Review

What do we know about student resilience in health professional education? A scoping review of the literature

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ABSTRACT

Objectives: Resilience has been identified as a key capability to thrive in the complex changing work environment of the 21st century. Therefore, the aim of this scoping review was to investigate how resilience is understood in the context of pre-qualifying health education, if there is a need to build student resilience, and what approaches to enhancing student resilience are described in the literature.
Design and Data Sources: Arksey and O'Malley's (2005) literature scoping review design was adopted as it enables researchers to review, summarise and analyse the literature on a given topic. The databases searched were Cumulative Index of Nursing and Allied Health Literature, Scopus, Proquest, Medline, Science Direct, and Education Resources Information Centre.
Review Method: Four research questions informed the literature review: (1) how is resilience conceptualised in the literature?, (2) what evidence exists for the need for resilience enhancement?, (3) what resilience factors should inform resilience enhancement?, and (4) what resilience enhancement programs are described in the literature?
Results: A total of 36 papers were reviewed in detail. Whilst the need for a focus on resilience across the health professions was evident an array of definitions and conceptualisations of resilience were described. A small number of approaches to enhancing resilience were identified.
Conclusion: Whilst widespread recognition of the importance of resilience in the health professions exists the area remains under theorised with limited conceptual models and robust interventions published to date.

1. Introduction

Over 50 years of research has demonstrated the importance of resilience in relation to positive outcomes for children, adolescents, families and trauma survivors (Pines et al., 2012). Whilst early research focused on children and adolescents in the context of trauma or disaster, this was broadened to include resilience in adults and across a range of contexts such as Caruana's (2014) examination of resilience and global citizenship in higher education. Aligned with this shift in the focus of the resilience research has been a change in the way resilience is viewed. Early researchers typically viewed resilience as a fixed trait or personal attribute (Masten and Garmezy, 1985). Contemporary researchers tend to view resilience as either a dynamic process (Earvolino-Ramirez, 2007) that can be developed or enhanced (Stephens, 2013), or as an outcome (Britt et al., 2016). For over 50 years' resilience has been studied in relation to adversity (Prince-Embury, 2014). This diversity in perspectives arises from the array of lenses through which resilience has been viewed with reviews of the literature highlighting psychological, ethical, moral, ecological, socio-ecological, organisational and supply chain perspectives (Bhamra et al., 2011; Howe et al., 2012).

No matter which perspective is adopted, resilience is increasingly viewed as a critical graduate capability for the 21st century (Tomlinson, 2017). This is particularly true for healthcare which is a complex, stressful and emotionally challenging environment (Aburn et al., 2016). Concern over the challenging health and social care work environment has led to interest in resilience across the health professions with key bodies including the Medical Research Council and the Economic and Social Research Council in the UK identifying resilience as an important factor in health and wellbeing (Windle et al., 2011). In their book *The Resilient Nurse* (McAllister and Lowe, 2011) claim resilience is an essential skill that enables one to make sense of experience and manage the stress of the workplace. Many other researchers including McAllister and McKinnon (2009), Pines et al. (2012), Monteverde (2014), and McGowan and Murray (2016) have proposed that health professionals need resilience to survive (and thrive) in the workplace.

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Furthermore, Hodges et al.'s (2010) nursing career longevity study found resilience to be the most critical factor.

Health professional education is perceived by many students to be a stressful experience (Taylor and Reyes, 2012; Wilks and Spivey, 2010) with students studying health related courses reporting increased levels of anxiety, fatigue, burnout and lack of motivation (Richards et al., 2013). Reeve et al.'s (2013) examination of nursing students revealed rates of anxiety, worry and depression that the authors described as indicative of a high burden of stress. This finding is supported by many including Gibbons (2010) and Priesack and Alcock (2015). The situation is similar for medical education where fatigue, stress and other mental health problems are major concerns (Wood, 2016). Dyrbye and Shanafelt's (2016) review of the literature on burnout in medical students revealed a high proportion of students across the globe experience severe work-related stress and burnout with between 45% and 56% displaying symptoms suggestive of burnout, and just under half reporting high levels of emotional exhaustion. Similarly, Cecil et al. (2014) cite burnout rates of around 49% in medical students in the USA and 28% to 61% in Australia.

In light of these student health and wellbeing issues it is perhaps not surprising that attrition rates for students in some health professions is a growing concern. Crombie et al. (2013) report that in some areas of the UK up to 30% of nursing students leave their course due to individual, institutional and political/professional issues. Similarly, Harris et al. (2013) state the average attrition rates for nursing students vary from 47% for associate degrees to 50% for baccalaureate degree programs. A more global study of first year health sciences students conducted in an Australian university in 2011 found an attrition rate of 49% with only 11% completing their undergraduate course (Hoyne and McNaught, 2016). Related to these student health, wellbeing and attrition concerns is the call for resilience training in health professional education (Eley and Stallman, 2014; Pines et al., 2012; Monteverde, 2014; Tempski et al., 2012; Waddell et al., 2015).

A critical review of the literature on resilience in the health professions was published by McAllister and McKinnon (2009). This led to three key recommendations. First, all health professional programs should include a focus on resiliency. Second, within practice contexts practitioners should be provided with opportunities to reflect on and learn from the practice of others. Third, professional cultural generativity (demonstrated through altruism, positive role modelling, mentoring and coaching) be engendered. Given the concept of resilience has evolved over recent years as new knowledge has been created (Aburn et al., 2016) it is timely to undertake a review to ascertain current understanding and progress in relation to resilience in pre-qualifying health professional education for the 21st century. The key practical and research implications of these findings are outlined. This research will help inform resilience enhancement programs in health professional education.

2. Methods

A scoping review was undertaken to map the existing literature on resilience in relation to the four research questions below. Scoping reviews are a form of knowledge synthesis, designed to summarise and synthesise the evidence, rather than assess the quality of studies (Arksey and O'Malley, 2005). More specifically a literature mapping study was undertaken. Rumrill et al. (2010) describe the objectives of this type of scoping review as identifying the location and magnitude of literature on the topic. The process for review is outlined in Fig. 1.

Arksey and O'Malley (2005) methodological framework for scoping reviews was adopted to enable replication and strengthen the rigor of the research. This framework is organised into four steps which are outlined below.

2.1. Step 1. The Research Questions

Prior to conducting the search, four specific questions were established in the context of pre-qualifying health professional education: (1) how is resilience conceptualised in the literature?, (2) what evidence exists for the need for resilience enhancement?, (3) what resilience factors should inform resilience enhancement?, and (4) what resilience enhancement programs are described in the literature?

2.2. Step 2. Identify the Relevant Studies

To ensure breadth of the review, several common health databases were utilised: CINAHL, Scopus, Proquest, Medline, Science Direct and ERIC. The search terms were narrowed to: 'resilien*' AND 'health' AND 'student'. In line with the focus on education for the 21st century, the review was narrowed to peer reviewed papers published in English between 2000 and 2016.

2.3. Step 3. Study Selection

The inclusion criteria were developed by the research team through an iterative process involving two key phases. Firstly, the inclusion criteria were developed to include relevant studies whilst balancing the need for comprehensiveness with cost and time implications. The initial research yielded 652 papers. Following exclusion of duplicate records and papers that did not meet the inclusion criteria in this initial phase, 56 papers were identified. The second phase of the selection process arose when, in charting the studies (see step 4 below), multiple papers were identified related to non-health related courses, that focused on faculty rather than students, or described the validation of a measurement tools. As a result, two additional inclusion criteria were added (see Table 1). Following exclusion of an additional 20 papers, 36 papers were included in the final analysis.

2.4. Step 4. Charting the Studies

An analytic frame was developed by two members of the project team and entered into a template excel spreadsheet. The analytic frame included:

1. Biographical details
2. Brief summary of the paper
3. Context and professions involved
4. Conceptualisation of resilience
5. Resilience factors
6. Resilience enhancement initiatives

The research assistant and first author used this frame to independently interrogate all of the papers included. The second author then interrogated approximately half ($n = 26$) of the papers, with a further two project members interrogating 10 studies each. This process ensured each paper was reviewed by three members of the research team. The research team met on two occasions to compare findings and ensure reliability between the reviewers.

3. Results

Our results align with escalating interest in resilience in the broader higher education context with the majority of papers (86%) published between 2011 and 2016 (see Fig. 2), thus subsequent to McAllister and McKinnon's (2009) review.

The vast majority of publications were empirical papers (78%), with the remaining being conceptual, program descriptions or opinion pieces. Most papers were from North America (50%) and Europe (30%) with the others from Australasia and South America. The most common professions represented were medicine (13), nursing (12), psychology