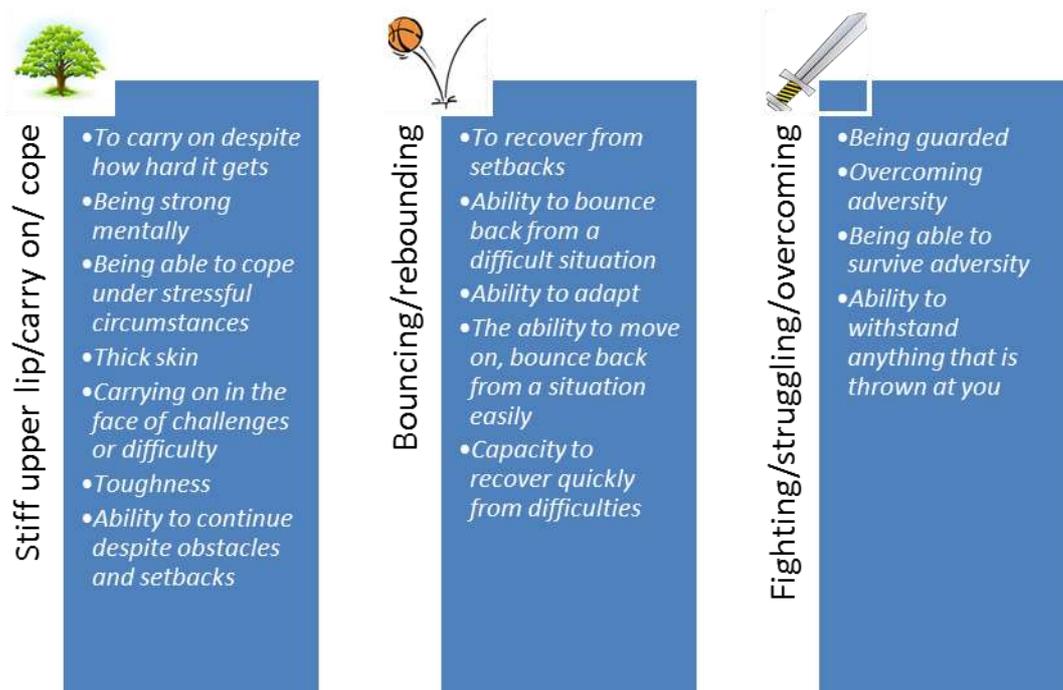
Findings and discussion

Responses were analysed using a thematic analysis approach, themes were extracted and codes were allowed to emerge rather than being predetermined (Bazeley 2013). This therefore uses an applied thematic analysis approach, as it is content-driven in the pursuit of describing the perceptions and experiences of the participants (Guest, MacQueen, and Namey 2012). The six-step approach outlined in Gray (2014) was followed: familiarise self with data, generate initial codes, search for themes, review themes, define and name theme, and finally produce a report. The themes were reviewed by an academic supervisor to add rigour to the process.

Analysis of all the responses appears to demonstrate three main categories in terms of the language use:

- Language of coping and carrying on ('stiff upper lip' in tone)
- Language of bouncing and rebounding (some positivity/recovery in the tone)
- Language of fighting/struggling/overcoming (adversarial in tone).

Figure 2: Categories for student definitions of resilience



In response to the first question asking about the term 'resilience', the language of 'coping' seems to prevail:

A coping mechanism for dealing with difficult situations.

Methods you use to get through things.

It feels like your level of tolerance.

There was only one voice that appears to recognize that coping alone may not be the same as being resilient:

Resilience can be coping but this is not very productive.

There were some more positive 'bouncing' responses too though:

Ability to recover from setbacks.

Ability to bounce back from a difficult situation.

Ability to move on, bounce back from a situation easily.

Some view resilience as a not entirely 'welcome' trait. In fact, some seem to equate being 'resilient to everything' (also note the scaling of resilience here) as a negative thing, perhaps suggesting that it is equated with 'hardness'/'toughness':

Being resilient and strong can have a knock-on effect on wellbeing.

I think that too much resilience is unnatural.

If you are resilient to everything, I think that is quite unhealthy.

I don't think it is completely healthy to be resilient against everything because sometimes it might mean things have to change, you can't just keep coping or trying to overcome everything. So, a degree of resilience.

This view of resilience as occurring in different degrees on a scale, and as a trait which is not always welcome, is slightly concerning. Perhaps this requires exploring with students as an integral part of any resilience 'training', otherwise a section of the cohort may resist any attempt to engage development activities. As educators, we could be guilty otherwise of making assumptions with regard to the purpose and understanding of such training – which is lost in translation. The findings from this small research study suggest that there may be merit in exploring whether the language a student uses to define resilience could affect the type of intervention(s), which may work best for them in developing resilience strategies. Statements in the 'bouncing' category would seem to allude to a growth mind-set, but those who are in the 'fighting/overcoming' grouping may be engaging in emotional-focused strategies, and this could lead to a sense of blame, of self and others (Anisman 2015). Pemberton (2015) would challenge the notion of 'determination' as not being resilient at all. Equally, those who are in the 'stiff upper lip/coping' grouping could be engaging in avoidant behaviours. For example, not thinking about it, doing something else, denial or even use of maladaptive behaviour such as alcohol use (Anisman 2015). Brown (2013) contests that avoidant behaviours, when someone starts to disengage from the type of emotional labour that may occur when personal resilience is challenged, is when someone stops attending, stops contributing, and stops caring. This is certainly not what is expected from a professional standards viewpoint, nor expected from the patients we care for. Perhaps in addressing personal resilience, we first need to explore the language an individual student uses. If an individual does not see the value or relevance of personal resilience, then any pedagogic efforts will be likely to fail to make an impact.

In this research study, demographic information was not requested. However, there is some suggestion in the literature that men and women talk about resilience in the business-work environment using different language. Women talk more about vulnerability, and the need to suppress emotion at work (Bond and Shaprio 2014). In her work around vulnerability and shame, Brown (2013) describes quite a marked difference in the language men and women use, and therefore their experience of shame (as a component of resilience). Smith *et al.* (2010) also suggest that there could be a gender difference, as does McEwen, Gray, and Nasca's (2015) review of the neurobiology of resilience. An understanding of any differences could mean we could adapt educational materials to address this. A current analogy in mental health awareness promotions, is the use of different messages, different language when attempting to reach the male population. A current example would be #ITSOKAYTOTALK campaign (Mind and Rethink Mental Illness 2017). This omission will be addressed in any follow-up studies, and demographic data requested on the question sheet.

Students were also asked to comment on factors that might impact on their ability to be resilient. Examples include:

If situation is something that hits you personally it might be hard to be resilient.

People putting you down.

Personal issues such as family, illness.

Thinking you will always get it wrong.

Not having effective support system.

Being overworked.

Lack of confidence.

The responses to the question ‘what affects your resilience’ were coded into themes; these eleven themes emerged which broadly seem to fit into [Kolar’s \(2011\)](#) model of micro (individual) factors and macro (external) risk factors, and also appear to have congruence with [Chambers, Schwartz and Boath’s \(2003\)](#) causes of stress model of internal and external sources.

Table 1: Analysis of ‘what affects your resilience’ coded into themes

<p>External factors (Macro factors)</p> <p><i>Usually beyond the individual’s control or immediate control</i></p>	<ul style="list-style-type: none"> • <i>workload</i> • <i>work environment</i> • <i>lack of support</i> • <i>external criticism</i> • <i>personal (but could also be internal)</i>
<p>Internal factors (individual factors)</p> <p><i>Coming from within</i></p>	<ul style="list-style-type: none"> • <i>stress</i> • <i>self-criticism</i> • <i>fatigue</i> • <i>emotion/sensitive</i> • <i>confidence</i> • <i>emotion/mood</i>

When reviewing the data, there appeared to be considerable variation within each students’ responses. Resilience is clearly something very personal, and this potentially has implications for any ‘one size’ approach in a class context. These findings resonate with the literature, which also suggests that the factors, which underlie any one individual’s resilience, are unique to them ([Grant and Kinman 2012](#)). Hence, it may be pragmatic to assume that each student will need to develop their own ‘recipe’ based on their understanding of, and evaluation of, their resilience. This “inner freedom to act” ([Simpson 2009: 1](#)), means that they do not tend to act in a habitual way to challenging situations, rather that they exercise a greater choice about what to do and how to respond. The need for an individual approach appears in [Robertson, Cooper, Sarkar, and Curran’s \(2015\)](#) systematic review, which asserts there is currently insufficient empirical data about the most effective training format, but that there is some evidence that inclusion of some one-to-one training is ‘wise’, and that this support is based on the needs of the individual. A question is raised by [Sull, Harland, and Moore \(2015\)](#) with regard to whether resilience is important in the context of wellbeing. There is also a question here, somewhat counterintuitively, in terms of potentially doing some harm, which is perhaps evident in some of the ‘fighting/overcoming’ responses in this research study. [Vanhove et al. \(2015\)](#) suggest that resilience-building programmes actually had the opposite effect over time in individuals thought to be at greatest risk and lacking what they termed “core protective factors” (278). [Dunn, Iglewicz, and Moutier \(2008\)](#) also found that because coping ‘reserve’ is unique to each individual, some students would react to small stressors as a crisis/major threats to their wellbeing and resilience. We do not know the internal structure of each individual’s resilience reserve (nor should we?) therefore we need to be cognisant of the potential to do harm for a small number of students in raising issues of resilience, especially in a group or class setting.

Finally, in considering resilience ‘training’ or development within the curriculum, it is perhaps tempting to assume fragility, i.e. a therapeutic lens. The concept of the fragile student is contested in [Jackson and colleagues’ study \(2011\)](#), in which they conclude that nursing

students are often more resilient than initially assumed. Importantly, any discussion solely around personal resilience-building seems to let the workplace/placement 'off the hook' and is certainly at risk of not addressing the macro (external) level aspects of resilience, as seen in this research. [Grobecker's \(2016\)](#) large-scale study of over a 1200 nurses in the United States found that a 'sense of belonging' and connection whilst on clinical placement was strongly related to measures of confidence and motivation. This was to such an extent that [Grobecker \(2016\)](#) termed this a 'fundamental human need'. Benner, Sutphen, Leonard, and Day's (2010) qualitative study also found that feeling part of the team was important to nursing student confidence levels. [Hart, Brannan, and de Chesnay \(2014\)](#) commented that resilience can be greatly influenced by encouraging a positive organisational culture. [McDonald et al. \(2012\)](#) looked at this issue of workplace adversity from an Australian nursing and midwifery perspective. They concluded that strategies that resilient individuals used to 'survive' workplace adversity included the use of support networks (this included peer mentoring), supportive and collegiate work environment (this included taking breaks together, approachable management etc.), external support from friends and family, looking after self, positive self-talk, and a degree of autonomy.

Conclusion and recommendations

This research has shown a fascinating variation in the interpretation of the word 'resilience.' For some students, there is a negative perception in being seen as 'too resilient', which has the potential to derail any resilience training/development activities. There needs to be a clear understanding that resilience is being addressed from a positive philosophical standpoint, one that aims to encourage flourishing rather than just coping or withstanding stress. If the language of resilience does indeed vary, then does this matter when we are researching, discussing, coaching or 'teaching' what it is to be resilient? Additionally, if we are effectively talking a different language, then does this have implications for any 'one-size' approaches? There seems to be a lack of clarity in the definition of resilience (confirmed in this research), thus are we therefore able to 'measure' impact or outcome meaningfully? In summary, before any 'resilience' interventions in the classroom are undertaken, it seems vital that an exploration of what it is to be resilient – personal definitions and world view – needs to take place. Otherwise, discussion and any 'training' interventions could just be 'lost in translation'.

There is a need to be aware that resilience is personal, and there cannot be a 'one-size fits all' approach. Any approach needs to recognise that each student's resilience is influenced by internal and external factors, and some of those are within our sphere of influence as educators, and some are not. However, we should foster an understanding of resilience as a positive trait as there are differences in definitions students give. We also need to be aware that personal resilience sits within a framework of shared responsibility, it is not just the responsibility of the individual to 'be' resilient. A person's resilience is therefore the product of interaction and responses will be individual, contextual and ever changing. Any resilience development therefore needs to guard against a reductionist approach where we are 'training' students to just cope. Importantly, coping is not the same as being or feeling resilient.

In summary, this aspect of the research project has demonstrated that whilst it may be tempting to state that 'resilience' needs to be 'taught' as part of a curriculum, in practice this is not just a word – consideration needs to be given to the fact this is a very nuanced concept, individual, and ever changing. My definition of resilience is unlikely to be the same as the next person's. 'Resilience' training is perhaps easy to say; harder to do, and most certainly not a panacea, and nor does it mitigate the need for a supportive, welcoming clinical practice and education environments.

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