

Attitude of Medical Science Students towards Medical Ethics

ARASH ZIAPOUR¹, ALIREZA KHATONY², FARANAK JAFARI³, NEDA KIANIPOUR⁴

ABSTRACT

Introduction: Medical ethics is an analytical activity whereby various aspects of decisions on moral issues in the practice of medicine are investigated.

Aim: The present study aimed to delve into students' attitudes towards medical ethics at Kermanshah University of Medical Sciences.

Materials and Methods: In this descriptive-correlational study, the statistical population consisted of 380 medical, nursing and midwifery students at Kermanshah University of Medical Sciences in the second semester of the academic year 2014-2015. A sample of 380 subjects (200 females and 180 males) was selected through quota sampling. For data collection, a demographic information questionnaire and an attitude measuring scale developed by Motamed-Jahromi M and Dehghani SL in the year 2014, were used. Data were analysed through the descriptive (frequency distribution, mean, and standard deviation) and inferential statistics (independent t-test and One-way ANOVA). Further, the SPSS Statistics 21.0 was used for data analysis.

Results: The results of the present study demonstrated that the students' overall attitude towards medical ethics was positive (4.47 ± 0.35). The highest and lowest means of attitude towards medical ethics was related to the principles of beneficence (4.62 ± 0.67) and justice (4.29 ± 0.80), respectively. Also, the results of t-test revealed that there was a significant relationship between the attitudes towards medical ethics in terms of gender, age, and marital status ($p < 0.05$). Besides, the results of analysis of variance showed that the students' field of study and their attitudes towards medical ethics were significantly related ($p < 0.05$).

Conclusion: To address paramount issues, including the ethical considerations within the scope of medicine, is one of the basic necessities among university students that should be taken into consideration in the comprehensive system of health. So, it is suggested that the medical, nursing and midwifery students be educated in medical ethics by means of short-term training programs or workshops.

Keywords: Behaviour, Beliefs, Bioethics, Morals

INTRODUCTION

Medical ethics, a branch of professional applied ethics and bioethics, is aimed at practically importing ethics into the scope of practice of doctors and medical staff as well as ethical decision making [1]. Medical ethics is a highly structured system towards provision of suitable solutions for ethical problems existing in medicine [2]. Educated people may encounter different demands that should be met through decisions proportional to one's conditions. A substantial portion of these decisions is based on moral principles learned on one's path to growth. For instance, students are exposed to situations and demands in various forms in the environment of universities that incline them to display various moral and immoral behaviours. In such areas, collegiate ethics refer to the extent to which one displays one's actions based on values, such as honesty, relying on personal efforts, lack of abusing the efforts of others, altruistic conduct, and showing respect for others [3,4]. One of the existing views of modern medical ethics is based on four established principles and two subsidiary principles for ethical decision making: autonomy (respecting one's right to self-determination as well as creating the conditions necessary for autonomous choice), beneficence (actions done for the benefit of others), non-maleficence (non-harming or inflicting the least harm possible to reach a beneficial outcome), justice (social distribution of benefits and burdens), veracity (truth-telling), fidelity (do as you say you will do and respect confidentiality) [5]. To educate doctors and medical staff, such as nurses and midwives, on these principles is of the essence [6].

Having completed their education, it seems that university students adopt certain behaviour and beliefs that diminish their ethical sensitivity to various issues, thereby making decisions difficult for them [7]. In recent years, with the increasing cases of complications about medical ethics, promotion of professional ethics among the medical students, especially those who are in direct contact with patients, has been attached great importance [8,9]. From the

viewpoint of Larjani B [10], the neglect of basic education and lack of attention to some necessities in the field of medical ethics have caused concerns in societies, whereby the dignity of the medical profession is distorted and the trust that societies are placing in physicians' merit and honesty is lessened. That's why medical ethics are considered an integral component of the medical science, and its recommendations are tailored towards directing conduct and professional methods of the practice of medicine among students [11-13]. Given the importance of the subject and lack of knowledge about the students' attitude towards medical ethics at Kermanshah University of medical sciences, the present study was conducted. The aim of this study was to investigate the attitude of medical students regarding principles of medical ethics.

MATERIALS AND METHODS

In this descriptive-correlational study, the statistical population consisted of 380 medical, nursing and midwifery students of Kermanshah University of Medical Sciences in the second semester of the academic year 2014-2015. A sample of 380 subjects [medical students=180 (47.3%), nursing students=113 (29.7%), and midwifery students=87 (22.9%)] was calculated through Cochran's sample size formula and selected using quota sampling. The inclusion criteria were the subjects' prior consent to participate in the study, studying in the second semester of academic year 2014-2015. Being in the first year to the fourth year of university for medical students and incomplete questionnaires were excluded from the study. For data collection, a demographic information questionnaire and an attitude measuring scale developed by Motamed-Jahromi M and Dehghani SL in the year 2014, were used [5]. The demographic information questionnaire consisted of questions about gender, age, marital status, and education. Moreover, the validity and reliability of the questionnaire were tested and then confirmed by content

analysis and Cronbach's alpha ($\alpha=0.75$) [5]. In the present study, the validity and reliability of the attitude instrument were retested. As for validity, the content analysis was applied. The questionnaires were distributed among 12 faculty members, and their corrective feedback was then included. To determine the reliability of the questionnaire, the Cronbach's alpha was calculated ($\alpha=0.82$).

The 18-item attitude measuring scale consisted of six principles (three items for each principle): autonomy, beneficence, non-maleficence, justice, veracity, and fidelity, with five-point Likert Scaling (1=Strongly disagree, 2=somewhat disagree, 3=neutral, 4=somewhat agree, 5=strongly agree).

The students could get a score between one to five from each of the questions. To determine the students' attitude towards each of the principles of medical ethics, the scores on the questions of each principle were summed up and their average was calculated. The score range for each of the principles was between 3 and 15. To determine the students' total attitude towards the principles of medical ethics, the scores of all questions were summed up and their average was obtained.

To commence the study, the required permits were obtained from the Vice Chancellery for the Department of Research and Technology at Kermanshah University of Medical Sciences. Then, the questionnaires were distributed among the target samples from the schools of medicine, nursing and midwifery. To this end, the objectives of the present study were explained to the target subjects, and they were assured that their information would be kept confidential. Additionally, their informed consent was obtained, too.

STATISTICAL ANALYSIS

Data were analysed through descriptive (frequency distribution, mean, and standard deviation) and inferential statistics (independent t-test and One-way ANOVA). Further, the SPSS Statistics 21.0 version was utilised for data analysis. To compare the scores of attitudes towards medical ethics in terms of the two-faceted qualitative variables, including gender and marital status, the Independent t-test was used, and in terms of the multi-faceted qualitative variables, one-way ANOVA was utilised. Moreover, the intended significance level was less than 0.05 in the present study.

RESULTS

The results showed that 288 (75.7%) students got the highest scores on the principles of medical ethics. The highest and lowest values of attitude towards medical ethics belonged to the principle of beneficence (with a mean and standard deviation of 4.62 ± 0.67) and the principle of justice (with a mean and standard deviation of 4.29 ± 0.80), respectively [Table/Fig-1].

The Independent t-test showed a statistically significant difference between the mean scores of students' attitudes in terms of gender, indicating that the male students' attitude was better than those among the female students ($p<0.05$). According to this test, there was a statistically significant difference between the single and married students' attitudes, indicating that the single students held better attitudes ($p<0.05$). On the other hand, the students aged under 20 had better attitudes than those aged over 20 ($p<0.05$). Further, the mean score of students' attitudes in terms of education

Statistical indicator variables	Mean±SD	Minimum	Maximum	Rank	
Components	Beneficence	4.62±0.67	1	5	First
	Non-maleficence	4.57±0.71	1	5	Second
	Veracity	4.54±0.76	1	5	Third
	Autonomy	4.52±0.69	1	5	Fourth
	Fidelity	4.49±0.71	2	5	Fifth
	Justice	4.29±0.80	1	5	Sixth

[Table/Fig-1]: Mean, standard deviation, minimum score, maximum score and respondents' ranks in terms of the medical ethics principles.

was significantly higher in medical student than those among nursing and midwifery students ($p<0.05$) [Table/Fig-2].

Variables	Groups	Number (%)	Mean±SD	Test Result
Gender	Male	180 (47.7)	4.57±0.33	t=3.132 p<0.001
	Female	200 (52.6)	4.45±0.40	
Age (years)	20≥	116 (30.5)	4.64±0.34	t=4.667 p<0.017
	20≤	264 (69.5)	4.45±0.37	
Marriage	Single	293 (77.1)	4.51±0.26	t=173.3 p<0.010
	Married	87 (9.22)	4.47±0.41	
Education	Medical	180 (47.4)	4.57±0.33	F=4.991 p<0.001
	Nursing	113 (29.7)	4.43±0.38	
	Midwifery	87 (22.9)	4.47±0.41	

[Table/Fig-2]: Frequency, percentage, and comparing the students' mean scores in terms of the demographic characteristics. p-value <0.05 is significant

DISCUSSION

The present work was the first comprehensive study dealing with the students' attitude towards medical ethics at Kermanshah University of Medical Sciences, as the medical education hub in western Iran. The results of the present study showed that the students of Kermanshah University of Medical Sciences had positive attitude towards medical ethics. From the viewpoints of the authors of this study, this optimum situation causes students to respect medical ethics, and in practice they will be displayed in their conduct. In a study conducted by Motamed-Jahromi M and Dehghani SL, the students' overall attitudes were reported as positive [5]. In another study done by Osingada CP et al., on Ugandan nurses and midwives, the results indicated that they were in need of training in nursing ethics, and 93% of them held positive attitudes towards continuing education in the field of nursing ethics [6]. According to Laabs C, 89% of Chinese nurses believed that educating all medical personnel on medical ethics was necessary [14]. Buyx A et al., concluded that specialists in medical ethics should shoulder the responsibility of educating students on moral virtues and ethics [15]. The results of a study conducted by Goldie J et al., showed that educating university freshmen about medical ethics was more efficacious in coping with problems than in later years of study [16]. Hariharan S et al., concluded that physicians had more awareness about medical ethics than nurses [17]. However, the results of a study conducted on Nigerian physicians were indicative of their low levels of knowledge of medical ethics [18]. Bazrafcan L et al., showed that there was not a significant difference between the mean scores of nursing students and nursing staff at Shiraz University of Medical Sciences; whereas the nursing students held more awareness in this regard [19]. It seems to the authors of the present article that this positive attitude acts as an important asset for the clinical environment, and all the officials should do their utmost to maintain and strengthen students' positive attitudes towards professional ethics through various ways, including retraining courses, and they should be prepared in the face of numerous ethical challenges in the future. The highest mean of attitudes towards medical ethics was related to the principle of beneficence. This finding was consistent with the results of studies conducted by Motamed-Jahromi M and Dehghani SL, Reddy RS et al., and Shah N [5,20,21]. Accordingly, any action causing harm to patients should be avoided by physicians and health staff.

Our findings indicated that the lowest mean of attitudes towards the medical ethics was related to the principle of justice. It should be noted that the students had a positive attitude towards this principle, but the score of their attitudes was lower than that of other principles of medical ethics. The students expressed that all patients were treated equally, no distinction was made between them, and the rights of patients were respected in any circumstance. This finding was consistent with the results of studies performed by Motamed-Jahromi M and Dehghani SL, Mallela KK et al., and Deolia SG et al., [5,22,23]. More attention should be paid to the principles of professional ethics,

and the importance of following this principle should be emphasised among medical students, especially in public hospitals [7].

Further, the mean score of students' attitude was significantly higher in medical students than among nursing and midwifery students. This finding was consistent with the results of studies conducted by Motamed-Jahromi M and Dehghani SL [5], Hariharan S et al., Yousuf R et al., Rai JJ et al., Elder R et al., and Zirak M et al., [5,17,24-27]. It is highly probable that a rise in the number of hours spent on the clinical training programs would be efficacious in increasing the medical students' attitude score.

In the present study, the mean score of attitude among the male students was better than that among the female students. This finding was consistent with the results of studies performed by Motamed-Jahromi M and Dehghani SL [5], Mallela KK et al., Gupta VV et al., and Kandeel N et al., [5,22,28,29]. It seems that male students are more committed with sticking to the principles of medical ethics.

In the present study, the results indicated that the mean score of the married students' attitudes was higher than that of the single students. This finding was consistent with the results of a study conducted by Motamed-Jahromi M and Dehghani SL [5], whereas it was inconsistent with the results of a study done by Karampourian A et al., [30]. In our view, marriage can cause law orientation and strengthening one's attitude towards following the ethical principles.

On the other hand, the students aged under 20 had better attitudes than those aged above 20. This finding was inconsistent with the results of studies conducted by Motamed-Jahromi M and Dehghani SL, Hariharan S et al., Deolia SG et al., and Rai JJ et al., [5,17,23,25].

LIMITATION

The main limitation of the present study was the data collection method, i.e., self-report, which may have affected the results.

CONCLUSION

All students held positive attitudes towards medical ethics principles. Given the significance of medical ethics, it is suggested that the medical, nursing and midwifery students should be educated on the general principles of medical ethics by means of short-term training programs or workshops.

ACKNOWLEDGEMENTS

The present article was based on the findings of the research project no. 93401, supported by the Vice Chancellor for Research and Technology of Kermanshah University of Medical Sciences. In conclusion, our grateful thanks go to the Clinical Research Development Center of Imam Reza Hospital, all our colleagues and students from the schools of medicine, paramedics, nursing and midwifery for their kind support and cooperation.

REFERENCES

- [1] Ahsin S, Shahid A, Gondal GM. Teaching communication skills and medical ethics to undergraduate medical student. *J Adv Med Educ Prof.* 2013;1(3):72-76.
- [2] Larjani B, Zahedi F. Medicine and modern medical ethics. *Iran J Diab Meta.* 2005;4:01-11.
- [3] Golparvar M. The relationship between ethics and justice education with the avoidance of deception, ethics. *Sci Tech.* 2010;5(2-1):57-66.
- [4] Ramana K, Kandi S, Boinpaly PR. Ethics in medical education, practice, and research: an insight. *Ann Tropic Med Public Health.* 2013;6(6):599-602.
- [5] Motamed-Jahromi M, Dehghani SL. Students' attitudes toward principles of medical ethics and matching them with Islamic Ethics in Kerman University of Medical Sciences. *J Babol Univ Med Sci.* 2014;16(7):29-35.
- [6] Osingada CP, Nalwadda G, Ngabirano T, Wakida J, Sewankambo N, Nakanjako D. Nurses' knowledge in ethics and their perceptions regarding continuing ethics education: a cross-sectional survey among nurses at three referral hospitals in Uganda. *BMC Res Notes.* 2015;8(1):319-23.
- [7] Sathirareungchai S. Medical students' and interns' attitudes toward medical ethics education in a Thai medical school. *Siriraj Med J.* 2016;68(2):97-103.
- [8] Boyd W, Newton D. Times of change, times of turbulence: seeking an ethical framework for curriculum development during critical transition in higher education. *International Journal of Cyber Ethics in Education (IJCEE).* 2011;1(3):01-11.
- [9] Ziapour A, Zokaei A, Kahrizi F. A theoretical study of the standing of social investment in the health sector. *Soc Sci.* 2016;11(5):3682-87.
- [10] Larjani B. Editorial. Medicine and modern medical ethics. *Iran J Med Ethics Hist Med.* 2008;1(2):12-19.
- [11] Khaghanizadeh M, Maleki H, Abbasi M, Abbaspour A, Mohamadi E. Faculty-related challenges in medical ethics education: a qualitative study. *Iran J Med Educ.* 2012;11(8):903-16.
- [12] Lakhan SE, Hamlat E, McNamee T, Laird C. Time for a unified approach to medical ethics. *Philos Ethics Humit Med.* 2009;4(1):01-13.
- [13] Ziapour A, Khatony A, Jafari F, Kianpour N. Patient satisfaction with medical services provided by a hospital in Kermanshah-Iran. *Acta Med Mediterranea.* 2016;32(2):959-65.
- [14] Laabs C. Confidence and knowledge regarding ethics among advanced practice nurses. *Nurs Educ Perspect.* 2012;33(1):10-14.
- [15] Buyx A, Maxwell B, Schöne SB. Challenges of educating for medical professionalism: who should step up to the line? *Med Educ.* 2008;42(8):758-64.
- [16] Goldie J. Review of ethics curricula in undergraduate medical education. *Med Educ.* 2000;34(2):108-19.
- [17] Hariharan S, Jonnalagadda R, Walrond E, Moseley H. Knowledge, attitudes and practice of healthcare ethics and law among doctors and nurses in Barbados. *BMC Med Ethics.* 2006;7(7):01-09.
- [18] Fadare JO, Desalu OO, Jemilohun AC, Babatunde OA. Knowledge of medical ethics among Nigerian medical doctors. *Nig Med J.* 2012;53(4):226-30.
- [19] Bazrafcan L, Nabelei P, Shokrpour N, Moadab N. Medical ethics as practiced by students, nurses and faculty members in Shiraz University of Medical Sciences. *J Adv Med Educ Prof.* 2015;3(1):33-38.
- [20] Reddy RS, Ramya K, Raju M, Rayudu GS, Kiran CS, Jyothirmal K. Knowledge, awareness and attitudes about research ethics among dental professionals in a dental institution of south India. *J Educ Ethics Dent.* 2013;3(1):34-39.
- [21] Shah N. Ethical issues in biomedical research and publication. *J Conserv Dent.* 2011;14(3):205-57.
- [22] Mallela KK, Walia R, Chaitra Devi T, Das M, Sepolia S, Sethi P. Knowledge, attitudes and practice about research ethics among dental faculty in the North India. *J Int oral health.* 2015;7(Suppl 2):52-56.
- [23] Deolia SG, Prasad K, Chhabra KG, Kalyanpur R, Kalghatgi S. An insight into research ethics among dental professionals in a dental institute, India-a pilot study. *J Clin Diagn Res.* 2014;8(9):ZC11-14.
- [24] Yousuf R, Fauzi A, How S, Rasool A, Rehana K. Awareness, knowledge and attitude towards informed consent among doctors in two different cultures in Asia: a cross-sectional comparative study in Malaysia and Kashmir, India. *Singapore Med J.* 2007;48(6):559-65.
- [25] Rai JJ, Acharya RV, Dave D. Knowledge and awareness among interns and residents about medical law and negligence in a medical college in Vadodara—a questionnaire study. *J Dent Med Sci.* 2013;3(4):32-38.
- [26] Elder R, Price J, Williams G. Differences in ethical attitudes between registered nurses and medical students. *Nurs Ethics.* 2003;10(2):149-64.
- [27] Zirak M, Moghaddsiyan S, Abdollahzadeh F, Rahmani A. Moral development of nursing students of Tabriz University of Medical Sciences. *Iran J Med Ethics Hist Med.* 2011;4(4):45-55.
- [28] Gupta VV, Bhat N, Asawa K, Tak M, Bapat S, Chaturvedi P. Knowledge and attitude toward informed consent among private dental practitioners in Bathinda city, Punjab, India. *Osong Public Health Res Perspect.* 2015;6(2):73-78.
- [29] Kandeel N, El-Nemer A, Ali NM, Kassem H, El-Setouhy M, Elgharieb ME, et al. A multicenter study of the awareness and attitudes of Egyptian faculty towards research ethics: A pilot study. *J Emp Res Hum Res Ethics.* 2011;6(4):99-108.
- [30] Karampourian A, Imani B, Torzabani P. The attitude of faculty members towards professional ethics at Hamadan University School of Dentistry. *J Res Dent Sci.* 2013;10(1):43-51.

PARTICULARS OF CONTRIBUTORS:

1. Research Center for Environmental Determinants of Health (RCEDH), Kermanshah University of Medical Sciences, Kermanshah, Iran.
2. Associate Professor, Department of Nursing, School of Nursing and Midwifery, Kermanshah University of Medical Sciences, Kermanshah, Iran.
3. Lecturer, Department of Nursing, School of Nursing and Midwifery, Kermanshah University of Medical Sciences, Kermanshah, Iran.
4. Students Research Committee, Kermanshah University of Medical Sciences, Kermanshah, Iran.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Alireza Khatony,
Clinical Research Development Center of Imam Reza Hospital, Kermanshah University of Medical Sciences,
Kermanshah-6714415333, Iran.
E-mail: akhatony@gmail.com

FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: Dec 04, 2016

Date of Peer Review: Jan 24, 2017

Date of Acceptance: Sep 06, 2017

Date of Publishing: Feb 01, 2018