



An overview of ethics teaching in physical therapy in Saudi Arabian universities

Ghadah Algudairi¹, Kholoud Almubarak² and Asma Alonazi^{3*}

¹Physical Therapy Department, Security Forces Hospital, Riyadh, **Kingdom of Saudi Arabia**

²King Abdullah bin Abdulaziz University Hospital, Riyadh, **Kingdom of Saudi Arabia**

³Department of Physical Therapy and Health Rehabilitation, College of Applied Medical Sciences, Majmaah University, Riyadh 11952, **Kingdom of Saudi Arabia**

*Correspondence: a.alonazi@mu.edu.sa Received 23-01-2023, Revised: 13-04-2023, Accepted: 15-04-2023 e-Published: 17-04-2023

To evaluate the inclusion of ethics content in entry-level curricula for Physical Therapy (PT) programs in Saudi Arabian (SA) public universities in order to establish a preliminary understanding of how PT ethics are taught in Saudi universities. An exploratory qualitative study analysis was conducted from August 2020 to December 2020 by accessing the websites of the PT programs offered by Saudi public universities. The PT programs from seven of 12 universities were evaluated. A descriptive and textual analysis of the courses was conducted, followed by a quantitative analysis which determined the percentage of total program credits attributed to courses with descriptions that contained specific keywords related to ethics. Seven universities were evaluated. Eighteen programs (29.0%) offered PT courses with descriptions that contained keywords related to ethics. The mean number of credits assigned to these courses was 2.05, with a standard deviation (SD) of 0.65. The term “ethics” or “ethical” was found in 88.8% of programs; the term “professionalism” was found in 44.4% of the evaluated programs, “legal” in 27.7%, and “regulation” in 11.1%. Universities in SA acknowledges the importance of ethics in PT professions. However, there is still considerable work to be done to fully integrate ethics education into PT programs.

Keywords: Physical therapy; Course description; Curriculum; Ethical Issues; Professionalism; Saudi Arabia.

INTRODUCTION

It is essential to identify and discuss the ethical problems in every field, like ethical action, decision-making, and most importantly, the physical therapy students' moral development; it should be considered a test of professionalism (H. L. Triezenberg, 1996). Recently, interest in ethical issues in healthcare professions has increased dramatically, accompanied by a concurrent increase in publications addressing these issues, especially in medicine and nursing (Ian V. McPhail, Stephens, & Heasman, 2018; Naro, 2019). Healthcare professionals face various of ethical and regulatory issues daily. Their ethical decisions and actions can impact a patient's health status. For example, professionals in physical therapy (PT) may need to provide other care due to restricted benefits and fiscally driven rules and regulations. As a result, healthcare professionals may experience additional ethical challenges. Therefore, academic healthcare programs must prepare graduates to respond to the ethical issues that they will encounter in their future practice. Learning about different ethical issues and developing practical ethical reasoning skills through academic programs is essential to prepare graduates to become responsible

healthcare providers.

Previous studies have reported that ethical decision-making and ethical actions are integral aspects of professional growth (H. L. Triezenberg, 1996). The honesty and attention with which a profession acknowledges and investigates any ethical matter is, in general, a definition of moral. Any healthcare professional must have ethical principles. The professional code of ethics must be understood to establish teaching strategies for students (Khin, 2018). The teaching of ethics in medicine and related health professions has gained tremendous support, and ethical awareness is recognized as an essential skill (Grace, Innes, Patton, & Stockhausen, 2017; Holub, 2017). The World Confederation for Physical Therapy (WCPT) guidelines declare a need for ethics courses in all entry-level PT programs. As a result, many countries, including the United States, Australia, and Canada, have implemented significant improvements in their training for PT clinical practice (Laliberte et al. 2015). Healthcare professionals' ethical decisions can impact patient care, healthcare outcomes, therapeutic relationships, and the professionals' reputations (Laliberte et al. 2015). Some of the critical ethical concerns in PT practice include establishing patient care goals when time

or resources are limited, discontinuing treatment for noncompliant patients, and continuing treatment of a terminally ill patient (Ernst, Cohen, & Stone, 2004; Nica, Constantinovici, & Miclaus, 2017).

Most undergraduate PT programs in Saudi Arabia (SA) include first-year courses in Islamic studies, literature, humanities, and fundamental sciences. Basic medical sciences and introductory PT procedures are usually taken in the second year. Third-year courses, which usually include internal medicine, orthopedics, radiology, psychology, and PT, are mainly clinical or medical. Fourth-year classes are mostly related to clinical PT practice and usually include a PT research project and clinical coursework covering neurology, pediatrics, and geriatrics. Alghadir et al. (2015) reported that after four years, Physical Therapy students must complete a one-year clinical internship working with various patients with different diagnosis to gain practical knowledge and skills in examination, evaluation, and therapy. They also reported that the ethics teaching in PT programs is complex and mostly unstructured in Saudi universities (Alghadir, Zafar, Iqbal, & Anwer, 2015).

Other health professions, including PT, began discussing their unique ethical concerns recently (Dahnke, 2014; A. Hudon et al. 2014; H. L. Triezenberg, 1996; Herman L Triezenberg, 2000). In a wide variety of delivery system models, including hospital-based, home health, and private practices, physical therapists typically engage in direct communication with various patients (Lojovich, Olson-Kellogg, & Davila, 2018). In addition to the requisite clinical skills, physical therapists must also be skilled in ethical reasoning, so that they can evaluate any ethical circumstance they might encounter and choose the appropriate action (Richardson, 2015). As PT professionals gain more rights to practice independently, along with the accompanying obligations, physical therapists will face more complex ethical dilemmas and challenges in their professional lives (Delany, Edwards, Jensen, & Skinner, 2010).

According to the 2020 Mission Statement and Strategic Plan of the American Physical Therapy Association (APTA), integrity is a central component of physical therapist education (Jensen & Richert, 2006). In contrast, the Saudi Physical Therapy Association (SPTA) has no jurisdiction over the practice or education of PT; this organization only registers all physical therapists working in SA and offers opportunities for professional growth and improvement. In 1979, the first PT program in SA was established at King Saud University. Today, more than 14 Saudi public universities offer undergraduate PT programs; these programs range from five and six years in length and include a one-year clinical internship (Alghadir et al. 2015). Physical therapists and other health practitioners whose actions may impact patients' health are all expected to make ethical choices regularly. However, to our knowledge, there is insufficient evidence that adequate academic ethical training is being provided

to PT students in SA to help them competently address the ethical challenges they will face in their future clinical practice. Therefore, this study aims to evaluate the inclusion of ethics content in the entry-level curricula of PT programs in SA in order to build a preliminary understanding of how PT ethics are taught in Saudi universities.

MATERIALS AND METHODS

Ethics Statement

No ethical approval was obtained, as this study includes no human subjects.

Study design

An exploratory qualitative study was conducted from August 2020 to December 2020.

Setting

The initial data were collected from program curricula available on the websites of Saudi public universities. Requests were made via email for other universities to share their course specification for review. A "program" was defined as an entire curriculum leading to a bachelor's degree. The term "course" refers to a series of classes on a particular subject, usually lasting a semester and for which a specific number of credits is earned (e.g., a 3-credit course). For each program, the courses names, numbers, credit hours, contact hours (the number of hours to be completed), and main course descriptions were collected. Other information about the structure of the different programs (e.g., the number of credits for each program and specific courses) was also collected, where this was available online. Only Almajmaah University described the curriculum in detail on their website. The faculty members of the remaining universities were contacted and asked to send course specifications that include ethics content of the PT entry-level curricula programs.

Statistical Methods

After the course specifications from the respective universities were collected, the descriptions of all courses from the 17 state universities included in the study were read blindly by researchers; courses addressing ethical issues were identified through keyword searches. In the first search, the following keywords were used: "ethical," "ethics," "professionalism," "legislation," "deontology," and "regulation." Later, other keywords, such as "code of conduct," "ethical values," and "morality," were included if they were found to be relevant to the objectives of this study. Next, the selected course descriptions were reassessed to confirm whether the courses addressed ethical issues clearly. All courses addressing clinical and professional ethics were included. Courses that did not address clinical, professional, or research ethics were excluded. All courses were assessed based on pre-

defined parameters; these parameters included the course title, credit hours, contact hours for the course, the name of the department hosting the course, academic semester level, and the year of study in which the course is offered. Finally, the descriptions of the included courses were analyzed according to the parameters mentioned above. The included programs were then quantitatively analyzed to determine the percentage of credits assigned to courses addressing ethical issues.

RESULTS

Descriptions of the assessed courses

This study evaluated the inclusion of ethics content in the descriptions of PT courses at different universities to provide initial insights into how PT ethics are taught in universities across SA. PT programs from seven of 12 universities were evaluated. A total of 62 courses were reviewed from the seven universities, and certain universities presented multiple courses addressing ethical issues. The universities' names, the number of ethics-related courses offered at each university, and the number of credits for each course are listed in the first three columns of Table 1. The remaining columns indicate the contact hours, the total number of credits in the program, the type of program, the name of the department offering the course, and the year and semester at which the course is offered. Seven of the universities replied with their syllabi. These universities were Almajmaah University, Shaqra University, King Khalid University, Taif University, Jizan University, Princess Nourahbint Abdulrahman University, and Najran University.

Findings of the descriptive analysis

The descriptive analysis revealed that descriptions for 18 of the 62 PT courses included in this study (29.0%) contained ethics-related keywords, as shown in Table 1. These keywords were: "ethics," "legal," "justness laws," "unjustness laws," "code of ethics," "professionalism," "patients' rights," "ethical values," "ethical principles," and "ethical issues." The courses with ethics-related keywords included Management of Physical Therapy Services, Professional Ethics, Management and Ethics in Physical Therapy Services, Ethics and Laws, Cardiopulmonary Physical Therapy, Introduction to Physical Therapy, Research in Physical Therapy, Research in Physical Therapy 2, Clinical Management and Administration, Clinical Psychiatry, Electro Diagnosis in Physical Therapy, Advanced Clinical Cardiopulmonary, Ethics and Professionalism in Physical Therapy, Graduate Project, Elective Clinical Course, Management of Physical Therapy Services, and Principles of Occupational Therapy. Of these courses, only three (17.6%) had keywords related to ethics in their titles.

The number of credits assigned to the courses was available for all courses except those at one university. The mean number of credits assigned to ethics courses

was 2.05, with a standard deviation (SD) of 0.65; the number of credits ranged from 1 to 3. All but three of the universities provided the number of contact hours required to complete the courses. The mean number of contact hours was 41.9, with an SD of 33.73. Since only one university provided the total credits required for their program, the proportion of credits assigned to the ethics-related course could not be calculated for all the universities (see Table 1). These courses were available through the Bachelor of Physical Therapy (BPT) and Doctor of Physical Therapy (DPT) programs. The departments offering the courses included Health Rehabilitation, Medical Rehabilitation Sciences, Rehabilitation Sciences, Physical Therapy and Rehabilitation, and Medical Rehabilitation Sciences. As shown in Table 1, the academic semesters of the ethics-related courses ranged from the third to eleventh semester, and the courses were provided across a range of years from the third to sixth. Princess Nourahbint Abdulrahman University was the only university teaching ethics-related courses at the program's highest academic semester (see Table 1).

Textual analyses of the courses

A textual analysis of the course descriptions, objectives, and topics addressed was also conducted. Nearly all the courses used words related to ethics in the course description or objectives, except for the courses offered by Taif University. Some of the universities framed their course objectives differently. These objectives included knowledge of ethics, ethical skills, and competence in ethics. Of the analyzed courses, 27.7% listed all these objectives either implicitly or explicitly. However, the remaining 72.2% either did not define the objectives by different academic semesters or defined the objectives for one or two semesters but not for all, as shown in Table 2. More specifically, 11 out of 18 courses (61.1%) listed objectives related to knowledge of ethics; nine of the 18 stated objectives were related to ethical skills. Seven of the 18-courses (38.8%) listed objectives related to competence in ethics, and 11 of the 18 courses (61.1%) listed specific topics related to ethics in their course outlines (see Table 2).

The most common ethics-related keywords in the

Table 1: Description of courses that include ethics keywords in their course description across in Physical Therapy (PT) programs across Saudi Arabia

Name of University	Courses with key words represent ethics	Name of course that included any terminology related to ethics	Number of credits for course having key words	Contact hours	Total number of credits for program	Name of Course reviewed	Program	Department	Level	Year
Shaqra University	1	Management of Physical Therapy Services	Not mentioned	22	NR	Management of Physical Therapy Services	Bachelor of Physical Therapy (BPT)	Health Rehabilitation	8	4
King Khalid University	1	Professional Ethics	2	30	128	Professional Ethics	BPT	Medical Rehabilitation Sciences	8	4
Majmaah University	1	Management & Ethics in Physical Therapy services	2	50	NR	Management & Ethics in Physical Therapy services	BPT	Department of Physical Therapy and Rehabilitation	8	2
Taif University	1	Ethics and Laws	1	NR	NR	Ethics and Laws	BPT	Physical Therapy	3	NR
Jizan University	1	Ethics and Laws	1	30	NR	Ethics and Laws	BPT	Physical Therapy	5	3
Princess Nourah bint Abdulrahman University	1	Cardiopulmonary Physical Therapy	3	150	NR	Cardiopulmonary Physical Therapy	Doctor of Physical Therapy (DPT)	Rehabilitation Sciences	6	3
	1	Introduction to physical therapy	1	40	NR	Introduction to physical therapy	DPT	Rehabilitation Sciences	2nd or 3rd	
	1	Research in Physical Therapy	2	30	NR	Research in Physical Therapy	BPT & DPT	Rehabilitation Sciences Department	7	4
	1	Research in physical therapy 2	2	30	NR	Research in physical therapy 2	DPT	Rehabilitation Sciences Department	8	4

	1	Clinical Management & administration	2	30	NR	Clinical Management & administration	DPT	Rehabilitation Sciences Department	NR	NR
	1	Clinical Psychiatry	2	30	NR	Clinical Psychiatry	DPT	Rehabilitation Sciences Department	9	5
	1	Electro Diagnosis in PT	3	30	NR	Electro Diagnosis in PT	DPT	Rehabilitation Sciences Department	10	5
	1	Advanced Clinical Cardiopulmonary	3	15	NR	Advanced Clinical Cardiopulmonary	DPT	Rehabilitation sciences	10	5
	1	Ethics & Professionalism in Physical Therapy	2	30	NR	Ethics & Professionalism in Physical Therapy	DPT	Rehabilitation Sciences	11	6
	1	Graduate project	2	NR	NR	Graduate project	DPT	Rehabilitation Sciences Department	12	6
	1	Elective Clinical Course	2	70	NR	Elective Clinical Course	DPT	Rehabilitation Sciences Department	NR	
Najran University	1	Management of Physical Therapy Services	2	NR	123	Management of Physical Therapy Services	BPT	Medical Rehabilitation Sciences	9	3
	1	Principles of Occupational Therapy	3	NR	NR	Principles of Occupational Therapy	BPT	Medical Rehabilitation Sciences	8	3

course descriptions and objectives were “ethical” or “ethics,” followed by “ethical manners,” “ethical principles,” “legal and ethical frameworks,” “laws,” “professionalism,” “moral and legal aspects,” “ethical code of professional institution,” “regulations of practicing,” “legal and ethical practice of physical therapy,” and “legal and ethical frameworks.” The terms “ethics” or “ethical” was found in 16 of the 18 course descriptions (88.8%); “professionalism” appeared in eight (44.4%), “legal” in five (27.7%), and “regulation” in two (11.1%). Topics covered in the courses included “ethical issues,” “ethics and values,” “ethical principles,” “concepts of patient rights and responsibilities,” “code of ethics,” “common ethical problems in physical therapy practice,” “ethical issues during health communication,” “ethics and morality,” and “code of ethics of physical therapy” (Table 2 Supplementary material)

DISCUSSION

To better understand how PT ethics are taught in Saudi universities, this study looked at the inclusion of ethics content in entry-level curricula for PT programs in SA. The study's findings show that only a quarter (29.0 percent) of the course descriptions reviewed contained keywords related to ethics, which is consistent with the findings of Venglar M. and Theall M. (2007) (18). Venglar M. and Theall M. (2007) found that students indicated the ethical content was more inconsequential and should be condensed instead of other topics (18). Although universities in Saudi Arabia have begun to consider teaching ethics, they must address ethical issues to a greater extent in their physical education courses. The majority of the courses reviewed in this study were clinical in nature, with little emphasis on ethics; only one course was entirely dedicated to ethics. These findings suggest that ethics courses are not always rigorously mapped in Saudi PT programs' curricula.

Furthermore, the current study findings suggest that almost all PT programs in Saudi universities teach ethics as a cross-cutting theme throughout the curriculum rather than as a separate dedicated topic with a specific named course. These findings also show that only a small number of PT programs or departments offer full ethics courses, which contradicts the recommendations of bioethics experts (Rosemary E Barnitt, 2000; Romanello, 2000; Herman L Triezenberg, 2000). These findings are not unique to Saudi Arabia, but universities in developed countries such as the United Kingdom and Canada do not appear to offer entire courses dedicated to ethics in PT programs, instead teaching ethics as a cross-cutting theme in various courses (Anne Hudon et al. 2014). However, it appears that universities are beginning to incorporate ethics into their PT courses rather than focusing solely on the clinical aspects of PT. This implies that Saudi universities regard ethics as a topic that is

practice,” “ethical issues, problems and dilemmas,” “medico-legal aspects,” “ethics of health care,” “professional rules,” “legal rights and duties,” “penalties of malpractice or bad practice,” “ethical and professional standards,” relevant to all PT courses. Teaching ethics as a cross-cutting theme may be advantageous because incorporating ethics into multiple courses highlights the importance of ethics to various topics and reinforces it as a valuable topic to be taught in PT programs. However, when designing their curricula for PT programs, all Saudi universities must consider teaching ethics as a separate course or at the very least focus on training their educators in ethics.

Integrating ethics into physical therapy programs has generally remained a challenge in various universities around the world. An in-depth examination of ethics courses taught in Canadian universities, for example, revealed a wide variation in the number of hours spent on ethics instruction (Laliberté et al. 2015). The challenges in teaching ethics include time constraints, unavailability of pedagogical tools required to teach the complex subject of ethics, lack of student's interest in learning ethics, and preference of students to learn clinical skills more than ethics (Laliberté et al. 2015). Moreover, the study also found that almost two-thirds of ethics educators were not adequately trained to teach ethics. Another study conducted by Hudon et al. reviewed the ethics content in 27 rehabilitation programs. The study found that the average proportion of credits allocated to courses that considered ethics separately or included ethics as a cross-cutting theme was 6.5% (SD=4.8)(Anne Hudon et al. 2014). Further, the most commonly used terms included “ethics/ethical” or “legal,” “regulatory,” “professionalism,” and “deontology”(Anne Hudon et al. 2014). We also found similar terms used for ethics courses in the current study.

Similarly, Barnett et al. and Brockett et al. found consistent findings with our study suggesting that teaching ethics is not a priority in universities' teaching rehabilitation programs(Rosemary E Barnitt, 1993; Brockett, 1996).The current study in Saudi Arabia did not explore why not teaching ethics in physical therapy. Nevertheless, the findings from the existing studies provide a pathway to conduct similar studies in the future and understand the reasons for not teaching ethics across all universities in Saudi Arabia.

In addition, the current study calculated the mean credit hours of the reviewed courses. However, because the total number of credits in the relevant programs was provided by only one university, we were unable to calculate the credit hours of these courses as a proportion of the total credit hours of the relevant programs. The course descriptions also did not specify how many credit hours were assigned to the ethics component, making it impossible to calculate the proportion of credit hours devoted to ethics in the reviewed courses. This could be due to a variety of factors. One difference is that courses

follow a general format in which credit hours are assigned to the course rather than specific topics within the course. Second, most of the courses evaluated focus on clinical rather than ethical aspects of physical therapy. As a result, some of these courses do not give credit for ethical topics. Contrary to our study, the Canadian survey of Laliberte et al. revealed that Canadian universities teach ethics for a minimum of 5 to a maximum of 61 hours in PT programs (Laliberté et al. 2015). These findings are analogous to the other studies conducted in the United Kingdom (Rosemary E Barnitt, 1993; Brockett, 1996).

Furthermore, there are structural differences in Saudi PT programs: some are undergraduate programs, while others are master's or doctoral programs. Whatever the reasons for these structural differences in the programs, the disparities in the number of hours of ethics in various programs are difficult to interpret. However, none of the included courses were offered to the master's program in the current study. Rather, most of the courses reviewed were either bachelor's or doctoral programs, representing the two ends of the career spectrum. The importance of teaching ethics to novice students, as well as the assumption that master's students have a background in ethics from their bachelor's, could be one reason for this. Furthermore, it is possible due to the sampling issue, which means that we only reviewed courses that were available to us due to convenience sampling. As a result, some master's courses may be teaching ethics in practice but were not included in the sample. In either case, we recommend that the ethics objectives be included in the course outlines for master's courses.

During the textual analysis, we discovered that almost all the courses mentioned ethics in either the course description or the course objectives. These findings are significant because defining sub-objectives for each learning parameter ensures that students learn enough about ethics as well as related skills and competencies. However, only a few courses mentioned ethical goals in the knowledge, skills, competence, and values taxonomy. Because course descriptions typically included two to three sentences, the authors were unable to determine the exact proportion of a course that focuses on teaching ethics. This is not to say that PT programs do not cover ethical topics in their curricula; rather, our keyword search or review of course descriptions may have missed them.

Our findings are consistent with the textual analysis of one study by Hudon et al. The authors found eight-course topics in their textual analysis. The most commonly used topics included "standards of practice," "ethical decision making," "clinical courses and mediation or communication"(Anne Hudon et al. 2014). These consistent findings are vital for pedagogical leaders and university professors teaching PT courses across the universities. Based on the analogous findings, it is strongly recommended that universities formulate their ethical objectives according to these learning parameters. Our results show that ethics are integrated into PT clinical

courses and addressed in management and administration courses as well. These findings are in consonance with the PT programs in the United States, where ethics is combined with management and administration courses (Purtilo, 1978). Similarly, our study results indicated that ethics content is incorporated more commonly in courses related to the professional role and professionalism. However, they contradict those of a study conducted in Canada, which found that ethics were usually integrated into courses on professionalism in PT (Anne Hudon et al. 2014). These differences could be attributed to the discrepancies in the socio-political practices across different countries.

Limitations and Suggestions

The present study has some strengths and some limitations. To begin, to the best of our knowledge, this is the first study to evaluate university courses in Saudi Arabia. The researchers conducted a rigorous, unblinded assessment of the courses, as well as a thorough textual analysis. Another limitation of this study was that the proportion of credit hours assigned to the evaluated courses within each program could not be calculated because the total number of credits in the majority of the programs was not available. Finally, specific keywords were used to identify courses and their ethical content; however, while some of the courses evaluated did not use the keywords used in our methodology, different words related to ethics were used in their objectives or lists of potential course topics. Furthermore, the current study did not assess the proportion of educators or professors who have received adequate training in teaching ethics. Furthermore, we did not investigate the challenges or obstacles in teaching ethics to PT students in various degree programs. By evaluating university curricula from a new perspective, this study has contributed to knowledge in this area, providing a framework for evidence-based decisions in this area. The findings of this study can benefit all universities in Saudi Arabia and other Middle Eastern countries. Further research could be conducted in other countries to assess the importance of ethics in PT pedagogy at their universities. Because physical therapy is an evolving discipline, it is critical to assess whether PT courses at various levels are holistic, not only in terms of clinical considerations but also in the critical area of ethics. Because physical therapists are frequently confronted with ethically challenging situations, it is critical to provide students with the tools and training to deal with these situations. This training should be incorporated into the curriculum, whether in courses on ethical decision-making or other technical courses.

CONCLUSION

According to the current study, universities in Saudi Arabia recognize the importance of ethics in physical therapy, which is reflected in course descriptions, objectives, and topics. However, much work remains to be

done in order to fully integrate ethics into PT courses in Saudi Arabia. Ethics integration will assist PT students in developing ethical decision-making and ethical action skills to deal with patients in an ethical and moral manner. This study investigated an important aspect of clinical care that is sometimes overlooked, despite the fact that it is an important component of clinical staff professional development. The growing academic and professional literature interest in integrating ethics in PT programs and the role of ethics training in clinical decision-making supports our findings to integrate ethics in PT programs. Professors and educators should be encouraged to improve ethics curricula and maximize students' ethics training. Furthermore, it would be beneficial to investigate the experiences of professors teaching ethics as well as the perspectives of students to create a comprehensive picture of the challenges in teaching ethics as well as proposed solutions.

CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

ACKNOWLEDGEMENT

We want to express our appreciation to all the university faculty members who were helpful and supportive, and shared their university's syllabus and course specifications with the researchers.

AUTHOR CONTRIBUTIONS

G.A. conceptualization and design the study, G.A. and K.A. data curation, G.A., K.A. methodology and formal analysis, GA project administration, writing – original draft: G.A. Writing – review & editing: G.A., K.A., and A.A. All authors read and approved the final version.

Copyrights: © 2023@ author (s).

This is an open access article distributed under the terms of the [Creative Commons Attribution License \(CC BY 4.0\)](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author(s) and source are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

REFERENCES

- Alghadir, A., Zafar, H., Iqbal, Z. A., & Anwer, S. (2015). Physical therapy education in Saudi Arabia. *J Phys Ther Sci*, 27(5), 1621-1623. doi:10.1589/jpts.27.1621
- Barnitt, R. E. (1993). 'Deeply troubling questions': the teaching of ethics in undergraduate courses. *British Journal of Occupational Therapy*, 56(11), 401-406.
- Barnitt, R. E. (2000). Facilitating ethical reasoning in student physical therapists. *Journal of Physical Therapy Education*, 14(3), 35.

Ethics teaching in PT programs in Saudi Arabian universities

- Brockett, M. (1996). Ethics, moral reasoning and professional virtue in occupational therapy education. *Canadian Journal of Occupational Therapy*, 63(3), 197-205.
- Dahnke, M. D. (2014). Utilizing codes of ethics in health professions education. *Adv Health Sci Educ Theory Pract*, 19(4), 611-623. doi:10.1007/s10459-013-9484-2
- Delany, C. M., Edwards, I., Jensen, G. M., & Skinner, E. (2010). Closing the gap between ethics knowledge and practice through active engagement: An applied model of physical therapy ethics. *Physical therapy*, 90(7), 1068-1078. doi:10.2522/ptj.20090379
- Ernst, E., Cohen, M. H., & Stone, J. (2004). Ethical problems arising in evidence based complementary and alternative medicine. *J Med Ethics*, 30(2), 156-159. doi:10.1136/jme.2003.007021
- Grace, S., Innes, E., Patton, N., & Stockhausen, L. (2017). Ethical experiential learning in medical, nursing and allied health education: A narrative review. *Nurse Educ Today*, 51, 23-33. doi:10.1016/j.nedt.2016.12.024
- Holub, P. G. (2017). Medical Ethics Is More Like Chess Than Checkers. *Internet Journal of Allied Health Sciences and Practice*, 15(4).
- Hudon, A., Laliberte, M., Hunt, M., Sonier, V., Williams-Jones, B., Mazer, B., Ehrmann Feldman, D. (2014). What place for ethics? An overview of ethics teaching in occupational therapy and physiotherapy programs in Canada. *Disabil Rehabil*, 36(9), 775-780. doi:10.3109/09638288.2013.813082
- Hudon, A., Laliberte, M., Hunt, M., Sonier, V., Williams-Jones, B., Mazer, B., Ehrmann Feldman, D. (2014). What place for ethics? An overview of ethics teaching in occupational therapy and physiotherapy programs in Canada. *Disability rehabilitation*, 36(9), 775-780.
- Ian V. McPhail, Stephens, S., & Heasman, A. (2018). Legal and ethical issues in treating clients with pedohebephilic interests.
- Jensen, G., & Richert, A. E. (2006). Reflection on the Teaching of Ethics in Physical Therapist Education: Integrating Cases, Theory, and Learning. *Journal of Physical Therapy Education* 19(3), 78-85. doi:10.1097/00001416-200510000-00011
- Khin, O. (2018). The Important Role of Ethical Values in Education. *Mandalay University Research Journal*, 9.
- Laliberte, M., Hudon, A., Mazer, B., Hunt, M. R., Ehrmann Feldman, D., & Williams-Jones, B. (2015). An in-depth analysis of ethics teaching in Canadian physiotherapy and occupational therapy programs. *Disabil Rehabil*, 37(24), 2305-2311. doi:10.3109/09638288.2015.1015687
- Laliberte, M., Hudon, A., Mazer, B., Hunt, M. R., Ehrmann Feldman, D., & Williams-Jones, B. (2015). An in-depth analysis of ethics teaching in Canadian physiotherapy and occupational therapy programs.

- Disabil Rehabil*, 37(24), 2305-2311.
doi:10.3109/09638288.2015.1015687
- Lojovich, J., Olson-Kellogg, B., & Davila, H. (2018). An Innovative Doctor of Physical Therapy Experiential Learning Opportunity With Older Adults: A Description of a Unique Academic and Long-Term Care Partnership. *Journal of Physical Therapy Education*, 33(1), 23-30.
doi:10.1097/JTE.000000000000070
- Naro, G. (2019). Ethical Issues in Global Health Education and "Immersion" Experiences. *AMA Journal of Ethics*, 21(9), E711-714.
doi:10.1001/amajethics.2019.711.
- Nica, A. S., Constantinovici, M., & Miclaus, R. (2017). Ethical issues in rehabilitation of the post-traumatic patient. *Romanian Society of Legal Medicine*, 25, 309-313. doi:10.4323/rjlm.2017.309
- Purtilo, R. B. (1978). Ethics teaching in allied health fields. *Hastings Center Report*, 14-16.
- Richardson, R. W. (2015). Ethical issues in physical therapy. *Curr Rev Musculoskelet Med*, 8(2), 118-121.
doi:10.1007/s12178-015-9266-y
- Romanello, M. (2000). The "ethic of care" in physical therapy practice and education: challenges and opportunities. *Journal of Physical Therapy Education*, 14(3), 20.
- Triezenberg, H. L. (1996). The identification of ethical issues in physical therapy practice. *Phys Ther*, 76(10), 1097-1107; discussion 1107-1098.
doi:10.1093/ptj/76.10.1097
- Triezenberg, H. L. (2000). Beyond the code of ethics: educating physical therapists for their role as moral agents. *Journal of Physical Therapy Education*, 14(3), 48.