

# Embedding Medical Ethics into Occupational Therapy Clinical Practice Education

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Ethical issues in occupational therapy education are important, with a need for the development of internship curriculum and continuing professional education. Ethics education has evolved over the past 20 years, but international guidelines for ethics education in occupational therapy are lacking. This review has three aims: (1) identify published contents of ethics education in occupational therapy, (2) analyze relevant teaching methods and evaluation tools, and (3) summarize contemporary medical ethics theories. We searched PubMed for articles published in English from January 2015 to August 2021, with the keywords “occupational therapy,” “ethics education,” “ethical issue,” “professionalism,” and “moral reasoning.” Retrieved articles were reviewed to assess contemporary education methods in the aspect of embedding medical ethics into occupational therapy clinical practice education. The study included 29 articles. We collected and organized them in the context of the current status in medical ethics education, including the education content, education methods, and education fields, and the way to evaluate the learning effectiveness. This review study provides a better understanding of contemporary medical ethic education, which shed light on embedding medical ethics into occupational therapy clinical practice education. Future research is warranted to improve evidence-based education methods of occupational therapy in this understudied area.

**Key words: occupational therapy, occupational therapy education, ethical issues, medical ethics education, professionalism, moral reasoning**  
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## INTRODUCTION

### **The key features of occupational therapy**

Occupational therapy practitioners provide equitable treatment, enhance well-being, respect autonomy, and prevent harm.<sup>[1]</sup> The primary goal of occupational therapy is to enhance clients' participation in their meaningful activities and daily lives, through providing comprehensive evaluations and interventions to help improve client functions, modifications to client's living environments, recommendations and training for adaptive equipment, education for main caregivers, and further enabling people to sustain themselves, to participate in the activities of everyday life, to contribute to the life of their family, and to participate in the broader society.<sup>[2,3]</sup> To ensure competence in providing services, occupational therapy students need to learn the necessary professional knowledge, performance skills, clinical reasoning, interpersonal abilities, professionalism, attitudes, and ethical practices to meet the needs of the population they will serve.<sup>[4-7]</sup>

### **From undervaluing ethics education to recognition of its importance**

Ethics education content has been mainly included in core courses linked to standards of practice and not as specific ethics courses. The American Occupational Therapy Association (AOTA) applies codes of ethics to facilitate ethical decisions in practice.<sup>[8,9]</sup> However, research indicates that professional codes of ethics may have limitations in supporting decision making, and individual occupational therapists may not have sufficient ethics knowledge when confronting medical ethics conflicts.<sup>[8-10]</sup> Hence, concerns have been expressed about advancing better

professionalism and fostering higher standards of health care behavior. According to research, ethics education can help to develop ethical reasoning, provide an integrated understanding of ethical theory, and boost confidence in making ethical decisions.<sup>[8,9]</sup> Thus, it is critical to incorporate ethics education into the occupational therapy preclinical curriculum, internship curriculum, and postgraduate training of occupational therapists.<sup>[11]</sup>

### **Contemporary ethical curriculum in occupational therapy**

The ethics education health professionals currently receive frequently focuses on regulations and professional standards of practice, the development of ethical theories and principles, evidence-based teaching tools, and evaluation methods.<sup>[4,5]</sup> However, literature was scarce on ethics education in occupational therapy preclinical curriculum, internship curriculum, and continuing professional development or on the effects on developing ethical professional practice.<sup>[12]</sup> That is, although ethics education has evolved over the last 20 years, international guidelines for what and how to teach clinical ethics to occupational therapy students are still lacking. Hence, a review of the evidence of current ethics education in health professionals was needed for occupational therapy education. The first aim of the present review was to determine evidence of ethics education content for occupational therapy students. The second aim was to analyze teaching methods and related evaluation tools. Third, contemporary medical ethic theories were also investigated.

## METHODS

### **Methodological steps**

This study was conducted according to PRISMA guideline<sup>[13]</sup> and used Arksey and

O'Malley's (2005) methodological framework to (1) develop the research question, (2) identify relevant literature, (3) select English articles for review, (4) extract information from the included articles, and (5) summarize the results of the review.<sup>[14]</sup>

### Literature search

We extracted English articles published from January 1, 2015, to August 1, 2021, indexed by PubMed. The keywords used were "occupational therapy" and "ethic education" or "ethical issue" or "professionalism" or "moral reasoning". Articles were eligible if they described ethics education programs for health professionals, students, or practitioners. We identified 29 articles that reported on health care professional ethics education. Group design studies and review articles were both included. Contents of the identified articles were assessed carefully for eligibility. Figure 1 shows the search strategies.

## RESULTS

### Literature search

Figure 1 shows the flowchart of the search. The initial search yielded 106 articles from the database. Included for review were 29 articles that addressed medical ethics issues relevant to occupational therapy education.

### Benefits of having ethics knowledge

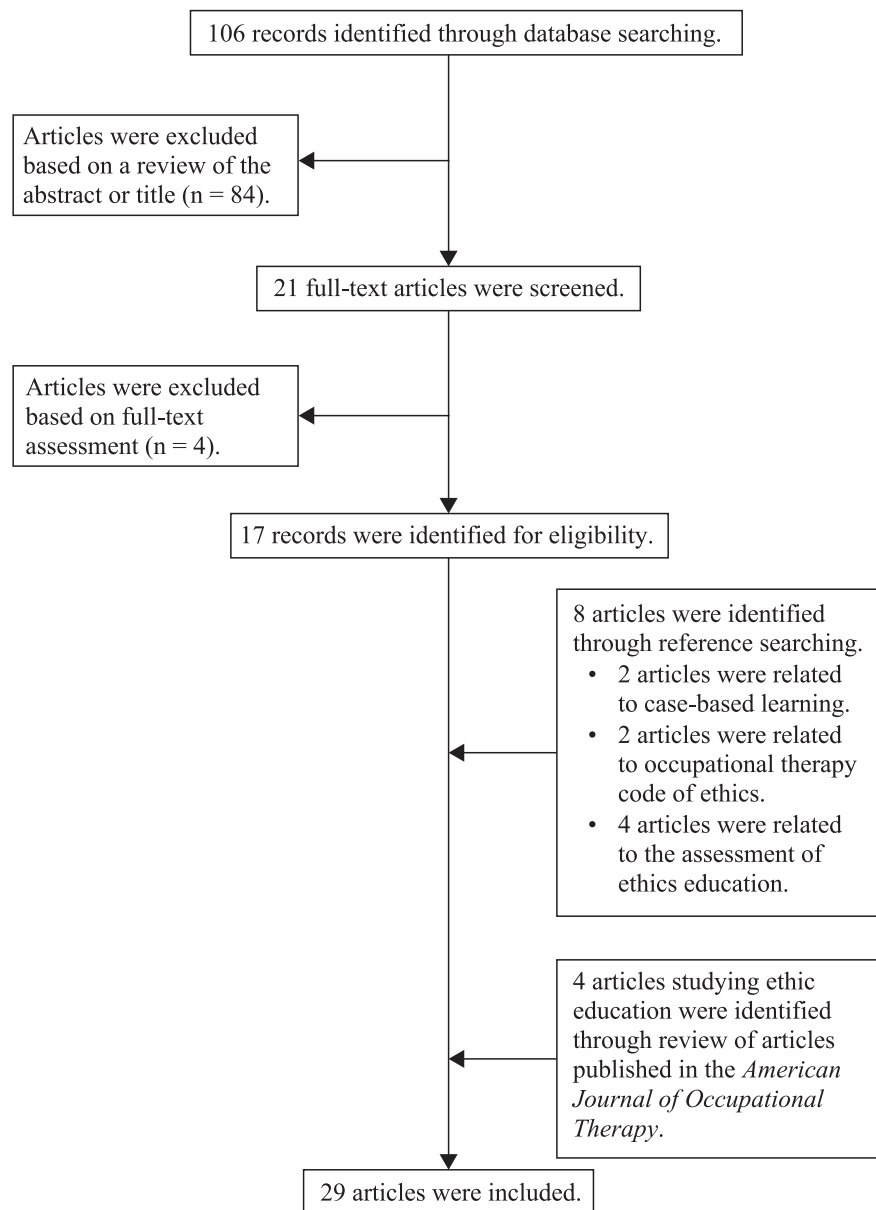
Students with lower levels of ethics training, or who are unable to bridge the gap between education and practice, maybe driven mostly by their own beliefs when facing ethical issues, which may increase moral distress.<sup>[17]</sup> However, the process of discerning ethical issues and making ethical decisions via proper ethical reasoning skills should not rely only on a personal trial-and-error

learning process. Furthermore, ethical issues and derivative ethical tensions have been linked to burnout, low personal accomplishment, a decrease in quality of care and patients' satisfaction, early attrition, and increased cost of health care.<sup>[15-17]</sup>

On the contrary, providing proper ethics education and incorporating elements of ethical care to occupational therapy students and practitioners can improve moral development and prepare them for ethical problem solving, contribute to the establishment of positive ethical climates, and increase job satisfaction in the health care profession.<sup>[15,17]</sup> Thus, it is essential to provide opportunities to teach occupational therapy students how to think ethically in difficult situations, and educators should incorporate ethical knowledge within the professional establishment's curriculum, whether in ethical decision-making courses or other professional courses.<sup>[19]</sup>

### What content should be added to the ethics teaching program?

Although literature related to ethics education is growing, consensus evidence on how and what to teach occupational therapist students is lacking. Yet, it is essential to make time for university students, postgraduate practitioners, and professional mentees to examine their values and ethical commitments and to foster a better understanding of ethical issues, rather than dwelling on theorizing formal ethical cases and debates.<sup>[18,19]</sup> Moreover, several studies suggested that students should gain knowledge about ethical theories, ethical reasoning, therapeutic relationships (e.g., professional boundaries, informed consent), professional values (e.g., integrity, honesty, and compassion), conflicts of interest, ethical uncertainty, or interest, and ethical practices.<sup>[8-10,15]</sup>

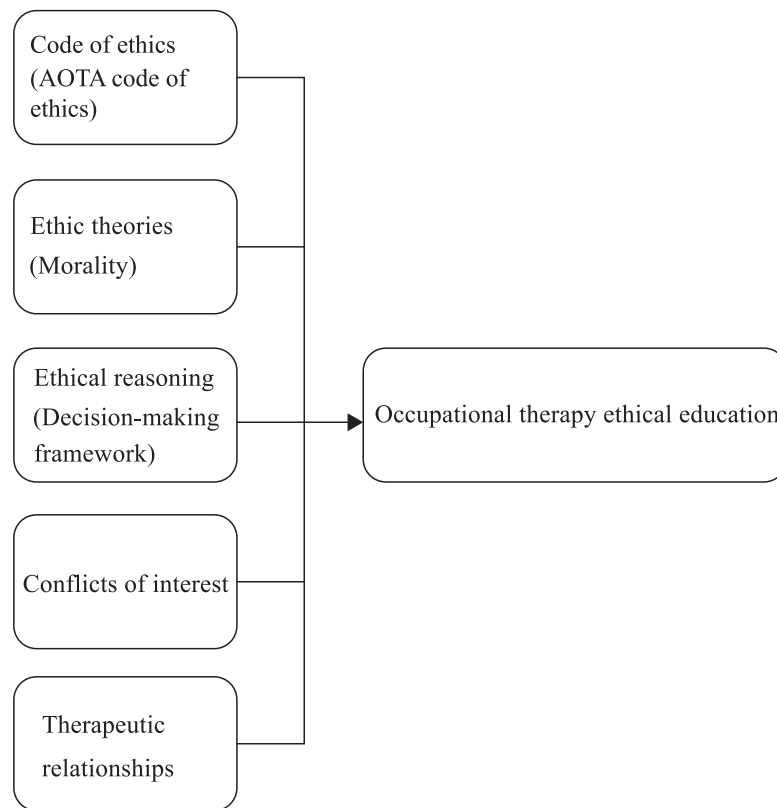


**Figure 1.** Flowchart of the review process.

### 1. Knowledge of self as a practitioner

- (1) Understanding the *professional values* (e.g., integrity, honesty, compassion, work ethics, and ethical clinical practice).<sup>[1]</sup>
- (2) Knowing the *therapeutic relationships* (e.g., professional boundaries, informed consent)

between health care professionals and patients is associated with effective communication and collaboration, which may further improve patient safety, satisfaction, and treatment adherence, promote quality of care, reduce levels of anxiety and depression, and decrease



**Figure 2.** Guides to occupational therapy ethical education contents.

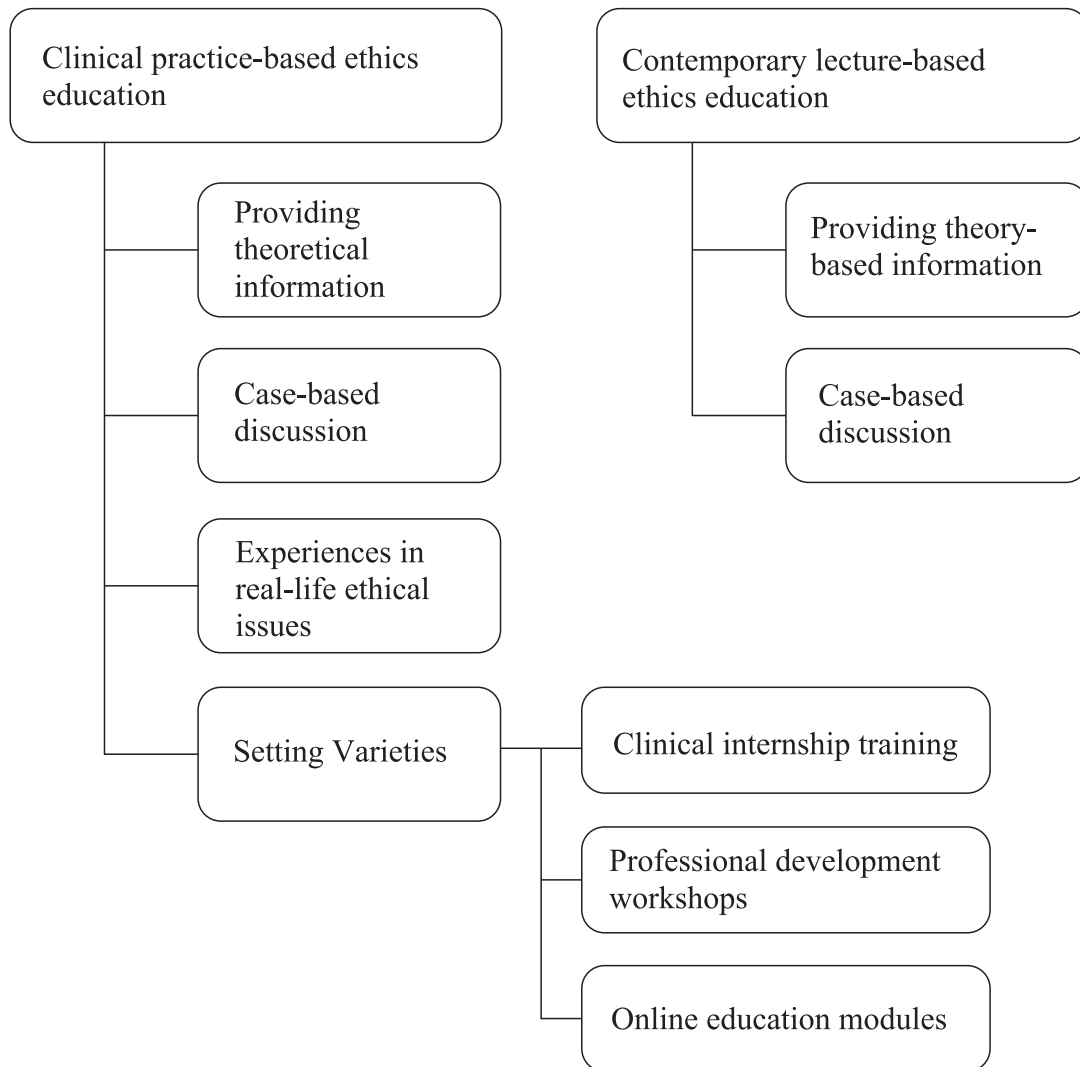
health care costs.<sup>[20,21]</sup>

**2. Knowledge of interpreting situations in clinical practice (conflicts of interest and ethical uncertainty)**

- (1) *Ethical dilemma* occurs when two or more moral principles apply to a situation and any chosen action will satisfy one but not all of the principles, such as difficult or dangerous clients, incompetent staff, lack of respect for vulnerable patients, patient discharge decisions, unfair resource allocation, privacy concerns, and lack of respect for the opinion of occupational therapists.<sup>[22,23]</sup>
- (2) *Ethical uncertainty* occurs when a therapist is not sure which moral standard to use or

whether a scenario is a moral problem.<sup>[15,23]</sup> For example, should an occupational therapist provide novel intervention technologies when the long-term consequences for their use are unknown?

- (3) *Moral distress* happens when an occupational therapist is aware of the proper course of action but is compelled to follow organizational rules, including the morality associated with being a professional member, telling the truth, and knowledge of health care.<sup>[7,15,23-24]</sup>
- (4) *Ethical tensions (conflict with professional guidelines)* include systemic constraints, conflicting values, witnessing questionable behavior, and failure to speak up.<sup>[25]</sup> *Systemic constraints* prevent the health



**Figure 3.** Guides to occupational therapy ethical education designs.

care team from enacting an ethic of care. For example, according to professional judgment, patients would benefit from a prolonged stay in rehabilitation, but the systemic constraints, such as inflexible discharge dates, preclude opportunities to provide care.<sup>[16]</sup> Ethical conflicts students may encounter, such as *witnessing questionable behaviors* by colleagues (e.g., disrespectful

behavior, inappropriate language, breach of confidentiality) and failure to speak up about ethically troubling events, are rarely handled in formal ethics courses.<sup>[25]</sup>

### 3. Knowledge of ethical theory

#### (1) Occupational therapy code of ethics

It establishes ethical occupational therapy practice guidelines and serves as a guide for ethical

action. The principles guide ethical decision making, including beneficence, nonmaleficence, autonomy, professional responsibility, justice, fidelity, and veracity.<sup>[1,23,26]</sup>

## (2) Ethical theories

- a. *Deontology*: Deontology is an action-based and duty-based approach. Medical practitioners have special obligations to care for patients. Each action is subject to moral intentions, and practical reason in making moral judgments ignores emotions.<sup>[27,28]</sup>
- b. *Utilitarianism*: According to utilitarianism, the highest moral good is the utility for the largest number of people.<sup>[28]</sup>
- c. *Four ethical principles*: Four ethical principles include autonomy (self-determination), beneficence (doing good), nonmaleficence (not harm), and justice (being fair).<sup>[16,29]</sup> A previous study recommended retaining the four principles but supplementing them with insights from other ethical theories.<sup>[28]</sup>
- d. *Virtue ethics*: Recent research on the virtues of good medical practitioners listed six important characteristics: fairness, honesty, judgment, kindness, leadership, and teamwork.<sup>[28]</sup>
- e. *Care ethics*: Care ethics takes “care” as its core, and it involves moral attention, understanding, and a mutual relationship of seeing and responding to patients’ need.<sup>[28]</sup>
- f. *Empathy-based ethics*: Empathy-based ethics is a novel approach to clinical ethics that draws on the virtues and care ethics to focus on the patient-doctor interaction. Moral sensitivity, moral imagination, emotions, reflection, moral judgments, motivation, and action are among the moral modeling principles incorporated into empathy-based ethics.<sup>[10]</sup>

## 4. Knowledge of different types of the reasoning processes

An ethics education program should also include strategies, such as flowcharts, decision-making trees, and checklists, that encourage participants to engage in a process of ethics education discussion that can support ethical decision making.<sup>[8,9,30]</sup>

### (1) Developing critical thinking skills

Critical thinking enables students to build ethical reasoning skills and ethical decision-making skills that they can apply to situations.<sup>[10,11,18]</sup>

### (2) Developing moral decision making

The moral model to develop ethical decision making consists of four components:

*Moral sensitivity* is the ability to identify and interpret moral issues.

*Moral judgment* is the ability to reason and evaluate whether or not something is right or wrong.

*Moral motivation* is the ability to prioritize moral values in order of importance.

*Moral character* is defined as the courage and persistence to carry out a plan of action.<sup>[31,32]</sup>

### (3) Developing ethical reasoning constructs (moral reasoning)

Kohlberg identified six stages of moral reasoning.

Stage 1, obedience to authority and stage 2, self-interest, are the foundations of pre-conventional morality.

Stage 3 involves the idea of reciprocal interaction and mutual caring with a chosen group of people.

Stage 4 broadens to embrace the linked societal concepts of law and order.

Stage 5 and Stage 6: The final stages are post-conventional morality, characterized by universal principles of justice and fairness and by shared ideals of reciprocity within cooperative society.<sup>[31,33]</sup>

## **The Suggested curriculum design**

### **1. From traditional teaching lectures to practical approaches**

Several studies have shown that students do not always apply what they have learned in theoretical courses to clinical practice.<sup>[34]</sup> To encourage students in patient-oriented care, professional responsibility, and benevolence, a comprehensive curricular plan for a structured approach may be suggested. However, lecture-based ethics education emphasizes only theory-based information for a short time, and this one-way communication pattern is disadvantageous for cultivating problem solving, decision making, or analyzing.<sup>[12]</sup>

Thus, to better embed medical ethics into occupational therapy clinical practice skills, a previous study suggested that ethical practice skills should be shifted away from traditional teaching lectures to practical approaches, including small group case-based discussions.<sup>[8,9,35]</sup> Incorporating clinical experiences into the educational component with proper mentorship may also potentially help students to consolidate the moral reasoning process.<sup>[18,36]</sup>

### **2. From preclinical year curriculum to clinical training year**

The real-life ethical difficulties students experience during their clinical practice may be more beneficial for building moral reasoning abilities than delivering ethics education during their preclinical year because they can reflect more on their previous experiences during training.<sup>[12]</sup>

### **3. Case-based approach**

Case-based discussions with a mentor or clinician-educators might take place in small groups of occupational therapy students. The group discussions present real-life situations to transmit principles and approaches that may be effective in clinical situations.<sup>[37,38]</sup> When compared with the lecture-based instruction method, this method benefits more in the following skills: providing the opportunity to practice critical thinking and ethical reasoning, a better understanding of ethical knowledge, decision-making skills, enhanced relevance to practice.<sup>[8,9,39]</sup>

Occupational therapy ethics educators may also use university courses, professional development workshops, online education modules, seminars, case studies, or web-based discussions in their teaching.<sup>[10,40]</sup> Newsletters or bulletins describing clinical ethics scenarios and approaches are other options. Methods that can also be useful for occupational therapy students to stimulate discussion include presentation of videos or books, sharing experiences from clinical practices, and role-play.<sup>[6,8,9,41]</sup>

### **4. Suggested length of ethics education**

Ethics courses with excessive hours can overburden students. The proper length of ethics education lasting 3 to 12 weeks may be one critical factor in the development of occupational therapist students' moral reasoning skill.<sup>[12]</sup>

### **5. Addressing the philosophical orientation of occupational therapy into ethics education**

Encourage active and diverse learning with a collaborative process that builds on prior knowledge and experience within and beyond the classroom environment and further promotes continuous professional skills, judgment,



evaluation, self-reflection, and lifelong learning.<sup>[42]</sup>

## **Evaluation tools**

### **1. Defining issues test**

The Defining Issues Test was developed based on Kohlberg's moral development theory and is now widely used by a variety of professional groups to assess students' moral reasoning abilities.<sup>[12,31,43]</sup> It comprises five scenarios where learners choose their action plan and 12 statements that respondents are asked to rate and rank in order of their importance.<sup>[44]</sup>

### **2. The Mini-Clinical evaluation exercise (Mini-CEX)**

Mini-CEX, which is based on the supervisor's observations of routine practice, is an effective and reliable assessment tool to rate the performance of the trainees in medical education settings.<sup>[45,46]</sup>

### **3. Other evaluation tools**

Multiple choice questions and short answer questions can be used to assess the students' acquisition of ethics knowledge before and after teaching. The Objective Structured Clinical Examination (OSCE) examination, a structured observation method, is designed to test clinical skill performance and competence in skills. Reflective diaries or the Self-Reflection and Insight Scale (SRIS) can be used to assess self-monitoring professional attitudes and behavior.<sup>[44]</sup>

## **DISCUSSION**

Few studies have investigated ethics education in occupational therapy to develop ethical professional practice. The main purpose of this review was to integrate contemporary evidence of ethics education, including ethics education content, novel teaching methods, and related

evaluation tools for health professionals.

The curriculum designed for occupational therapy students enables students to gain professional knowledge and clinical skills mainly through lectures. In the last training year, students start their internship in a teaching hospital to learn how to integrate their knowledge and skills into actual practice and to learn more practical experience, professional attitude, and ethical practice. However, in our experience of providing internship coaching, gaps exist between the knowledge and skills students have learned at school and their application into clinical practice. This was also seen in proper professional attitude with ethical practice. Even though students have learned general ethics theory (mainly the four principles) in their school course, when internship students start their training year, or after they enter the workforce, some may not carry professionalism, attitude, and most importantly, an ethical practice.

However, we expect occupational therapy students to not only gradually develop their knowledge and clinical skills but also value integrity and ethical core values during their education and throughout their careers. Achieving this purpose requires providing optimized educational guidance and proper role modeling with adequate ethical practice. Of note, the purpose of providing ethics education to occupational therapy students is not to train ethical philosophers but to help students develop the essential competencies for their professional careers.

Although studies reporting evidence are scarce, our study presents the current evidence of medical ethics education mainly for health professionals, including teaching contents, methods, and related evaluation tools, which may apply to and optimize occupational therapy education. This review also reveals the need

for further studies to identify elements of ethics education in occupational therapy toward a more comprehensive understanding and practical implications.

### **Embedding ethics education in the occupational therapy curriculum**

Our review suggests that we may embed contemporary experiences in medical ethics education by incorporating a comprehensive curricular plan for the structured approach into occupational therapy curriculum design:

1. During the preclinical year curriculum (length 3-12 weeks): students may learn ethics education content (including knowledge of self as a practitioner, knowledge of interpreting situations in clinical practice, knowledge of ethical theory, and different types of reasoning) with a small group case-based discussion. Course designers should narrow down the ethical issues to guide students through them. It would be more useful for students to know more about the actual ethical situations they might encounter instead of providing general ethical issues from news and movies.
2. During the clinical training year (length 3-12 weeks): students may be exposed to actual clinical situations and learn more practical approaches through case-based discussion, incorporating proper mentorship. At the beginning of the internship training, students may also explore some online ethics education modules, including professional codes of ethics and/or some review of ethics education content.

### **Study limitations**

This study has several limitations that warrant consideration. First, our search terms might not have discovered all relevant articles. Second, our research only used PubMed and limited

articles to only those written in English. This may have excluded other relevant articles and further influenced the results. Third, we did not empirically consider ethics education in overall health professionals other than occupational therapists, which targeted its application in the internship practice and postgraduate stage.

## **CONCLUSIONS**

Although ethics education has evolved over the last 20 years, literature related to ethics education in occupational therapy is still lacking international guidelines for what and how to teach ethics to occupational therapy students. This study shed light on embedding medical ethics into occupational therapy clinical practice education. Future research is warranted to improve evidence-based education methods of occupational therapy in this understudied area.

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## **REFERENCES**

1. American Occupational Therapy Association: AOTA 2020 occupational therapy code of ethics. *Am J Occup Ther* 2020; 74(Suppl3): 7413410005. DOI: 10.5014/ajot.2020.74S3006.
2. Silva LC, Troncon LEA, Panúncio-Pinto MP: Perceptions of occupational therapy students and clinical tutors on the attributes of a good role

- model. *Scand J Occup Ther* 2019; 26(4): 283-93. DOI: 10.1080/11038128.2018.1508495
3. Jessen-Winge C, Petersen MN, Morville AL: The influence of occupation on wellbeing, as experienced by the elderly: A systematic review. *JBIS Database System Rev Implement Rep* 2018; 16(5): 1174-89. DOI: 10.11124/JBISRIR-2016-003123.
  4. Lecours A, Baril N, Drolet MJ: What is professionalism in occupational therapy? A concept analysis: Qu'est-ce que le professionnalisme en ergothérapie? *Analyse de ce concept. Can J Occup Ther* 2021; 88(2): 117-30. DOI: 10.1177/0008417421994377
  5. Harden RM: Ten key features of the future medical school-not an impossible dream. *Med Teach* 2018; 40(10): 1010-5. DOI: 10.1080/0142159X.2018.1498613
  6. Bazyk S, Glorioso M, Gordon R, *et al.*: Service learning: The process of doing and becoming an occupational therapist. *Occup Ther Health Care* 2010; 24(2): 171-87. DOI: 10.3109/07380571003681194
  7. McAndrew NS, Leske JS, Garcia A: Influence of moral distress on the professional practice environment during the prognostic conflict in critical care. *J Trauma Nurs* 2011; 18(4): 221-30. DOI: 10.1097/JTN.0b013e31823a4a12
  8. VanderKaay S, Jung B, Letts L, *et al.*: Continuing competency in ethical decision making: An interpretive description of occupational therapists' perspectives. *Can J Occup Ther* 2019; 86(3): 209-19. DOI: 10.1177/0008417419833842
  9. VanderKaay S, Jung B, Letts L, *et al.*: On-line ethics education for occupational therapy clinician-educators: A single-group pre-/post-test study. *Disabil Rehabil* 2019; 41(23): 2841-53. DOI: 10.1080/09638288.2018.1473510
  10. Hudon A, Perreault K, Laliberté M, *et al.*: Ethics teaching in rehabilitation: Results of a pan-Canadian workshop with occupational and physical therapy educators. *Disabil Rehabil* 2016; 38(22): 2244-54. DOI: 10.3109/09638288.2015.1123308
  11. Hudon A, Blackburn É, Laliberté M, *et al.*: Supporting ethics educators in Canadian occupational therapy and physical therapy programs: A national interprofessional knowledge exchange project. *J Interprof Care* 2018; 32(4): 452-62. DOI: 10.1080/13561820.2018.1435514
  12. Park M, Kjervik D, Crandell J, *et al.*: The relationship of ethics education to moral sensitivity and moral reasoning skills of nursing students. *Nurs Ethics* 2012; 19(4): 568-80. DOI: 10.1177/0969733011433922
  13. Liberati A, Altman DG, Tetzlaff J, *et al.*: The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. *BMJ (Clinical research ed.)* 2009; 339: b2700. DOI: 10.1136/BMJ.b2700
  14. Arksey H, O'Malley L: Scoping studies: Towards a methodological framework. *Int J Soc Res Methodol* 2005; 8(1): 19-32. DOI: 10.1080/1364557032000119616
  15. Bushby K, Chan J, Druif S, *et al.*: Ethical tensions in occupational therapy practice: A scoping review. *Br J Occup Ther* 2015; 78(4): 212-21. DOI: 10.1177/0308022614564770
  16. Durocher E, Kinsella EA, McCorquodale L, *et al.*: Ethical tensions related to systemic constraints: Occupational alienation in occupational therapy practice. *OTJR (Thorofare NJ)* 2016; 36(4): 216-26. DOI: 10.1177/1539449216665117
  17. Howard BS, Kern C, Milliner O, *et al.*: Comparing moral reasoning across graduate occupational and physical therapy students and practitioners. *J Occup Ther Educ* 2020; 4(3). DOI: 10.26681/jote.2020.040305
  18. Hudon A, Laliberté M, Hunt M, *et al.*: What place

- for ethics? An overview of ethics teaching in occupational therapy and physiotherapy programs in Canada. *Disabil Rehabil* 2014; 36(9): 775-80. DOI: 10.3109/09638288.2013.813082
19. Kinsella EA, Phelan SK, Park Lala A, *et al.*: An investigation of students' perceptions of ethical practice: Engaging a reflective dialogue about ethics education in the health professions. *Adv Health Sci Educ* 2015; 20(3): 781-801. DOI: 10.1007/s10459-014-9566-9
  20. Kornhaber R, Walsh K, Duff J, *et al.*: Enhancing adult therapeutic interpersonal relationships in the acute health care setting: An integrative review. *J Multidiscip Healthc* 2016; 9: 537-46. DOI: 10.2147/JMDH.S116957
  21. Gallagher CT: Assessment of levels of moral reasoning in pharmacy students at different stages of the undergraduate curriculum. *Int J Pharm Pract* 2011; 19(5): 374-80. DOI: 10.1111/j.2042-7174.2011.00121.x
  22. Barnett R: Ethical dilemmas in occupational therapy and physical therapy: A survey of practitioners in the UK National Health Service. *J Med Ethics* 1998; 24(3): 193-9. DOI: 10.1136/jme.24.3.193
  23. Penny NH, You D: Preparing occupational therapy students to make moral decisions. *Occup Ther Health Care* 2011; 25(2-3): 150-63. DOI: 10.3109/07380577.2011.565544
  24. Penny NH, Bires SJ, Bonn EA, *et al.*: Moral distress scale for occupational therapists: Part 1. Instrument development and content validity. *Am J Occup Ther* 2016; 70(4): 7004300020p1.
  25. Kinsella EA, Park AJ, Appiagyei J, *et al.*: Through the eyes of students: Ethical tensions in occupational therapy practice. *Can J Occup Ther* 2008; 75(3): 176-83. DOI: 10.1177/000841740807500309
  26. American Occupational Therapy Association: Enforcement procedures for the AOTA occupational therapy code of ethics. *The Am J Occup Ther* 2019; 73(Supplement2): 7312410003p1-14. DOI: 10.5014/ajot.2019.73S210
  27. Joanne PE: Occupational therapists' experiences with ethical and occupation-based practice in hospital settings. University of Kentucky: Doctoral dissertation, 2014.
  28. Jeffrey DI: Empathy-based ethics: A way to practice humane medicine. Palgrave Macmillan 2020; 73-94. DOI: 10.1007/978-3-030-64804-6
  29. Wong MK, Hong DZH, Wu J, *et al.*: A systematic scoping review of undergraduate medical ethics education programs from 1990 to 2020. *Med Teach* 2021; 1-20. DOI: 10.1080/0142159X.2021.1970729
  30. Dieruf K: Ethical decision-making by students in physical and occupational therapy. *J Allied Health* 2004; 33: 24-30.
  31. Geddes EL, Salvatori P, Eva KW: Does moral judgment improve in occupational therapy and physiotherapy students throughout their pre-licensure training? *Learning in Health & Social Care* 2009; 8(2): 92-102. DOI: 10.1111/j.1473-6861.2008.00205.x
  32. Edwards I, van Kessel G, Jones M, *et al.*: The development of moral judgment and organization of ethical knowledge in a final year physical therapy students. *Phys Ther Rev* 2013; 17: 157-66.
  33. Tai CT: A survey on the effectiveness of bioethics teaching in medical institutes. *Formos J Med Humanit* 2006; 7(1&2): 133-57. DOI: 10.30097/FJMH.200606.0010
  34. Pashmdarfard M, Shafarood N: Factors affecting the clinical education of rehabilitation students in Iran: A systematic review. *Med J Islam Repub Iran* 2018; 663-70. DOI: 10.14196/mjiri.32.114
  35. Murphy S, Whitehouse L, Parsa B: Teaching professionalism: Some features in Canadian

- physiotherapy programs. *Physiother Theory Pract* 2020; 36(5): 615-27. DOI: 10.1080/09593985.2018.1491080
36. Horowitz BP: Ethical decision-making challenges in clinical practice. *Occup Ther Health Care* 2003; 16(4): 1-14. DOI: 10.1080/J003v16n04\_01
  37. Macpherson I, Roqué MV, Martín-Sánchez JC, *et al.*: Analysis in the ethical decision-making of dental, nurse and physiotherapist students, through case-based learning. *Eur J Dent Educ* 2021. DOI: 10.1111/eje.12700
  38. McLean SF: Case-based learning and its application in medical and health-care fields: A review of worldwide literature. *J Med Educ Curric Dev* 2016; 3: JMECD.S20377. DOI: 10.4137/JMECD.S20377
  39. Johnson JF, Bagdasarov Z, Connelly S, *et al.*: Case-based ethics education: The impact of cause complexity and outcome favorability on ethicality. *J Empir Res Hum Res Ethics* 2012; 7(3): 63-77. DOI: 10.1525/jer.2012.7.3.63
  40. Donaldson TM, Feinstein E, Dunn M: Case-based seminars in medical ethics education: How medical students define and discuss moral problems. *J Med Ethics* 2010; 36(12): 816-20. DOI: 10.1136/jme.2010.036574
  41. Swisher LL: Moral reasoning among physical therapists: Results of the defining issues test. *Physiother Res Int* 2010; 15: 69-79. DOI: 10.1002/pri.482
  42. Mohammadi E, Mirzazadeh A, Shahsavari H, *et al.*: Clinical teachers' perceptions of role modeling: A qualitative study. *BMC Med Educ* 2021; 21(1): 261. DOI: 10.1186/s12909-021-02648-1
  43. Liu YC, Huang PC, Lee YC, *et al.*: The use of the mini-cex in occupational therapy postgraduate year training programs in Taiwan. *J Med Educ* 2021; 25(2): 49-60. DOI: 10.6145/jme.202106\_25(2).0004
  44. Liu YC, Huang PC, Chu CL, *et al.*: Using the mini-CEX for teaching evaluation in mental health occupational therapy clinical fieldwork. *Journal of Taiwan Occupational Therapy Research and Practice* 2018; 14(2): 61-74. DOI: 10.6534/jtotrp.201812\_14(2).0001
  45. McLeod-Sordjan R: Evaluating moral reasoning in nursing education. *Nurs Ethics* 2014; 21(4): 473-83. DOI: 10.1177/0969733013505309
  46. American Occupational Therapy Association: Philosophy of occupational therapy education. *Am J Occup Ther* 2018; 72(Supplement2): 7212410070p1-2. DOI: 10.5014/ajot.2018.72S201