



A Systematic Review: Promoting Professional Behaviors and Attitudes in Healthcare Students

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Introduction

Healthcare professions have called for increased teaching of professionalism to students in the past 20 years.¹ Each healthcare profession has a code of ethics or core values document which states the expected behaviors of the profession. Professionalism has been addressed through numerous American Physical Therapy Association (APTA) documents including the APTA Code of Ethics, the APTA Guide for Professional Conduct, and the APTA Professionalism in Physical Therapy - Core Values.²⁻⁴ We know that it is critical for professionals to develop a level of expertise in their cognitive and psychomotor skills. We also know that this is not enough, and the affective domain must also be addressed. To develop high-quality, competent, and caring practitioners who have assimilated the core values of the profession, we need to facilitate development in all domains of learning.^{5,6} The development of professional behaviors and attitudes among healthcare students can be challenging because these skills are abstract and complex concepts rather than technical skills.⁶ There is little in the current literature to inform us of the best methods for the development of professional behaviors and attitudes in healthcare education. Several models have been proposed to foster the development of professionalism in healthcare students, but few have been examined to determine the efficacy of promoting professional growth, identity formation, and socialization.⁷ The purpose of this study was to conduct a systematic review across six healthcare disciplines to investigate the most effective teaching and educational methods for developing students' professional behaviors and attitudes.

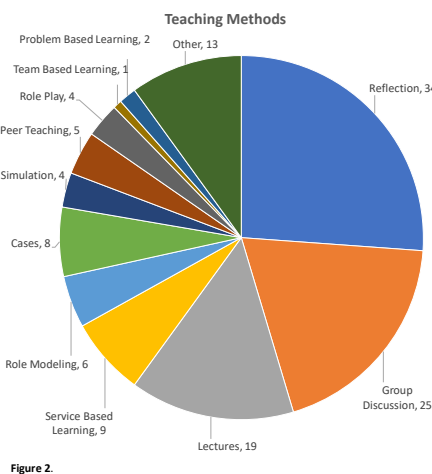
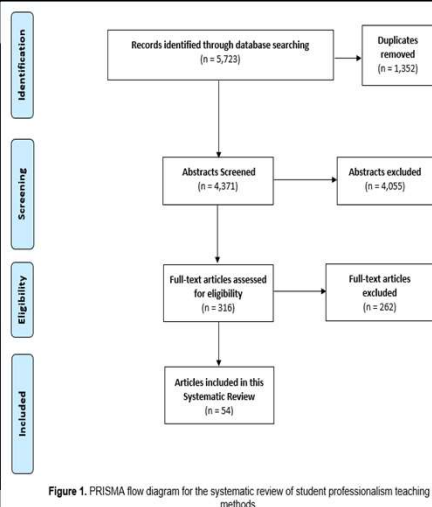
Methods

Search Strategy: Medline Complete, CINAHL Plus with Full-text, SPORTDiscus, Professional Development Collection, and ERIC databases were electronically searched. Select key search phrases included: healthcare, physical therapy, occupational therapy, nursing, dentistry, medicine, pharmacy, education, student, teaching technique, teaching method, educational intervention, learning, assessment, outcome, professionalism, and professional behavior (Figure 1).

Inclusion Criteria: 1) Studies from 2005 to April 2021. 2) Only English language articles. 3) Teaching of professionalism in physical therapy, medicine, occupational therapy, nursing, dentistry, and pharmacy education. 4) Teaching methods, educational interventions, and outcomes in healthcare curricula. 5) Types of studies included quantitative descriptive, mixed methods, quantitative non-randomized control trials, and quantitative randomized control trials.

Review of titles/abstracts, full-text articles, and quality assessments were independently performed by two evaluators. A third evaluator resolved discrepancies during the review process.

Quality Assessment: The Mixed Methods Appraisal Tool (MMAT), Version 2018 was utilized to evaluate the methodological quality of the included articles. The MMAT was selected due to its ability to critically evaluate varied study designs, its established reliability, validity, and ease of use.⁸



Results

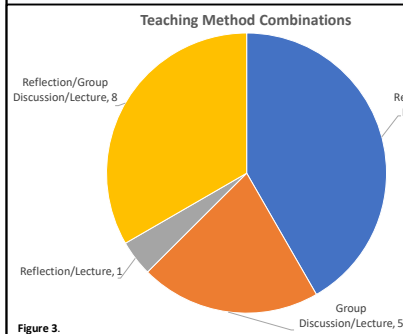
Quality Assessment: The MMAT appraisal resulted in 47/54 (87%) of the reviewed studies meeting all the appraisal criteria.

Teaching Methods:

- Twelve teaching methods were identified that were used to promote the development of professional behaviors in healthcare students (Figure 2).
- The three most used teaching methods were reflection/self assessment (34/54 = 63.0%), group discussion (25/54 = 46.3%), and lecture (19/54 = 35.2%).
- Each of these teaching methods was rarely used in isolation but frequently in combination (44/54 = 81.5%).
- The most used combination of teaching methods were reflection with group discussion (n = 10), reflection and group discussion with lecture (n = 8), and group discussion with lecture (n = 5) (Figure 3).

Outcomes:

- Study outcomes were assessed to determine the effectiveness of the teaching methods on developing professional *behaviors* and/or *attitudes* in healthcare students.
- 89% of the studies resulted in positive changes in professional *behavior* or *attitude*. A positive change in professional *behavior* was observed 95% of the time, while positive changes were observed in professional *attitude* 87% of the time.
- The highest percentage of positive changes in professional *behavior* or *attitude* occurred when used in isolation or in combination in the following teaching methods: role modeling (100%), service-based learning (89%), and reflection (88%).
- In studies that grouped the three most used teaching methods, the percentage of a positive change in professional *behavior* or *attitude* when reflection was paired with group discussion was 70%, when group discussion was paired with lecture was 60%, and when reflection, group discussion and lecture were all together was 75%.



Discussion

- Teaching professionalism to healthcare students using any of the teaching methods investigated in this systematic review resulted in positive outcomes the majority of the time.
- The teaching methods were commonly used in combinations of two to five methods.
- Reflection was most effective when used in combination with other teaching methods.
- The teaching methods most reported in the literature are the easiest to implement and group in combination but are not necessarily the most effective.

Relevance for Educators: The teaching of professionalism to healthcare students is necessary to develop well-rounded and competent practitioners. There are several teaching methods that can be used to teaching of professionalism to healthcare students. Reflection appears to be an effective and often used method for teaching professionalism and using the methods in combination may be the most effective approach for changing student behavior and attitudes of professionalism.

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