



Original Article

Assessing Physiotherapists' Knowledge of Professional Ethics Codes in Shiraz: A Cross-Sectional Study

Marzieh Mohamadi¹, PhD;^{ID} Hossein Mahmoodian^{2*}, PhD;^{ID} Narges Meftahi¹, PhD; Zahra Rahmanian¹, BSc

¹Department of Physiotherapy, School of Rehabilitation Sciences, Shiraz University of Medical Sciences, Shiraz, Iran

²Department of Medical Ethics, School of Medicine, Shiraz University of Medical Sciences, Iran

ARTICLE INFO

Article History:

Received: 28/09/2022

Revised: 02/05/2023

Accepted: 14/06/2023

Keywords:

Codes of ethics
Professional ethics
Ethical knowledge
Physiotherapy
Iran

Please cite this article as:

Mohamadi M, Mahmoodian H, Meftahi N, Rahmanian Z. Assessing Physiotherapists' Knowledge of Professional Ethics Codes in Shiraz: A Cross-Sectional Study. JRSR. 2024;11(2):70-75. doi: 10.30476/JRSR.2023.96868.1327.

ABSTRACT

Background: Understanding the principles of professional ethics is crucial for physiotherapists as it equips them to navigate ethical dilemmas effectively. This study aimed to assess the awareness level of physiotherapists in Shiraz regarding the ethical principles outlined in the codes of professional ethics within the field of physiotherapy.

Methods: To carry out this cross-sectional study, a checklist comprising 20 items was developed and distributed to 163 physiotherapists practicing in Shiraz. Each item was scored using a 5-point Likert scale. The checklist allowed for a maximum score of 100 and a minimum score of 20.

Results: Out of the 163 physiotherapists approached, 109 completed the checklist. The mean score this study's participating physiotherapists achieved was 80.1 ± 6.5 . The mean score showed correlations with both age ($r_s = 0.9, P < 0.001$) and clinical experience ($r_s = 0.32, P < 0.001$) of the physiotherapists. No significant differences were observed in the level of awareness of professional ethics codes between genders ($P = 0.99$) or among those working in private, public, or mixed sectors ($P = 0.39$).

Conclusion: Overall, the findings of this study indicate that the awareness level of Shiraz physiotherapists regarding the codes of professional ethics is generally good. However, certain codes may benefit from further training and emphasis.

2024© The Authors. Published by JRSR. All rights reserved.

Introduction

Virtues and ideals, such as caring for others, can sometimes seem ambiguous in their meaning. While it's often said that individuals should embody qualities like kindness and compassion, the practical application of these virtues may lack clarity. Therefore, having clear principles and rules becomes essential in defining the significance of these virtues. Especially in healthcare settings, where ethical relationships are paramount, it's important to recognize the guidance provided by several fundamental ethical principles widely utilized

in biomedical ethics. Four principles are particularly significant: respect for autonomy, beneficence, non-maleficence, and justice [1].

Patient rights are essentially a subset of human rights. Human rights delineate the minimum standards and practices that individuals can rightfully expect from others. Conversely, ethics revolves around the conventional criteria dictating how individuals should treat one another. Hence, law and morality often intersect, representing two facets of the same principle. By elucidating patient rights, healthcare endeavors to standardize care, ensuring that patients maintain consistent expectations throughout their treatment [2].

Patients have the inherent right to receive essential treatments regardless of gender, age, or financial status. Moreover, their fundamental rights, including autonomy,

*Corresponding author: Hossein Mahmoodian, PhD; Department of Medical Ethics, School of Medicine, Zand Street, Postal code: 71348-45794, Shiraz, Iran. Tel: +98 71 32307880; Fax: +98 71 32359847; Email: mahmoodian@sums.ac.ir

human dignity, and privacy, must be upheld, considering their cultural, psychological, and spiritual values. Upholding patient rights necessitates the delivery of care that is of high quality and administered with respect [3, 4].

As outlined in the Patient Bill of Rights, healthcare institutions and professionals uphold these rights and principles per established national and international laws [4]. Professional ethics encompass the guiding principles of appropriate conduct concerning the rights and responsibilities of practitioners, interactions with patients and peers, and professional and interpersonal relationships with the patient's family [5].

Since 1935, national and international associations have developed specific codes of ethics for physical therapy [6]. For instance, the American Physical Therapy Association (APTA) has outlined eight principles encompassing 38 ethical recommendations to establish a foundation for practice integrity within its membership [7]. Similarly, the Australian Physiotherapy Association (APA) has delineated nine principles and 59 recommendations for professional conduct [8]. At the same time, the World Confederation of Physiotherapy (WCPT) expects physiotherapists to adhere to 8 principles and 40 recommendations in good practice [9].

It is imperative to tailor ethical codes in medical sciences to each society's beliefs, values, and moral principles. Given that the Iranian constitution underscores the importance of morality, and the first article of the country's civil law echoes this sentiment, along with the general policies of the system in the field of health emphasizing ethics, it's evident that the need for ethics in the Islamic Republic of Iran's system is paramount. Numerous ethical guidelines, including those from the Medical System Organization and specific ethics guidelines in the country's medical science research, further underscore this need.

Since ethics aims to ensure compliance with treatment, research, and education standards, the initial step toward achieving this objective is offering guidance and guidelines. In Iran, codes of ethics in the field of physiotherapy encompass principles compiled into three sections: "Ethics in Providing Physiotherapy Services," "Ethics in Physiotherapy Research," and "Ethics in Physiotherapy Education." Each section comprises various chapters and axes [10].

Over the years, physical therapists have pursued a more autonomous role in clinical decision-making within the healthcare system [11, 12]. Leaders in physiotherapy have repeatedly emphasized that increased autonomy brings about more complex ethical dilemmas and responsibilities [13-17]. Magistro cautioned in 1989: "As physical therapists assume a more independent role in providing health care, ethical judgments will play an important role in the scope of physical therapist clinical decision-making" [13]. With the evolution of the medical field, the profession of physical therapy transitioned from a technical discipline to a professional one, and the code of ethics of physical therapy became a document that emphasized the therapist's primary responsibility directly to the patient, independent of the physician [18]. Today, physiotherapists must assess

their profession ethically to determine the boundaries of their legal and professional independence. In doing so, they conscientiously safeguard patients' rights, uphold their integrity as professionals, and advance the ideals of physical therapy as a profession [17].

Ethically safe care is a paramount objective in healthcare globally [19], and codes of professional ethics serve several crucial purposes; they can elucidate ethical concerns or dilemmas, foster collaboration among members of the profession, instruct and steer ethical decision-making and conduct, promote public accountability, and align with societal expectations [20]. Therefore, physiotherapists must grasp the tenets of professional ethics in their domain, enabling them to navigate ethical quandaries adeptly. Given that familiarity with the principles of professional ethics has recently been incorporated into the educational curriculum of physiotherapy, it's presumed that practicing physiotherapists may not possess sufficient familiarity with the profession's codes of professional ethics.

Based on our research, only two studies have investigated the awareness of physiotherapists about ethical principles in Iran. The first study, conducted in 2009 in Tabriz city, and the second study, conducted in 2016 in Tehran city, did not specifically investigate the level of awareness of physiotherapists about the ethical codes specific to the field of physiotherapy [21, 22]. In the first study, the questionnaire's questions were designed based on various aspects of patient rights. Still, other aspects, such as the rights of therapists, colleagues, institutions, and societal rights, were not considered. In the second study, a questionnaire was not utilized; participants were interviewed, and their opinions were sought. Since the questions were posed in an open-ended manner, covering general topics initially and then delving into more specialized ones based on participants' responses, there is a possibility that not all aspects of ethical codes were addressed. Therefore, it can be concluded that systematic studies on the awareness of ethical codes among physical therapists have not been conducted.

At the global level, ethical practice and awareness are paramount in physiotherapy as a clinical profession, garnering attention since the pre-2000s era. Previous studies have underscored the necessity of assessing professionals' awareness and, where necessary, providing training [17, 23, 24]. However, our search yielded no studies on determining the level of awareness among physiotherapists in Shiraz regarding the principles of professional ethics. Consequently, this study was undertaken to investigate the level of awareness among physiotherapists in Shiraz concerning the principles of professional ethics in their field.

In this study, our objective was to assess the level of awareness among physiotherapists in Shiraz regarding the ethical principles outlined in the codes of professional ethics in physiotherapy. Given the potential physiological and psychological distinctions between genders, it was conceivable that women and men might exhibit varying performances and cognitive approaches to moral matters. Additionally, the work environment, training provisions, and supervision protocols in public and private

settings could influence therapists' comprehension and performance concerning ethical issues. Furthermore, age and clinical experience might shape individuals' understanding due to accrued experiences. Consequently, the current study compared the level of knowledge between two groups: men and women and professionals from the public and private sectors. Moreover, the study investigated the correlation between professionals' level of knowledge and their age and clinical experience.

Methods

The present study is a descriptive cross-sectional investigation conducted in Shiraz City. Approval for the research was obtained from the Shiraz University of Medical Sciences ethics committee under code IR.SUMS.REHAB.REC.1401.004. A checklist titled "Checklist for Assessing the Level of Awareness of Physical Therapists Regarding the Codes of Professional Ethics in Physical Therapy" was used for data collection. This checklist was meticulously crafted based on the established codes of professional ethics within physiotherapy. The target population comprised physiotherapists across Shiraz City's private and public sectors. The primary variable under scrutiny was the level of awareness among physiotherapists concerning the codes of professional ethics. Additionally, to glean further insights, the study explored potential relationships between three variables: age, gender, clinical work experience, employment sector (private, public, or both), and the level of awareness.

The checklist was meticulously designed based on the principles of professional ethics developed in Iran [10]. It encompassed 20 items carefully selected from the codes of professional ethics within physiotherapy. The goal was to ensure the checklist encompassed all clauses from the compiled version of professional ethics principles and incorporated most of the codes of ethics. Some items mirrored the original version of the code of ethics, while others presented the code of ethics in a reverse manner. The checklist was collaboratively prepared by a team of three individuals, comprising a medical ethics expert (assistant professor of the medical ethics department) and two physiotherapy experts (assistant professors of the physiotherapy department). Subsequently, a 5-point Likert scale was assigned to each item. Participants were tasked with selecting one of the available options (I completely agree, I agree, I have no opinion, I disagree, I completely disagree) to indicate their level of agreement with the respective item.

To facilitate the study, the designed checklist was digitized and made accessible online via the Porsline system. Utilizing the Shiraz University of Medical Sciences database, we obtained a list comprising the names and mobile phone numbers of all physiotherapists operating in Shiraz City. Initially, 220 phone numbers were procured, but after filtering out duplicates and inactive numbers, 163 remained. Adhering to ethical standards, each phone number was contacted, and the study procedure was explained to the individuals. Participants were assured of the confidentiality of their personal information, including their name, phone number, and responses to the checklist. They were informed that their participation was voluntary. Those willing to participate in the study were provided a link to access the checklist online. Subsequently, 109 individuals out of the initial 163 completed the checklist.

The checklist designated "completely agree" as the correct response for items corresponding to the code of ethics. At the same time, "completely disagree" was considered correct for items inversely related to the code of ethics. Each correct response earned 5 points, while others received fewer points. With a maximum score of 100 and a minimum score of 20, the mean score for each checklist item was calculated upon collection.

Physiotherapists were categorized into age groups (20-35 years, 36-50 years, and over 50 years) and clinical experience groups (1-10 years, 11-20 years, and over 20 years) to analyze the frequency distribution. Pearson correlation test was employed to assess the correlation between age/clinical work experience and knowledge level. Furthermore, to compare knowledge levels between male and female physiotherapists and those working in private, public, or both sectors, Mann-Whitney and Kruskal-Wallis tests were utilized, respectively.

Results

The mean score of the participating physiotherapists in this study was 80.1 ± 6.5 with 95% CI (81.3-78.8). Table 1 shows the mean scores and standard deviation obtained in the different groups examined in this study.

The checklist included 20 items, each receiving a score between 1 and 5. The mean score obtained in each item is shown in Figure 1.

The results of the Spearman test indicate a significant positive correlation between the mean score obtained and both the age ($r_s=0.9$, $P<0.001$) and the clinical work

Table 1: The scores obtained from the checklist in the different groups studied

	Group	Number	Mean±SD
Sex	Female	65	80.2±6.2
	Male	44	79.8±7.1
Age range (Y/O)	20 to 35	54	78.5±6
	36 to 50	39	81.2±6.7
	>50	16	82.7±6.9
Experience (years)	1 to 10	60	78.5±6.1
	11 to 20	29	81.3±6.5
	>20	20	82.8±6.8
Sector	Private	72	80.7±6.8
	Public	14	79.2±4.5
	Both	23	78.6±6.8

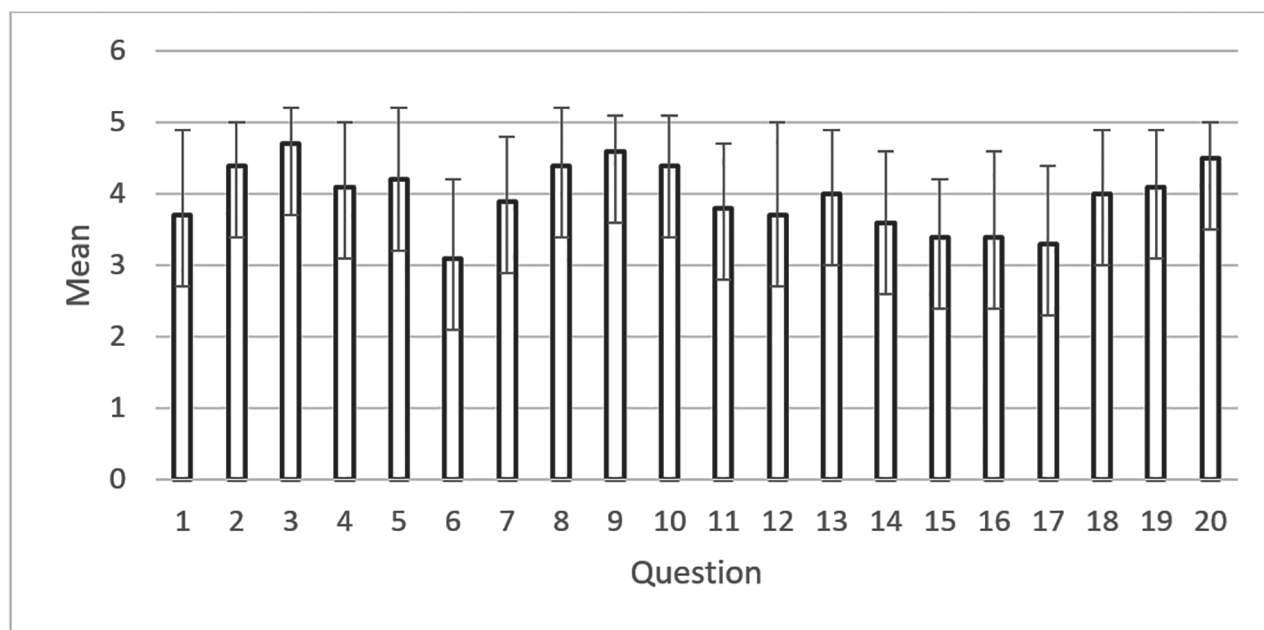


Figure 1: The mean score obtained for each item on the checklist

experience ($r_s=0.32$, $P<0.001$) of the physiotherapists. This suggests that older physiotherapists with more clinical experience tend to have a higher level of awareness regarding professional ethics codes.

Additionally, the analysis showed no significant difference in the level of knowledge of professional ethics codes between male and female physiotherapists ($P=0.99$), nor among those working in the private, public, or both sectors ($P=0.39$). This suggests that gender and employment sectors do not significantly influence the awareness of professional ethics codes among physiotherapists in Shiraz.

Discussion

The findings of this research indicate a positive assessment of the level of awareness of physiotherapists in Shiraz regarding professional ethics codes. While the overall awareness level is deemed “good,” it’s noteworthy that there were variations in the level of awareness across different checklist items. Specifically, 11 out of 20 items received a “good” grade, while nine received a “moderate” grade.

Importantly, the study found no significant disparity in the knowledge of professional ethics codes between male and female physiotherapists, nor among those working in different sectors (private, public, or both). However, there was a notable correlation between the age and clinical work experience of physiotherapists and their level of awareness of professional ethics codes. Older physiotherapists with more clinical experience tended to exhibit a higher level of awareness regarding ethical codes.

The findings of this study showed that physiotherapists obtained a moderate score from the items related to the following ethical codes:

- Professionals must refer patients to therapists and other qualified specialists when necessary, and they should not seek financial gain from such referrals.
- Professionals must honor patient privacy and avoid

conducting examinations in shared spaces. Additionally, they should endeavor to provide adequate patient coverage for privacy during examinations.

- Professionals are responsible for ensuring that patients comprehend the nature of the services offered and are informed about the anticipated costs before any service is rendered.
- Professionals must honor patients’ information, choice, and decision-making rights.
- Professionals must empathize with patients, avoid indifference, and control their emotions and reactions.
- Professionals are mandated to deliver suitable services to all individuals seeking rehabilitation, regardless of age, gender, race, ethnicity, nationality, religion, ideology, moral convictions, personal inclinations, political views, disabilities, and health conditions.
- In allocating human and capital resources, adhering to principles of justice is imperative. When resources are limited, it is essential to prioritize based on the guidelines established by clinical ethics committees affiliated with medical universities (Physiotherapy Scientific Association).
- Professionals are not entitled to offer services deemed unnecessary for the patient’s condition.
- Professionals must courteously notify the relevant colleague of a scientific or technical error made by their peers and, upon request, furnish details about the error to the patient or their legal representative. They are also expected to offer support and assistance in such situations.

Given that the level of awareness among physiotherapists regarding certain ethical codes is deemed “moderate,” there appears to be a requirement for additional training about these codes. These areas encompass ethical principles such as “respecting human dignity rights,” “observing justice and equity,” “prioritizing patient interests and avoiding harm,” “social responsibility,” and “ethical conduct concerning colleagues.” [10]. It is evident that among the six chapters outlining professional ethics codes, there is a discernible necessity for further

training across five domains.

The findings of this study revealed a positive correlation between the age and clinical experience of physiotherapists and their awareness of professional ethics codes. These results align with the findings of Myyrya et al. [25]. They observed a negative correlation between age and personal interest scores in their investigation into empathy, role-taking, and personal values as predictors of moral schemas. In contrast, a positive correlation was found with post-conventional schema thinking scores. Furthermore, age was positively associated with role-taking, universalism, and self-orientation while negatively impacting hedonism, achievement, and power. Notably, disparities between men and women were identified in personal interest scores and post-conventional thinking scores [25].

On the contrary, our findings diverge from those reported by Tiruneh and Ayele in 2018 [26]. Their study, focusing on Ethiopian doctors, revealed that only 30.4% of doctors demonstrated ethical practice. Interestingly, ethical performance was higher among doctors aged 25 to 29 compared to those aged 30 to 34, and doctors employed in the private sector exhibited better moral performance than their counterparts in the public sector. The disparity between the outcomes of the two studies might stem from the difference in the methodologies employed. In contrast, our study assessed the level of awareness of ethics codes, and Tiruneh and Ayele evaluated ethical performance [26].

It is commonly observed that individuals tend to approach a plateau in terms of professional ethics as they reach a certain age [27]. James Rest's four-element model provides a widely accepted framework for assessing the psychological processes involved in moral behavior. The elements identified by Rest include 1) moral sensitivity (the interpretation of the situation); 2) moral judgment (the ability to distinguish morally right from wrong actions); 3) moral motivation (prioritizing moral virtues over other considerations); and 4) moral character (possessing qualities such as courage, loyalty, the ability to overcome distractions, and effective execution skills). This model posits that although these underlying psychological processes interact, they are distinct. Moral reasoning is the most prominent element in the Rest model, with cognitive development significantly contributing to this domain. Moral judgments progress along a continuum from pre-conventional to post-conventional thinking levels, with age and educational trajectories influencing these levels [25].

Conceptually, role-taking and empathy serve as prerequisites for moral sensitivity. Empathy evolves across five levels, from the infant's spontaneous cry to experiencing empathic distress beyond immediate circumstances. Strong positive correlations have been observed between role-taking and empathic concern, as well as between role-taking and moral reasoning. Research indicates linear age-related advancements in role-taking from adolescence to early adulthood, paralleled by the development of social moral judgment. Moreover, there is compelling evidence suggesting that exposure to diverse social experiences, such as interactions across age groups, socioeconomic strata, educational backgrounds,

and engaging in role-taking activities with peers, fosters the development of moral judgment [25].

In the realm of gender's influence on moral performance, findings have been contradictory. While some argue that women exhibit higher moral standards than men, other studies suggest that men demonstrate superior moral reasoning. Meta-analyses, however, indicate no significant differences between men and women regarding moral decision-making abilities. Both genders can exhibit flawed reasoning, leading to erroneous judgments and hindering the pursuit of justice. By distinguishing between "sex," referring to biological characteristics, and "gender," about psychosocial attributes, research suggests that moral reasoning outcomes may vary between men and women. Studies have demonstrated a significant relationship between gender and cognitive moral development, with femininity scores playing a crucial predictive role. Interestingly, heightened femininity has been associated with lower scores in models explaining changes in moral-cognitive development [28]. Therefore, the findings of our study, which revealed no discrepancy between male and female professionals, are consistent, as the comparison was based on the biological sex of physiotherapists.

The present study's findings revealed no significant disparity in the level of awareness of professional ethics codes between employees in the private and public sectors. A review study identified 25 ethical issues pertinent to the employment sector, categorized into three primary domains: 1) business and economic concerns, such as conflicts of interest and disparities in managed care impacting the quality of care; 2) professional considerations, including professional independence, clinical judgment, treatment efficacy, and professional conduct; and 3) issues relating to patient's rights and well-being, such as confidentiality, power differentials, the balance between paternalism and patient autonomy, and informed consent [29]. These findings suggest that awareness and knowledge of professional ethics codes do not necessarily guarantee ethical conduct.

Notably, the current study solely assessed the awareness level of physiotherapists without insight into their professional practices. Another limitation of the study was that not all physiotherapists in Shiraz participated in this study.

Conclusion

In summary, the study suggests that Shiraz physiotherapists exhibit a commendable level of awareness regarding professional ethics codes, albeit certain areas may necessitate further training. Gender and the employment sector seem to exert no discernible influence on awareness levels. However, a notable correlation emerged between greater clinical experience and heightened familiarity with professional ethics codes among physiotherapists.

Acknowledgment

The authors thank K. Shashok (AuthorAID in the

Eastern Mediterranean) for improving the English in the manuscript and the Rehabilitation Research Center (Department of Physical Therapy, School of Rehabilitation Sciences) and Shiraz University of Medical Sciences for their support.

Conflict of Interest: None declared.

References

- Gabard DL, Martin MW. Physical therapy ethics: FA Davis; 2010. <https://books.google.com/books?id=aqqlSAAACAAJ>
- Olejarczyk JP, Young M. Patient rights and ethics. StatPearls Publishing; 2021. <https://www.ncbi.nlm.nih.gov/books/NBK538279/>
- Sabzevari A, Kiani MA, Saeidi M, Jafari SA, Kianifar H, Ahanchian H, et al. Evaluation of patients' rights observance according to patients' rights charter in educational hospitals affiliated to Mashhad University of medical sciences: medical staffs' views. *Electron Physician*. 2016; 8(10):3102-9.
- Woogara J. Patients' rights to privacy and dignity in the NHS. *Nurs Stand*. 2005; 19(18):33.
- MESH terms: Ethics, Professional. <https://www.ncbi.nlm.nih.gov/mesh/68004995>
- Edwards I, Delany CM, Townsend AF, Swisher LL. New perspectives on the theory of justice: implications for physical therapy ethics and clinical practice. *Phys Ther*. 2011; 91(11):1642-52.
- Code of Ethics for the Physical Therapist. <https://www.apta.org/apta-and-you/leadership-and-governance/policies/code-of-ethics-for-the-physical-therapist>
- The Physiotherapy Board of Australia. Code of conduct for registered health practitioners. <https://www.physiotherapyboard.gov.au/codes-guidelines/code-of-conduct.aspx>
- The World Confederation for Physical Therapy (WCPT). WCPT declaration of principle on ethical principles. <https://world.physio/sites/default/files/2020-04/PS-2019-Ethical-principles.pdf>
- Mohamadi M, Rojhani-Shirazi Z, Enjoo SA, Shamsi-Gooshki E, Abdollahi I, Fatemeh Bahmani FB, et al. Proposing a set of ethical guidelines for Iranian physiotherapists: results of a modified Delphi technique. *Indian J Med Ethics*. 2022; VII (1):1-22.
- Rose SJ. Editor's note: Gathering storms. *Phys Ther*. 1989; 69(5):354-5. <https://doi.org/10.1093/ptj/69.5.354>
- Rose SJ. Editor's note: Our body of knowledge revisited. *Phys Ther*. 1989; 69(4):297-8. <https://doi.org/10.1093/ptj/69.4.297>
- Magistro CM. Clinical decision making in physical therapy: a practitioner's perspective. *Phys Ther*. 1989; 69(7):525-34.
- Singleton MC. Independent practice--on the horns of a dilemma. A special communication. *Phys Ther*. 1987; 67(1):54-7.
- Purtilo RB. Understanding ethical issues. The physical therapist as ethicist. *Phys Ther*. 1974; 54(3):239-43.
- Purtilo RB. Ethics teaching in allied health fields. *Hastings Cent Rep*. 1978; 8(2):14-6.
- Guccione AA. Ethical issues in physical therapy practice. A survey of physical therapists in New England. *Phys Ther*. 1980; 60(10):1264-72.
- Cantu R. Physical therapists' perception of workplace ethics in an evolving health-care delivery environment: a cross-sectional survey. *Physiother Theory Pract*. 2019; 35(8):724-37.
- Kulju K, Suhonen R, Puukka P, Tolvanen A, Leino-Kilpi H. Self-evaluated ethical competence of a practicing physiotherapist: a national study in Finland. *BMC Med Ethics*. 2020; 21(1):43.
- Swisher LL, Hiller P. The revised APTA code of ethics for the physical therapist and standards of ethical conduct for the physical therapist assistant: theory, purpose, process, and significance. *Phys Ther*. 2010; 90(5):803-24.
- Gharibi F, Oskouei M, Tabrizi H, Jafarabadi M. Assessing the level of patient rights compliance in the physiotherapy clinic of Tabriz University of Medical Sciences in 2009. *Med Ethics*. 2012; 6(19): 27-46. <https://doi.org/10.22037/mej.v6i19.3560> [Persian]
- Souri N, Nodehi Moghadam A, Mohammadi Shahbolaghi F. Iranian Physiotherapists' Perceptions of the Ethical Issues in Everyday Practice. *Iranian Rehabil J*. 2020; 18(2):125-136.
- Praestegaard J, Gard G. The perceptions of Danish physiotherapists on the ethical issues related to the physiotherapist-patient relationship during the first session: a phenomenological approach. *BMC Med Ethics*. 2011; 12:21.
- Marques-Sulé E, Arnal-Gómez A, Cortés-Amador S, de la Torre MI, Hernández D, Aguilar-Rodríguez M. Attitudes towards learning professional ethics in undergraduate physiotherapy students: A STROBE compliant cross-sectional study. *Nurse Educ Today*. 2021; 98:104771. <https://doi.org/10.1016/j.nedt.2021.104771>.
- Myrria L, Juujärvi S, Pessa K. Empathy, perspective taking and personal values as predictors of moral schemas. *J Moral Educ*. 2010; 39:2, 213-233.
- Tiruneh MA, Ayele BT. Practice of code of ethics and associated factors among medical doctors in Addis Ababa, Ethiopia. *PLoS ONE*. 2018; 13(8): e0201020. <https://doi.org/10.1371/journal.pone.0201020>.
- Das S, Kaur S. Professional ethics grow with teaching experience: a study of women teachers in higher education institutions of Punjab. *Eur Acad Res*. 2014; 2(4): 5904-22.
- Kracher B, Marble R. The significance of gender in predicting the cognitive moral development of business practitioners using the sociomoral reflection objective measure. *J Bus Ethics*. 2008; 78:503-26.
- Hudon A, Drolet MJ, Williams-Jones B. Ethical issues raised by private practice physiotherapy are more diverse than first meets the eye: Recommendations from a literature review. *Physiother Can*. 2015; 67(2): 124-132.