Professional Ethics in Teaching from the Perspectives of Professors and Graduate Students of Mazandaran University of Medical Sciences: A Comparative Study

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Abstract

Background: Teaching and training require ethical considerations.

Objectives: The present study aimed at evaluating teaching ethics from the perspectives of professors and postgraduate students of Mazandaran University of Medical Sciences based on a comparative approach.

Methods: A cross-sectional study was performed on all postgraduate students and their professors in the academic year of 2019-2020. A total of 284 postgraduate students and 42 professors were selected using a stratified random sampling method, according to the size of each stratum. The data collection instrument was the standard teacher's professional ethics scale including six subscales and 48 items, scored based on a five-point Likert scale from 1 to 5. Data were analyzed by SPSS version 21 using descriptive statistics, independent samples t-test, and one-way analysis of variance.

Results: The total mean score of professional ethics for professors was 3.67 ± 0.63 and 4.29 ± 0.59 from the students' and professors' perspectives, respectively. There was a significant difference between the students' and professors' perspectives in each of the subscales ($P <0.0001$). There was a significant difference among schools in the teaching techniques mastery and observation of rules subscales.

Conclusion: From the perspective of students, the status of teaching ethics is still far from the standard, and it needs more educational plans to improve.

Keywords: Professional Ethics, Teaching, Professors, Students

Background

Teaching and training are important parts of the higher education system; hence, it requires special ethical considerations (1). Ethics and teaching are two intertwined components (2). The main mission of the university is to train specialized and experienced human resources based on society's needs (3). National and international experiences in improving the quality of higher education show that the performance of faculty members, especially in education affairs, is of great importance, as they are the main determinants of students' performance (4). An effective trainer can facilitate the teaching process and even compensate for textbook deficiencies and lack of educational facilities or, conversely, turn the best situation and subject into inefficient teaching due to inefficiency (5).

Besides being responsible for the transfer of knowledge, lecturers and professors are a model of professional ethics in the academic environment for the students (6). Teachers, because of their teaching profession, have moral responsibilities called professional ethics in teaching or training. Professional ethics can be summarized in two main components of ethical duties in teaching and upbringing; therefore, adherence to the principles and values of professional ethics is very important both in terms of developing ethical organizational culture and transmitting humanity to students and, thus, disseminating it to society (7, 8).

Regardless of having adequate skills in their specialty, professors must also be skillful in teaching and familiar with its professional principles. The training provided by education systems can specifically affect morally criticizable behaviors of the community. For example,

the teaching technique can provide effective learning opportunities for the student; the educational references and content can strengthen or weaken thinking in a certain manner, which has a positive or negative impact on society; and the professor's behavior can also have a positive or negative effect on students' characters and behaviors (9). Observation of teaching ethics guarantees the health of the teaching-learning process. It helps the moral rules and values of teaching to ensure students' rights in benefitting from the best education, as well as the dignity of learning, science, and studying (10).

The success of any university depends on teaching ethics status and its distance from educational standards. Therefore, a special place is given to research performed on this issue because such studies, from the perspective of students, as the important elements of education that all efforts are made to train them as professional workforce, can help university administrators and educational planners to make appropriate decisions to reduce the gap between the current and optimal situation and achieve educational standards (11). From the perspective of Morris and Wood, the components of teaching professional ethics include personal traits, teaching techniques, problem-based and interactive teaching, and communication skills (12). Rutgans and Schmidt indicated the criteria of professional ethics as social congruence, subject-matter expertise, and cognitive congruence (13). From the perspective of students in Birjand, Iran, the most important components of professional ethics were personal traits, teaching skills, personal communication skills, evaluation skills, and observance of educational rules and regulations (14). From the viewpoint of the students of Shahid Sadoughi University, Yazd, Iran, the most important criteria of professional ethics teaching include personal traits, human relations, teaching skills, and evaluation skills (15). Sobhani-Nejad et al. stated the personal traits of the teacher, mastery of content, mastery of teaching methods, knowledge of the learner, standard evaluations, and observation of educational rules as the components of professional ethics teaching from the perspective of medical students in Qom, Iran (11).

It can be said that evaluating the views of postgraduate students, who have a much closer relationship with professors and can more appropriately evaluate teaching ethics, as well as examining the professors' views and the gap between the two views, can solve dilemmas existing in teaching and promote the quality of teaching in order to achieve educational standards. Objectives: Given the importance of professional ethics teaching in achieving academic goals, the present study aimed at investigating the status of teaching professional ethics from the perspective of professors and postgraduate students of basic sciences at Mazandaran University of Medical Sciences.

Objectives

The present study aimed at evaluating teaching ethics from the perspectives of professors and postgraduate students of Mazandaran University of Medical Sciences based on a comparative approach.

Methods

The present descriptive-analytical study was performed on all professors, as well as MSc. and Ph.D. students in basic sciences including medicine, pharmacy, paramedical, health, nursing-midwifery, and advanced technologies in various medical sciences schools. A general assessment was performed, and the students' views on those professors who had a course with them were examined. Inclusion criteria were studying at the university and a willingness to participate in the study. The exclusion criterion was an incompletely filled questionnaire (<30% of the items). A stratified random sampling method was used to determine the sample size based on the size of each stratum, i.e., the numbers of students and their professors in each school. The samples size was determined using Morgan's table based on the proportion of each school, which was 284 for students and 42 for professors.

The teacher's professional ethics scale was utilized as the data collection tool. It was designed by Sobhani-Nejad et al. in six components based on the theoretical foundations of ethics and effective teaching, as well as related research (16-22). The face and content validity of the tool were also confirmed. The reliability of the scale was also assessed using Cronbach's alpha coefficient (alpha = 0.92) (10). The questionnaire consisted of 48 items in six components that examined teaching ethics in professors. The components included: 1. personality traits consisting 21 items including attention to appearance, good human relations, practical commitment to religious values, patience in receiving feedback, responsibility to students, avoiding nasty jokes, avoiding reprimand and blame, motivity for teaching, criticizability, lack of discrimination in dealing with students, not questioning the performance of counterparts, welcoming group decision-making, commitment to confidentiality about students' information, adequate insight into students' behavior, not assigning students to personal affairs, safekeeping of teaching aids, good manners in teaching, good self-esteem, accessibility in non-school hours, use of research evidence to explain theoretical orientation, and teaching without personal bias. 2. content mastery consisting 6 items including making a proper horizontal connection among different subjects, making a proper vertical connection among different subjects, good command of analytical methods and content choice, coincidence of most content chosen with students' needs, sufficient expertise in the subject and content, and using a variety of teaching techniques. 3. teaching techniques mastery consisting 4 items including consistent and meaningful presentation of content, paying attention to the teaching process and student participation, organizing subjects as a semester plan, and using a variety of teaching techniques consistent with the objectives and content. 4. recognizing learners' dimensions consisting 6 items including considering students' personal differences in the teaching process, good knowledge of students' needs, recognition of students' previous experiences and

learnings, skillfulness in creating motivation, balanced approach to strengthen students' cognitive, emotional, and functional areas, and paying attention to students' feedback. 5. standard evaluation consisting 5 items including consistency of evaluation with educational objectives, justice in evaluation, predetermining the evaluation method, establishing an appropriate incentive system to manage students' behavior, and applying developmental evaluation to the teaching process. 6. Observation of educational rules and regulations consisting 6 items including giving importance to attendance, assigning time for checking exam papers and handling complains, timely attendance at class, observation of class time, compliance of assigned tasks with academic objectives, and commitment to university regulations. The items were scored based on a five-point Likert scale from 1 (very low) to 5 (very high). The mean score of 1-2.33 is considered undesirable, 2.34-3.67 relatively desirable, and 3.68-5 desirable. A maximum score of 5 is considered the standard (optimal) status. In terms of ethical considerations, the participation was completely voluntary and subjects were provided with necessary explanations about the project, data extraction and expression, confidentiality of personal information, and anonymity of questionnaires. The completion and return of questionnaires were considered a sign of willingness to participate in the study. The questionnaire was collected after completion. Data were entered into SPSS version 21, reported as descriptive statistics (frequency, mean, and standard deviation), analyzed using independent t-test, and one-way analysis of variance (one-way ANOVA).

Results

Out of 284 questionnaires distributed to the students, 235 were completed and returned (response rate = 82.7%). Of them, 160 (68.1%) were completed by female students and 75 (31.9%) by male students. The numbers of MSc and Ph.D. students participating in the study were 172 (73.2%) and 63 (26.8%), respectively. All 42 questionnaires distributed to the professors were returned completely (response rate = 100%), of which 16 (38.1%) were completed by females and 26 (61.9%) by males. The number of students was 77 (32.8%) in the school of medicine, 64 (27.2%) in nursing-midwifery, 53 (22.6%) in health, 20 (8.5%) in pharmacy, 12 (5.1%) in paramedical, and 9 (3.8%) in advanced technologies in medicine.

The comparison of professors' and students' attitudes toward the professional ethics of faculty members showed that professors had a more positive attitude towards the observation of professional ethics by teachers. The mean scores of professional ethics of faculty members from view point of professors and students were at desirable and relatively desirable levels, respectively. Also, the comparison of teaching ethics components showed that the observation of the rules attained the highest (desirable) and learner cognition the lowest (relatively desirable) mean scores from the perspective of both professors and students. Data shown in Table 1 indicate a significant difference between the perspectives of professors and students in the teaching ethics scale and its components P <0.0001) (Table 1).

Table 2 shows the mean scores of teachers' professional ethics from students' perspectives based on gender. Data indicated no significant difference between the scores obtained by male and female students in the teaching ethics scale and its components (independent samples t-test P = 0.71).

Table 3 shows the mean scores of teachers' professional ethics from the students' perspectives based on degree. Data indicated a significant difference between the PhD and MSc student views in the teaching ethics scale and its components (P = 0.02).

Table 1. Comparison of the mean scores of faculty members and students on the teacher's professional ethics scale

The component of teachers' professional ethics	Students Mean (SD)	Faculty members Mean (SD)	P	t
Personality traits	3.80 (0.64)	4.33 (0.7)	0.0001	-4.831
Mastery of content	3.72 (0.73)	4.26 (0.63)	0.0001	-4.519
Mastery of teaching techniques	3.75 (0.75)	3.47 (0.74)	0.0001	-4.687
Learner cognition	3.56 (0.80)	4.00 (0.79)	0.0001	-3.862
Standard evaluation	3.64 (0.79)	4.36 (0.65)	0.0001	-5.348
Observation of rules	3.64 (0.79)	4.36 (0.65)	0.0001	-4.493
Total score	3.67 (0.63)	4.29 (0.59)	0.0001	-5.252

Table 2. Comparison of the mean scores of students by gender on the teachers' professional ethics scale

The component of teachers' professional ethics	Mean (SD)		P	t
	Female, n=160	Male, n=75		
Personality traits	3.82 (0.64)	3.75 (0.65)	0.450	0.762
Mastery of content	3.74 (0.74)	3.67 (0.71)	0.353	0.613
Mastery of teaching techniques	3.77 (0.77)	3.70 (0.71)	0.508	0.643
Learner cognition	3.55 (0.79)	3.59 (0.84)	0.751	-0.326
Standard evaluation	3.66 (0.82)	3.67 (0.74)	0.872	-0.155
Observation of rules	3.87 (0.81)	3.80 (0.71)	0.461	0.704
Total score	3.68 (0.63)	3.65 (0.62)	0.717	0.362

Table 3. Comparison of the mean scores of students by degree on the teachers' professional ethics scale

The component of teachers' professional ethics	Mean (SD)		P	t
	MSc, n= 172	Doctoral degree, n= 63		
Personality traits	3.84 (0.64)	3.70 (0.63)	0.143	1.441
Mastery of content	3.78 (0.73)	3.54 (0.69)	0.025	2.224
Mastery of teaching techniques	3.85 (0.73)	3.47 (0.74)	0.001	3.520
Learner cognition	3.62 (0.82)	3.41 (0.70)	0.057	1.765
Standard evaluation	3.74 (0.79)	3.46 (0.78)	0.017	2.409
Observation of rules	3.92 (0.73)	3.64 (0.88)	0.027	2.450
Total score	3.73 (0.63)	3.52 (0.60)	0.022	2.279

Table 4. Comparison of the mean score of students by school on the teachers' professional ethics scale

The component of teachers' professional ethics	Mean (SD) score by school							P	T
	Medicine	Nursing	Healthcare	Pharmacy	Paramedics	Advanced Technologies in Medicine	Total score		
Personality traits	3.74 (0.69)	3.91 (0.68)	3.76 (0.59)	3.69 (0.46)	3.92 (0.51)	3.84 (0.63)	3.80 (0.64)	0.593	0.742
Mastery of content	3.54 (0.70)	3.92 (0.83)	3.77 (0.69)	3.65 (0.64)	3.66 (0.46)	3.62 (0.51)	3.72 (0.73)	0.068	2.085
Mastery of teaching techniques	3.53 (0.77)	4.06 (0.73)	3.77 (0.74)	3.75 (0.59)	3.79 (0.66)	3.61 (0.66)	3.72 (0.73)	0.002	4.036
Learner cognition	3.51 (0.74)	3.77 (0.86)	3.53 (0.86)	3.23 (0.73)	3.72 (0.54)	3.25 (0.82)	3.75 (0.73)	0.077	2.017
Standard evaluation	3.61 (0.77)	3.58 (0.83)	3.64 (0.81)	3.29 (0.70)	3.80 (0.60)	3.44 (0.88)	3.56 (0.80)	0.088	1.942
Observation of rules	3.58 (0.87)	4.14 (0.67)	3.91 (0.69)	3.85 (0.73)	3.75 (0.58)	3.81 (0.84)	3.66 (0.79)	0.002	3.969
Total score	3.57 (0.65)	3.58 (0.66)	3.67 (0.62)	3.52 (0.48)	3.73 (0.47)	3.60 (0.63)	3.67 (0.63)	0.139	1.687

The difference was mostly observed in content mastery (P = 0.02), teaching techniques mastery (P = 0.001), standard evaluation (P = 0.01), and observance of rules (P = 0.02) components. There was no difference between the two grades in the personality traits component (P = 0.14); there was also a slight difference in the learner cognition component (P = 0.05).

Table 4 shows the mean score of professors teaching ethics from the perspectives of students based on the school. Data indicated no significant difference among the perspectives of students of different schools in the teaching ethics scale and its components (P = 0. 13). There was also a significant difference in the mastery of teaching techniques (P = 0.002) and observance of rules (P = 0.002) components. In the mastery of teaching techniques, the highest and lowest mean scores were obtained in the schools of nursing & midwifery and medicine, respectively. Also, in the observation of rules component, the highest and lowest mean scores were obtained in the schools of nursing & midwifery and medicine, respectively.

Discussion

The results of the present study showed that the total mean score of the teaching ethics scale was at a relatively desirable level from the perspective of students but a desirable level from the perspective of professors. From the viewpoint of professors, all components were at a desirable level and from the viewpoint of students; the components of learner cognition and standard evaluation were at a relatively desirable level. In terms of the perspective of students, the results of the present study are consistent with those of the studies by Sobhani-Nejad et al. and Najafi et al. (2, 11), and inconsistent with those of the study by

Jadidi et al. (6), in some components; the reason for this inconsistency might be differences in educational facilities (space, time, and educational equipment) and the nature of some disciplines studied by researchers.

The study results also showed that there was no significant difference between the views of male and female postgraduate students, and the status of these components was at a desirable level from the viewpoints of both genders. In addition, a significant difference was observed between the views of postgraduate and doctoral students so that from the viewpoint of postgraduate students, the observation of teaching ethics was desirable, but from the viewpoint of doctoral students, it was relatively desirable. In the present study, postgraduate students scored significantly higher than doctoral ones in all components of the teaching ethics scale, except for personality traits. However, in a similar study by Jana-Abadi et al., (2015) performed at Sistan and Baluchestan University of Medical Sciences (23), Iran, using the same questionnaire to assess the views of postgraduate students, they reported no significant difference between two groups of degree (master's and doctoral), as well as two groups of gender.

The status of teaching ethics was also examined and compared from the perspective of students of different schools, and the results showed that although there was no significant difference among the schools in the mean score of the teaching ethics scale, there was a significant difference among the schools in the mean score of two components, namely mastery of teaching techniques and observation of rules, so that the highest and lowest scores in these two components belonged to the schools of nursing & midwifery and medicine, respectively. The study by Babasafari et al. (2014) showed no significant

differences among the scores of five components of the teaching ethics scale given by the schools of human sciences and basic sciences (24). The results of the study by Mossadegh et al., (2012) on the evaluation of teaching ethics from the perspective of postgraduate students of the University of Tehran and Imam Khomeini Education and Research Institute, showed no significant differences among the faculty members of human sciences and technical engineering schools in adherence to teaching ethics (25).

A comparison of the views of postgraduate students and their professors concerning teaching ethics and its components showed that teachers had a more positive view than students toward the total scale and each of its components, and the difference was significant. Very few comparative studies have been conducted to simultaneously examine the views of professors and students on teaching ethics. Faculty members assessed the status of professional ethics as desirable in self-report studies, but students' views were opposite (26-31). In the study by Pourkarimi et al. (2019), the results showed a significant difference between the perspectives of students and professors on the professional ethics of faculty members so that for all components, students' views were more negative than those of professors at the University of Tehran (32). This gap is probably due to differences in respondents' observations and conversations. Despite explanations provided on the confidentiality of responses given, the professors showed less interest in self-assessment and completion of the questionnaire and its items; in other words, they showed resistance and often recommended their assessment by students. It seemed that they feared to respond to the questionnaire and even self-assessment. They mostly acknowledged that such information is private. Perhaps the fear of revealing the responses made them give higher scores. Also, if some professors were successful in a certain area, they extended that to other arenas and evaluated themselves positively. Such side factors might have been influential and led to the creation of a gap between the perspectives of students and professors. In general, students had higher expectations of teaching ethics. Perhaps the expectations of different groups participating in the study were different, and they generalized different cases and events to each other, which could have affected the scoring of items and, consequently, components (33).

In the present study, the highest and lowest scores were given to the components of observation of rules and learner cognition, respectively, from the perspectives of students and professors, which was completely consistent with the results of the study by Najafi et al. (2). In a recent study by Jadidi et al. (2017) in Iran, using the same questionnaire, the students of Islamic Azad University, Sanandaj Branch, gave the highest and lowest scores to the components of personality traits and standard evaluation, respectively (6). A similar study by Jana-Abadi et al. reported that students gave the highest and lowest scores to the observation of rules and the component

of recognizing different dimensions of the learner, respectively (23). In the study by Sobhani-Nejad et al. (2014), using the same questionnaire to assess teaching ethics, students of Qom University of Medical Sciences, Iran, gave the highest and lowest scores to personality traits and mastery of teaching techniques (11). Knowledge is not enough to be successful in teaching, but it requires teaching skills, referred to as professional ethics teaching (33). A qualitative study conducted in Canada showed that students sometimes experienced professors' immoralities, and professors were less likely to discuss and evaluate such ethical issues (34). Professors always play a role as an ethical model for students in teaching and other matters; therefore, observation of professional ethics, especially in teaching, causes changes in students' behaviors, attitudes, and thinking. Hence, addressing teaching ethics is one of the essentials for planners and politicians of the Iran medical education system, which should be included in the hidden and overt curricula (15). All researchers in this field acknowledge that teaching is a profession with moral nature, and emphasize the observation of teaching ethic components. It seems that not only teaching skills but also personality, character, behavior, and moral characteristics of the teacher in the classroom can motivate students to learn, and ultimately improve teaching quality. Motivated and moral professors can ethically train motivated and healthy students.

Study Limitations

One of the study limitations was that it was a quantitative study and only one questionnaire was used as a data collection tool while interviewing and observation methods could produce different results. In addition, the statistical population was limited to postgraduate students; therefore, caution should be used in the generalizability of results to other educational institutions. Another limitation of the study was that students had less interest in participating in the study. As there was a small number of students in each class, additional information was more likely to be disclosed.

Conclusion

In the present study, teaching ethics gained scores above the median from the perspectives of both students and professors. Although it was more desirable from the perspective of professors, it was still far from the desired and standard status. Observation of rules, regulations and professional requirements in an organization can improve the quality of work and lead to better results and outputs.

Recommendations

- To study factors contributing to professional ethics teaching
- Compilation and design of a course called teaching ethics and its inclusion in the curricula of all disciplines.
- To conduct the continuous evaluation of teachers' adherence to the principles of professional ethics teaching to achieve the curriculum goals.

- To assess teaching ethics indices before applying for admission to the school.
- To identify good and effective practical solutions by conducting more research to promote professional ethics teaching.

Acknowledgments

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