



Review

Does peer-assisted learning improve academic performance? A scoping review



Brett Williams*, Priya Reddy

Department of Community Emergency Health and Paramedic Practice, Monash University, Victoria, Australia

ARTICLE INFO

Article history:

Received 8 April 2015

Received in revised form 9 March 2016

Accepted 29 March 2016

Keywords:

Students

Health occupations

"Peer assisted learning"

Education

Professional

"Near peer teaching"

ABSTRACT

Objectives: Due to the diverse and ever-changing nature of the healthcare industry, teaching pedagogies such as peer-assisted learning (PAL) are being implemented to align with external competency standards. A scoping review was conducted in order to map the breadth of literature available on PAL and its impact on student performance.

Method: This review used Arksey and O'Malley's six stage scoping methodology. The databases searched included: Cinahl, Ovid Medline, Proquest and Embase as well as grey literature sites and dissertations.

Results: 22 articles were included in this review, 10 of which were mixed methods randomised controlled trials, one retrospective study, four controlled trials, two randomised cross over controlled trial, three prospective randomised controlled trials, one thesis and one comparative research design. Analysis of the included articles identified three major themes outlining student performance. Student teachers themselves showed the most significant improvement in objective outcomes. The predominant healthcare field addressed were medical students with very few studies being completed on other professions.

Conclusions: The search indicated an overall positive response to PAL with the measurable outcome of student tutors being of most significance. Further research is required to determine the relevance for the wider healthcare community.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Due to the constantly changing nature of the health care industry, current university students are required to successfully acquire and maintain skills throughout their education in order to keep up with industry and community expectations (Brueckner and MacPherson, 2004). Competency standards within healthcare occupations require students, graduates and interns to possess the ability to teach and have an understanding of the learning process. For example, the Australian Medical Association (AMA), Australian Nursing and Midwifery Federation (ANMF) and Council of Ambulance Authorities all suggest that teaching, mentorship and coaching are all important graduate attributes (Association, 2010; Federation, 2005). Therefore it is important for educational institutions to formulate ways in which to align and meet the supply and demand of the industry and community expectations. Developing methods in order to increase resources as well as utilise time and staff more appropriately appears to be the next logical step

for the future of teaching healthcare students (Brueckner and MacPherson, 2004; Burgess et al., 2014; Secomb, 2008).

Tertiary healthcare institutions utilise a plethora of teaching and learning methods that are student-focussed; among these pedagogies is peer-assisted learning (PAL). Unlike conventional teaching methods whereby students are taught by teachers and professionals in their respective fields, PAL attempts to incorporate the student into the teaching process and promote a more social learning atmosphere (Manzoor, 2014; Topping and Ehly, 1998).

PAL is not a new teaching approach and dates back to the era of Socrates and Plato (Topping and Ehly, 1998). PAL has been incorporated into tertiary education for decades. Topping and Ehly (1998) contributed theoretically in forming the initial framework for PAL that is being used today, including the methods in which to implement this teaching pedagogy (Topping and Ehly, 1998). PAL is based on various theories including Vygotsky's social constructivism and the theory of cognitive congruence (Atwater, 1996; Lockspeiser et al., 2008). Both of these theories are aligned with the notion of PAL. For example social constructivism is defined by learning that occurs in a social setting where students assist each other through a shared culture of knowledge (Atwater, 1996). It refers to the process of collating a range of artefacts, collaborated pieces of work and information that hold a shared meaning within a social group (Atwater, 1996). Individuals become immersed within the culture created during this time and consequently become part of a

* Corresponding author at: Department of Community Emergency Health & Paramedic Practice, Monash University – Peninsula Campus, PO Box 527, McMahons Road, Frankston, Victoria 3199, Australia.

E-mail address: brett.williams@monash.edu (B. Williams).

continually learning environment that has been formed under a social setting. PAL relies heavily on the social interactions between students in order to successfully implement this teaching method; this is underlined by the social constructivism theory. Similarly the theory of cognitive congruence looks at the similarity between teacher and student knowledge on particular concepts (Lockspeiser et al., 2008). Due to the comparatively 'shorter-gap' in knowledge between a student teacher and student learner the recollection of facts and understanding for the student teacher are potentially more suitable. This enhances and assists the relay of information from students to students. In comparison, the experience gap between staff and student is often much larger resulting in a reduced ability to communicate in relative terms (Lockspeiser et al., 2008). The social arena of learning from peers and collating gathered information to reach a common goal has been developed based on the social constructivism theory (Atwater, 1996). Cognitive congruence is the main basis for the development of PAL with the theory directly underpinning the reason behind creating this teaching concept (Lockspeiser et al., 2008).

PAL incorporates a number of different teaching methods that aim to enhance student learning each with individual terms that depict different teaching methods. For example students of a higher year may teach students of a lower year which is referred to as 'near-peer teaching' (Topping and Ehly, 1998). 'Peer to peer' learning is where students of the same year level teach and learn from each other with the role of tutor and tutee being interchangeable between students (Topping and Ehly, 1998). From this it can be seen that PAL does not refer to one meaning but rather encompasses a range of teaching styles.

The current literature surrounding PAL highlights both positive and negative effects of this teaching method (Patel et al., 2014; Rengier et al., 2010; Tolsgaard, 2013). While a large portion of studies state the benefits of PAL to be its cost-effectiveness and ability to utilise staff and resources in a more sustainable way little can be said on its direct impact on objective student learning and outcomes. The nature of available literature on PAL is largely qualitative in nature with studies attempting to determine student perceptions and emotions in relation to this teaching method rather than develop an understanding of how it affects objective performance. While a number of systematic reviews have been undertaken on PAL these have addressed student perceptions and emotions towards PAL (Burgess et al., 2014; Secomb, 2008). Given the growing use of PAL in tertiary institutions, it is timely that examination of whether PAL can objectively enhance student performance be undertaken. Therefore to address this question we have undertaken a six stage scoping review.

2. Methods

While systematic reviews seek to summarise peer reviewed literature available on a narrow and specific research question, scoping reviews attempt to map the fields of study by examining the full range and extent of research activity on a broader topic (Arksey and O'Malley, 2005). This allows for all peer-reviewed and non-peer reviewed literature to be incorporated in understanding and answering the research question. This scoping review was guided by Arksey and O'Malley's (2005) six stage methodology for scoping reviews. These stages included:

1. Identify the research question
2. Identify relevant studies
3. Study selection
4. Charting the data
5. Collating, summarising and reporting results
6. Expert consultation (optional and included)

While the methodology states five compulsory stages Arksey and O'Malley (2005) suggested that a sixth stage of consultation may be incorporated to validate the main findings from the review. This stage is considered optional but as it allows for key contributors to offer insight

and additional references the authors chose to include it in this review in order to enrich the study findings.

2.1. Identify the Research Question

Given the emerging body of knowledge surrounding PAL and the breadth of literature available on PAL the following research question was developed to inform the scoping review: "Can PAL objectively improve student performance?"

2.2. Identify Relevant Studies

Four databases were searched for articles of relevance; these were Cinahl, Ovid Medline, Proquest and Embase. The grey literature sites <http://www.greylit.org/> and <http://www.tripdatabase.com/> were also searched for non-peer reviewed literature which yielded no results. Along with this dissertations and hand searching were also conducted. There were no restrictions on dates of publications and articles found ranged from 1996 to 2014; no relevant studies before this year were found. The search terms used in the strategy included: "peer assisted learning", "near peer teaching", "students, health occupations exp.", "educational, professional exp.", "peer mentor*s", "student teacher*s". The search was conducted by one author (PR) and ratified by an expert librarian and (BW) while the discussions around inclusion and exclusion of articles incorporated both authors (BW and PR).

2.3. Study Selection

This initial search of the four databases produced a total of 677 articles (after eliminating duplicates). After a title and abstract review, a total of 45 articles were found to meet the initial criteria and were included for the next stage in sorting. A further full article review was then conducted utilising the following inclusion criteria:

1. Articles focused around peer assisted learning and its derivatives (near-peer, etc.)
2. Articles including only "students" within a tertiary healthcare course
3. Student performance outcomes were objective and measurable.

Studies were excluded if the full article was not in English and if the performance outcome was not measured using an objective method. Actual clinicians were also excluded as they did not fit the criteria of being a tertiary-level student. This screening yielded 22 articles that were then included in this review.

2.4. Charting the Data

Arksey and O'Malley (2005) describe the charting of the data stage both as a narrative and analytical approach to extracting data from articles that best describe the research aim. Summaries of each study were categorised into publication year, author, study location, study type, cohort size and research findings. Table 1 provides an overview of the 22 articles selected for this scoping review.

2.5. Collating, Summarising and Reporting Results

Among the 22 articles included for this review, 10 were mixed-method randomised controlled trials, one retrospective study, four controlled trials, two randomised cross over controlled trial, three prospective randomised controlled trials, one thesis and one comparative research design. Of these, five were conducted in Germany, four in USA, three in Scotland, two in Canada, one in Denmark, two in Australia, one in Nigeria, one in Pakistan, one in The Netherlands and two in the United Kingdom. The bulk of studies addressed PAL in medical and nursing professions with very little on other healthcare professions. Appraisal of the articles using an iterative and thematic approach

Download English Version:

<https://daneshyari.com/en/article/367839>

Download Persian Version:

<https://daneshyari.com/article/367839>

[Daneshyari.com](https://daneshyari.com)