

Educational theories that inform the educational strategies for teaching ethics in undergraduate medical education

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Abstract

Objectives: To find out the most appropriate learning theory for the ethics education of medical undergraduates.

Method: Two electronic databases were searched PubMed and Web of Science. We searched for published articles written in English without a time limit using the keywords: ethics education, medical undergraduates and learning theory. In the four-phased retrieval process, six full texts out of 133 citations were included in this review. Data were analyzed done by conventional content analysis.

Results: This systemic review revealed that reflection is the most effective pathway to develop ethical attributes and values of the physician. Social constructivist and experiential theory seem appropriate to form the basis for developing effective ethics curriculum.

Conclusion: This review heightens the importance of learning theories for ethics education. It gives prompt evidence that reflection is the most suitable model for ethical education. Therefore, the educational theories and teaching activities that endorse reflective learning should be used for ethics education.

Keywords: Ethics education, Medical undergraduates, Learning theories. (JPMA 70: 128; 2020).

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Introduction

An underlying theoretical foundation shapes and justifies the selection of effective approaches for teaching and assessment in any educational endeavour.¹ The theoretical basis provides a rational for developing instructional strategies, learning objectives and the assessment process that are in line with the educational goals.² Literature on medical education, however, is severely deficient in identifying the theoretical perspectives for ethics education.^{3,4} Eckles et al. comprehensively reviewed in 2005 literature surrounding ethics education in undergraduate medical school curriculums in the United States and did not find consensus on educational philosophy, goals and objectives. Similar findings were reported by Tsai and Harasym in 2010 in their review of using ethical reasoning models in medical education.⁵

The current systemic review was planned to evaluate the evidence on educational theories that are best suited for

guiding the strategies in achieving the goals for teaching ethics in undergraduate medical education. The focus of this review is on the theoretical approach for providing optimum educational experience on ethics in medicine.

Research question: Which educational (learning) theories may guide the development of appropriate teaching strategies for ethics education in undergraduate medical programmes?

Methods

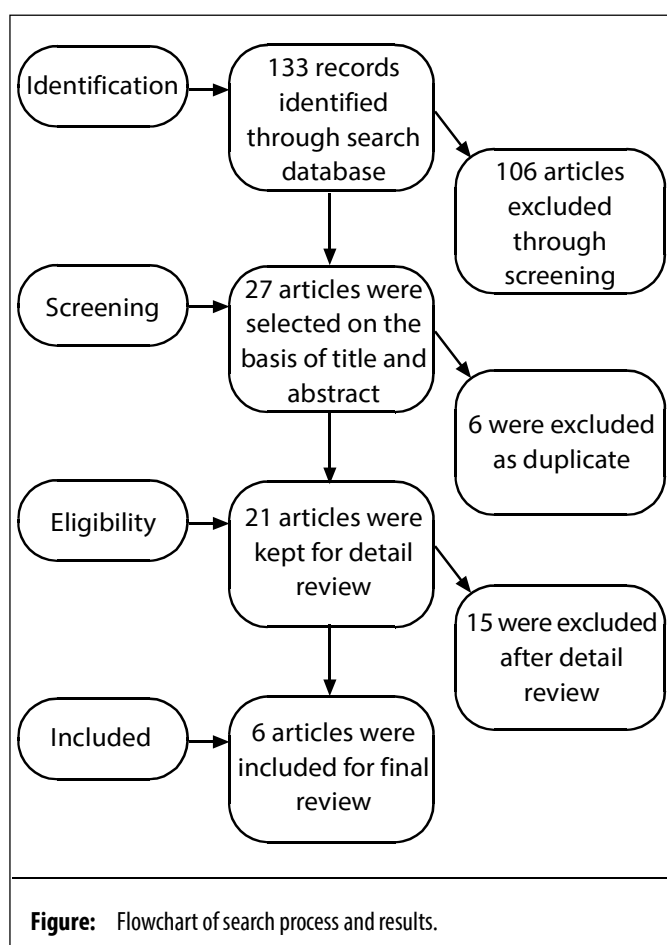
Inclusion and exclusion criteria: The review included English language articles on ethics education for medical students published in scientific journals. There were no time span limitations. The articles that were more focussed on professionalism instead of ethics and also those which did not discuss or highlight the learning theories in ethics education, were excluded. Articles based on nursing and veterinary ethical education were also excluded.

Retrieval of the studies: We used Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines⁶ for this systemic review. First, articles were

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searched by using PubMed and Web of Science databases. Keywords used for search were, "Ethical education", "Learning theories" and "Medical students". Boolean search word "AND" was used to make combinations of key words. PubMed yielded 90 articles and Web of Science gave 43 articles. First screening was based on the titles and abstracts. Abstract of articles whose title appeared relevant to research question were reviewed initially. Fourteen abstracts from PubMed and 13 from Web of Science were selected; six of them were duplicates. These articles were also reviewed by a second reviewer to confirm the relevance. Nine articles were selected for detailed final review out of which three articles were excluded because they did not discuss learning theories (Figure).

Data extraction and organisation: Data extraction framework was designed and the extracted information was organised in table format. The information included author(s), year of publication, and country of origin, design, purpose and participants. Other information like teaching strategies used, and identified learning theories, were also included in data framework.

Two independent researchers participated in all aspects of this review. They compared and discussed their findings with respect to inclusion and exclusion criteria, process of data extraction and item classification, and drawing inferences from their findings. Disagreements were resolved by discussion. The search was done without time

Table: Articles included in the systematic review.

S.N.	Author and Year	Country	Characteristics of Articles				Teaching strategies	Learning theories
			Type of journal	Type of manuscript	Purpose	Participants		
1	Stolper, Molewijk, & Widdershoven, 2016 ⁷	Netherland	BMC medical ethics	Original research article (descriptive case study)	To evaluate theory and practice of the moral case deliberation for ethics education	Medical students	Moral case deliberation and dilemma method	Reflection Experiential learning
2	Alyousefi, Jarallah & Alrowais, 2016 ⁹	KSA*	Creative Education	Study report	To assess the efficacy of clinical cases in ethics teaching	Medical students	Lectures & case-based tutorials	Reflection Constructivism Social learning theory
3	Molewijk, Zadelhoff, Lendemeijer, & Widdershoven, 2008 ⁸	Denmark	Bioethica Forum	Original article Mixed method	To evaluate the importance of moral case deliberation in ethics education	Medical students	Moral case deliberation	Reflection Experiential learning
4	Shamim, Zubairi, Sayed & Gazzaz, 2016 ¹¹	KSA*	JPMA	Original article	To analyses the use of portfolio-workbook in ethics course.	Medical students	Role-plays, movie/video clips, vignettes, workbook	Reflection Guided learning
5	Branch & George, 2017 ¹⁰	USA*	AMA Journal of Ethics	Case study	To evaluate the efficacy of narration and reflection in ethical education	Medical students	Narratives Reflection practice on clinical incidents	Reflection Narratives
6	Childress, 2017 ¹²	USA*	AMA Journal of Ethics	Review article	To evaluate the importance of stories and reflection in ethical teaching	Medical students	Doctor stories Case narratives	Reflection Narratives

limitations to enable an in-depth investigation of the topic.

Data analysis: Data was analysed using conventional content analysis. The original expressions used by authors in their article were used without any interpretations. The reviewers primarily looked for theoretical basis of ethics education in the reviewed articles. Teaching methods used in educational process was considered as a secondary concern, to be used in discussion for supporting the theoretical approach.

Findings: Although there was broad agreement on the need to apply adult education principles to ethics teaching, literature was scarce when it came to the application of learning theories to ethics education. We found only six studies which identified the learning theories for ethics teaching (Table).

Characteristics of studies: The reviewed studies were published between 2008 and 2017. Four studies originated from the developed Western countries, while two were carried out in Saudi Arabia. These included a review article, one quantitative research, one mixed method study, one observational commentary, and two descriptive case studies. The focus of all of the reviewed articles was undergraduate medical education.

Teaching strategies for ethics education: Various teaching interventions are mentioned in these articles that include moral case deliberation, narratives, doctor's story, case-based tutorial, role-plays, movie/video clips, vignettes, portfolio, reflection on clinical incidents.

Learning theory for ethics education: All articles in this review informed that reflection in relation with different learning theories was best suited for ethics education. The articles suggested that ethics curriculum should be primarily based on reflection and experiential learning. In this regard, varying models of learning have been recommended.

Stopler et al. (2016) and Molewijk et al. (2008) suggested moral case deliberation (MCD) as an effective method for promoting reflective learning in ethics education.^{7,8} In this method the teachers bring their actual moral questions and dilemmas to facilitate the learning process by structured dialogue and conversation. The students and teachers reflect on these real cases to develop students' moral competencies. According to them, MCD with clinical dilemmas fosters reflection and enhances students' reasoning skills.

Alyousefi et al. (2016) presented a study in which they let students analyse ethical issues from real clinical cases after their usual ethics teaching sessions.⁹ They found that the students were able to reflect on their learning and recognised the ethical issues in the given cases. Additionally, the process reflected on students' ethical sensitivity by showing their ability to recognise, analyse and criticise unethical and unprofessional behaviours. They concluded that the students' reflection on clinical cases with ethical issues was important and beneficial for learning. Similar conclusions were drawn by Branch and George (2017) who believed that doctors could learn ethics by reflecting on experience.¹⁰ They may reflect in the moment (reflection-in-action) or afterwards (reflection-on-action). Their review discussed two case examples of ethics teaching using guided group reflection on narratives. They suggested that this method fostered moral development alongside professional identity formation in students. They further claimed that reflective learning addressed and enabled processing of the most pressing ethical issues and helped the students to think critically about ethical principles as they applied it on living examples.

Shamim et al. (2016) developed a workbook, a guide, for ethics education and evaluated its use in their mixed-method study.¹¹ The workbook contained reading material and reflective exercises to be used with other teaching methods. Their study indirectly supported that reflection should be the underlying model for ethics education. They claimed that the use of workbook in undergraduate ethics education was promising as it addressed the socio-cultural context, provided opportunity for interaction and enhanced students' interest in ethics.

Childress (2017) argued that reflection was a core competency in medical education. He suggested that activities like "storying" promoted reflection and could be used as effective method of teaching ethics to medical students and trainees.¹² Childress described "storying" as a mode of reflection and self-examination. It builds up on narrative-writing strategies to help learners cultivate self-awareness and become reflective practitioners.¹² Bridging the gap between theory and practice is important in learning ethics, as real-life experiences are expected to help students to reflect "in action" as well as "on action" to deepen their understanding and self-directed learning of the ethical issues.

Discussion

Earlier, ethics education was considered only a part of the "hidden curriculum" and the students were expected to learn through peers and "role models". But in recent years, medical ethics has appeared as a crucial field in undergraduate medical institutions. It is now considered compulsory for most medical schools to include ethics as a part of undergraduate curriculum. Despite this widespread adoption of medical ethics curricula and publication of several helpful reviews on ethics education, there is dearth of evidence on how ethics should be taught to medical students and which learning theories should form the basis to develop the ethics curriculum.

This article offered a comprehensive review of literature on learning theories for ethics education in the undergraduate medical school curriculum. It was observed during the review that the literature is very erratic in this field. We found three articles which focussed on learning theories for ethics education, and an additional three that indirectly referred to theories. Four out of six publications examined in this review originated from the developed countries (Denmark, Netherlands and the United States) where ethics curriculum has been introduced decades ago. The concept is relatively new in Asian and African countries where medical institutions may not have given the desired attention to the ethical grooming of students.^{13,14}

In our review, reflection came forward as the main component of theoretical underpinning for ethics education. The selected articles implied that reflection has important relevance to ethics education. Therefore, the ethics curriculum should be based on theories that incorporate reflection for learning, to become more effective. The inference supports Kolb's model (1984) which explains that learners reflect on their experiences, which, in turn, enable them to articulate abstract concepts and make appropriate implications. Learners then use their knowledge in new situations for understanding and problem-solving. This gives them a concrete experience, and the cycle continues.¹⁵

There is a widespread agreement that ethics should be taught by using clinical cases, but how these cases should be used, varies considerably in the reviewed publications. Some educators rely on real-life clinical cases, while others prefer to use pre-determined clinical vignettes to highlight specific ethical issues.

The first teaching strategy worth discussing here is "moral

case deliberate practice" which is highlighted by Stopler et al. (2016) and Molewijk et al. (2008). In this strategy, ethics education starts with actual experience of students and moral deliberation provides students an opportunity to learn through reflecting on their experience of actual clinical cases.^{7,8} It claims that moral knowledge and wisdom originate from reflections on existing situations. In moral deliberation, learners were invited to bring cases they have experienced in practice and then invite other learners to reflect upon them and find the solution of problems. It is considered that deliberate practice provides the students with valuable insights into ethical dilemmas and opportunities for acquisition of ethical skills using reflection and feedback. This also enhances students' autonomous learning. Stopler et al. added that dilemma method is an efficient method for teaching ethics in clinical settings.⁷ It also states that reflection with inductive dialogue among students after clinical case study helps to develop ethical knowledge, skills and attitude. The role of trained facilitators could not be ignored. It is the responsibility of the teachers to guide the students in approaching the learning activities in a planned way. The teachers or facilitators help students to monitor their progress, construct meaning of learned content and apply their knowledge and skills to other contexts and settings through reflective practice.

Two of the reviewed articles reported the use of sharing stories and narratives for constructing moral convictions and beliefs.^{10,11} Childress (2017) claimed that physicians who write short reflective clinical stories have better understanding of ethical and humanistic issues and have more expertise of evidence-based medicine.¹² Reflection on or in practice allows physicians to become more self-aware and inclined towards self-improvement and wisdom. Therefore, he believes that use of stories and narratives are effective in inculcating reflective practice in students. This helps the learners to nurture self-awareness and to become reflective practitioners in future.¹² The reflective practitioner always compares intended with actual outcomes in clinical practice and considers if outcomes are optimal and, if not, what might have been improved. In this manner, moral development progresses as an enduring route. The reflective practice here plays a vital role in promoting constructivism, in which the learners build their own knowledge based on their previous knowledge, thereby rendering the learning an active rather than a passive process.¹⁶

In another reviewed article, Alyousefi et al. (2016) used case studies with didactic lectures for ethics education.⁹ They observed that this approach of teaching ethics is well accepted by students and appears to be more engaging and motivating for them. Moreover, the lectures on ethics give learners the basic knowledge that they use in exploring clinical cases. This provides them the opportunity to reflect and integrate new knowledge on to the previous one.

Shamim et al. (2016) reported the efficacy of the innovative use of portfolio-workbook in teaching ethics to undergraduates.¹¹ They used the portfolio approach that has shown to be an effective means of reflection.¹⁷ However, the portfolio in the study is combined with an innovative workbook that enhances the role that the portfolio-workbook can play in students' learning.¹¹ The authors claim that portfolio-workbook is an effective guide for learning ethics in limited time, while maintaining interest and interaction of students. In their workbook, the students reflect on what they have learned during the ethics module and collect evidence from their previous clinical or non-clinical experiences. They also use various teaching tools in collaboration with the workbook, like video demonstrations, presentations, small group discussions and role-plays to provide further experience to students and enhance their learning.

The authors of the reviewed articles used the learning theories and model of reflection in their work. However, half of them did not discuss the theoretical underpinning of their publications directly.¹⁰⁻¹² One may assume that the theoretical approach taken for reflection is from an experiential learning and constructivist perspective. This review identifies that, if done effectively, reflection is a powerful tool in transforming learning process in ethics education, but it is not without risk. Reflection of new learners may impact negatively on their learning process or render the process ineffective. Therefore, it is important that the process is guided by teacher, facilitator or mentor.¹⁸

The publications reviewed in this project accept that learning activities that endorse reflection are effective in ethics education. However, a key element noted in this process is the constructive feedback in the form of guidance provided by the teacher or the facilitator. This enhances effectiveness of reflective learning and helps in fostering ethical behaviour and professionalism in students.¹⁹

Strength and Limitation

The main strength of the current review is its attempt to identify the learning theory for the ethical education, which probably makes it the first systemic review conducted on this specific topic. This review gives insight on learning theory for the development of ethics curriculum. We conducted the literature search following a systematic search protocol, using two databases.

One of the limitations of the review is that there is very scanty research in this field, and the findings from this review cannot be generalised. Hence, there is strong calling of further research in the field, especially in the Asian region that host a large number of medical institutions.

Recommendations

We recommend that ethics curriculum should be based on reflection, social constructivism and experiential learning theories. Moreover, the role of teachers should not be ignored for ethical development of students. However, it is noted that the duration of ethics education is still not sufficient and most of the activities in the reviewed articles are either limited to a course or a module. It is much needed that ethics education should be prominently featured and emphasised in the curriculum. Further research is required, especially in Asian countries, to help see the implementation, outcomes and efficacy of ethics education.

Conclusion

The review enhances our understanding about the learning theories for ethics education. It gives evidence that reflection is considered to be the most effective pathway to developing ethical attributes and values. The review also proposes the understanding that social constructivist and experiential learning theories seem appropriate for theoretical underpinning of effective ethics education. However, there is clearly more research needed to establish evidence with certainty regarding the theoretical underpinning required for developing ethics educational process in different contexts.

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