

Original Research



Providing a model of a hidden curriculum in medical majors with an emphasis on medical ethics

Amir Nahavandi Takab¹, Eskandar Fathi Azar^{2*}, Zarrin Daneshvar Heris¹, Hossein Baghaei³

¹Department of Humanities Sciences, Tabriz Branch, Islamic Azad University, Tabriz, Iran

²Department of Psychology and Educational sciences, Tabriz University, Tabriz, Iran

³Department of Educational Sciences, Kaleybar Branch, Islamic Azad University, Kaleybar, Iran

Article info

Article History:

Received: 16 Jan. 2021
Accepted: 17 Apr. 2021
published: 5 May 2021

Keywords:

Hidden curriculum
Medical ethics
Medical training

Abstract

Background: The “hidden” curriculum, alongside official education, can transfer ethical and professional values and principles to medical students and show them the importance of medical ethics. Ethical issues are essential factors influenced by the hidden curriculum in the medical educational system; these issues are also instruments for medical students as they develop their professionalism and idealism. The current study aims to provide an empirical study model of this hidden curriculum and its role in transferring knowledge of medical ethics.

Methods: The current research is qualitative in the phenomenological type. The statistical population consisted of professors along with students in their fourth and upper years of various medical disciplines at the Tabriz University of Medical Sciences during 2019-2020. The sample group, according to the qualitative nature of the research, was compiled to a theoretical saturation to be 36 professors and students. The data were collected through semi-structured interviews. Analysis was done using thematic coding and Smith’s method. To maintain quality and accuracy, interview content was analyzed by two authors to reconstruct the reality. The data and their interpretation were then provided to the professors to confirm their accuracy. To ensure stability of the data, the interviews were conducted in a suitable atmosphere and in compliance with the interview conditions and isolated from bias and personal opinion.

Results: A total of 67 concepts were extracted that were consequently categorized into five main themes: 1. Objectives and Curriculum; 2. Physical Space; 3. Backgrounds and Perspectives; 4. Laws and regulations; and, 5. Relationships. A model for studying students’ experiences of the hidden curriculum and medical ethics was presented.

Conclusion: Since medical professors and senior students are dealing with patient health, it is essential to acknowledge the concept of medical ethics as a “hidden” curriculum alongside scientific and professional issues in designing medical curriculum.

Introduction

Universities of medical sciences are one of the most important centers and institutions that train young and specialized people at the level of higher education and has an important mission. Moreover, the relationship between a university of medical sciences and the health of the individuals and society, as well as the entire service and treatment system, are the core of medical higher education.¹ Due to the importance of medical education, its curriculum should be properly designed and implemented, and in addition to the formal and designated curriculum for students, the “hidden” curriculum, or that part of the curriculum that consists of unspoken or implicit academic, social, and cultural messages, should also be addressed. This hidden curriculum is one of the most

important tools and elements to achieve the general goals and missions of medical education. Along with formal education, the hidden curriculum conveys values, ethical and professional principles to medical students, and make medical ethics important for them.² Because the hidden curriculum is an unpredictable dimension of learning, if this dimension is not considered in educational design, it neglects an important part of the factors that have a great impact on learning. Usually in educational design, obvious factors are considered and hidden factors are omitted. Therefore, it is helpful to identify factors related to the hidden curriculum and attempt to control them to some extent in designing and implementation.³

Medical ethics is the observance of principles and values in medical decisions that should be involved in

*Corresponding author: Eskandar Fathi Azar, Email: e-fathiazar@tabrizu.ac.ir

© 2021 The Author(s). This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, as long as the original authors and source are cited. No permission is required from the authors or the publishers.

any decision related to the health of individuals or society. The subject of ethics is an important issue that the hidden curriculum can affect in the medical system and is a means to guiding medical students towards becoming more ideal and professional.⁴ The role of the hidden curriculum is not only shaping what doctors have learned but also changing a physician's behavior and ethics and ways in which a physician can succeed in the healthcare system. Physicians confront new experiences in clinical skills that can create a gap between reality and practice.⁵ The hidden curriculum, which has been considered important during the study period along with formal education and has been able to influence students' attitudes and behaviors, may help the physician reduce the gap between ideal and existing performance.⁶ The role of the hidden curriculum, meanwhile, is not only to shape what physicians have learned, but also to conceptually change the idea and thought of how a physician succeeds in the health care system and, of course, the formation of medical ethics.⁷

Rogers et al,⁸ conducted a study, "Using a hidden curriculum in professional training," in the surgical department at the University of Southern Illinois among 134 medical students of a two-year surgical training course. They examined medical students' views on medical ethics. The results showed the ethics of medical students are influenced by the hidden curriculum and that the formal and hidden curricula in each permanent medical training course can analyze and support the connections between physician and patient, as well as interactions between the physician and the health care system. Macleod⁹ conducted research entitled "Hidden curriculum, ethics and profession", which sought to improve the clinical learning environment of students in becoming physicians. The current training course for medical students is mostly related to behaviors and characteristics that are contrary to the field of medical and professional ethics. These negative points are in direct conflict with the lesson, patient expectations, the community, and medical educators. These issues lie in the organizational structure and culture, and that part of the curriculum hidden in medical faculties and hospitals.

Although the connection between the hidden curriculum and medical ethics is theoretically clear, experimental research on such a relationship has not been directly conducted.¹⁰ As a result, due to a lack of comprehensive research in this field, it is helpful to create a context for more comprehensive and numerous studies in this field. Therefore, the current study aims to provide an empirical study model of the hidden curriculum and medical ethics.

Material and Methods

The study population consisted of all professors and fourth-year medical students at the University of Tabriz in the academic year 2019-2020. The criterion for selecting these students was that before entering clinical internships

and only with theoretical training, they have no experience in direct observations in medical centers and thus cannot express what they have not experienced. Therefore, many tried to make the students even higher than the fourth and fifth year. The samples were selected due to their more detailed study and also multiplicity of information using a purposeful sampling approach and the snowball method. Those who were selected as interviewers introduced other people who had comprehensive information about the subject. The number of professors was 11 and the number of students was 25 for a total of 36 people who entered the study. The interview information from 22 students and 8 professors was duplicated and the data became saturated at this stage, but the interview process continued to 36 interviewees to assure confidence. Interviews with professors and students were conducted in the form of in-depth semi-structured interviews individually by the researcher to further explore their views on the subject of research to fulfill all the factors and conditions of a good interview and to make the most of the experiences of professors and students. This method of data collection provided the opportunity to review and discover the diverse experiences of professors and students in the field under study. Then, the content of the interview data was analyzed based on the research question. The interview process took 30 to 60 minutes. With the permission of the participants and with an assurance of confidentiality, in order to increase the quality and accuracy of the interview data, the interview was recorded using digital tools. During the interview, certain codes were used instead of names to assure confidentiality in the research. The accuracy and quality of the current study was internal, which indicates the degree of data stability. Data analysis was performed by the two authors of the article and then the data and their interpretation were provided to interview participants to confirm the quality and accuracy and to inform interpretation. To increase data stability, interviews were conducted in a suitable atmosphere and observing the interview conditions with the appropriate instructions, away from bias and personal opinion, and using a tape recorder. Simultaneously with data collection, analysis began with the twin objectives of obtaining feedback for subsequent interviews and ensuring data saturation. Data analysis was performed according to Smith's proposed method¹¹ for the qualitative part. Smith proposed three steps for analyzing data in the phenomenological method: a. Data production; b. Data analysis (this step includes sub-steps: 1. Initial confrontation; reading and re-reading an item, 2. Identifying and labeling categories, 3. Listing and clustering categories, 4. Creating a summary table); and c. Combining items.¹² To analyze the collected data, interviews were transcribed word for word by the interviewer after each interview to form the analysis unit. After determining important phrases and words, these were identified as codes, and similar codes were then merged and initial classification was performed.

From the very first interviews, codes and subclasses were identified, and the data degradation process continued in all codes until classes emerged. To validate the research, people with suitable knowledge and information were included in the study. Therefore, the minimum criteria for entering the interview were experienced people with suitable and fruitful experience. To achieve transferability, the researcher must present his data set and textual descriptions completely and richly so they can be adapted to previous theoretical literature and receive theoretical confirmation of the findings. Simultaneously, other researchers should be able to judge the transferability of such findings to other environments. The information obtained by seven faculty members who are specialists in the field of qualitative research, three of whom are professors at the Tabriz Medical School, was placed as Delphi and group techniques, and in different stages of the Smith method, used as a group, and the information then reviewed and approved. In addition to describing the study area, the necessary explanations about the participants and their direct quotes were also provided. To determine reliability, two people familiar with the qualitative research method coded the interviews separately to examine the agreement between their opinions. Extreme care was taken in collecting, implementing, and recording data and allocating sufficient time to collect data. The data, interpretations, and findings of this study were verified several times through careful review and revision; this process was followed through review of previous studies, so other researchers can understand the experience of experts in this field and follow the data and achieve similar results. Descriptive, analytical, interpretive, and inferential methods were used to analyze the data obtained from documentary studies. In this research, both inductive and deductive methods were used; inductive and partial were used for interviews and obtaining information and experiences. At the same time, by analogy, the hidden curriculum models and questionnaires were examined and the main dimensions and components were identified and separated, and then the secondary themes were placed in a framework and were adapted to the models inductively and deductively.

Results

After studying the content of the interviews and the mentioned topics, creating the initial classifications and clustering according to Smith method, the subcategories and main themes are identified in Table 1.

Table 1 illustrates the themes mentioned by the interviewees regarding the hidden curriculum and medical ethics, in the form of 67 concepts. According to the classifications made by the researcher, they are categorized in terms of five dimensions: 1. Objectives and Curriculum with 1 Main Theme and 3 Subcategories, 2. Physical Space with 1 Main Theme and 2 Subcategories, 3. Backgrounds and Perspectives with 1 Main Theme and 3

Subcategories, 4. Laws and regulations 1 Main Theme and 4 Subcategories, 5. Relationships with 1 Main Theme and 3 Subcategories.

Objectives and Curriculum

Non-specialized / non-applied education and teaching: One of the most important factors in objectives and curriculum in medicine is “applied and specialized teaching methods”. Most interviewees mentioned many problems of this type as the main cases in the applied teaching method taking into consideration the theoretical teaching of the professor and the lack of knowledge transfer to the students during the patient’s visit.

Weakness in objective setting and curriculum development: One of the most important factors in the hidden curriculum objectives in medicine is “curriculum objectives”. Most interviewees identified attention to medical science education without regard to human and moral issues, lack of attention to the patient and mere attention to the disease itself, and lack of education to students about altruism with the patient as the main issues in the hidden curriculum goals.

Physical space

Inadequate physical space: Inadequate educational design and architecture, insufficient educational space, low attention to the welfare and safety of students, were among the items expressed by the interviewees as important, noted as influential yet forgotten factors concerning the geophysics of the faculty and the hospital.

Backgrounds and perspectives

Bad personal/family/environmental background: It seems that the adverse effect of the student’s family / social environment and the adverse effect of personal factors and the student’s school background are among the most important factors in determining students’ views on medicine.

Laws and regulations

Ignoring patient rights: One of the most important factors in paying attention to ethics in the hidden curriculum in medical disciplines is “failure to maintain professional ethics towards the patient.” Most of the interviewees identified lack of respect for privacy and the rights of the patient, lack of permission from the patient for examination, lack of confidentiality concerning the patient, examination of the patient in public, and non-observance of patient privacy in public as primary examples of non-compliance with professional ethics. Patients themselves were described as “hidden” in the curriculum.

Relationships

Immoral and inappropriate behavior: One of the most important factors of relationships in the hidden curriculum in medicine is “professors’ relations with

Table 1. Objectives and curriculum

Main Themes	Subcategories	Concepts
Difficulty in Objectives / curriculum and education	Weakness in objective setting and curriculum development	Lack of attention to humanities issues
		Insufficient attention to daily issues of medical ethics
		Lack of coherence and presentation of teaching resources (medical ethics)
		Presenting inappropriate and irrelevant teaching resources (medical ethics)
		Ethical challenges insignificance (in medical affairs)
		Inattention toward humanitarian issues
		Inattention toward learning medical ethics and education
	Non-specialized / non-applied education and teaching	Encouraging students to study specialized education
		Non-specialist professors in the course (medical ethics)
		Incompatibility between the words and actions of professors (medical ethics)
		Incompatibility between the words and the content of the books
		Lack of practical/clinical education system for medical ethics
		Lack of practical / clinical education in examination and diagnosis processes
		Professor-centered educational system
Inadequacy of educational content	Inadequate education on post- discharge care points	
	Inadequate education on how to communicate with professors and others	
	Failure to provide daily medical decisions to the student	
	Lack of education on how to communicate with the patient	
	Lack of education on writing the prescription	
Physical space	Subcategories	Concepts
Main Themes	Inadequate physical space	Inadequate design and architecture of educational space
Inadequate physical / social atmosphere		Insufficient educational space
		Ignoring student safety
	Ignoring student welfare	
	Prosaic social and psychological atmosphere	Lack of cultural and recreational space
		Lack of proper mental and emotional atmosphere
	Subcategories	Concepts
Backgrounds and perspectives	Bad personal / family / environmental background	Undesirable effect of family / social environment of student
Main Themes		Undesirable effect of personal factors and school background of student
Undesirable effect of backgrounds and perspectives of students	Job / financial perspective	Financial motive dominance of medical students
		Job interest and motive dominance of medical students
	Following bad patterns and indifference to medical ethics	The role of physicians' bad patterns in undermining student interest and attitude
		The effect of imitation of society custom on undermining student interest and attitude
		Lack of consideration for the patient's financial and social conditions and the support of physicians
	Subcategories	Concepts
	Lack of proper system of encouragement and punishment	Lack of supervision on attendance monitoring system
Laws and regulations		Lack of supervision on quantity and quality of visit and treatment process
Main Themes		Ambiguity in medical errors
Lack of supervision on law enforcement and respect for rights		Lack of meritocracy selection system
	Weak organizational structure	Student ignorance of assigned responsibilities and duties

	Ambiguity in the role and inability of the student to treat the patient
	Lack of supervision on staff relations and organizational behavior
	Unhealthy (organizational) management system in the university and hospital
Ignoring patient rights	Lack of patient trust and satisfaction
	Ignoring health and safety issues in the treatment process
	Insufficient information about the possible risks of the disease
	Lack of awareness of the disease, treatment process and self-care
	Ignoring the patient's request / question and need
	Lack of attention to the psychological condition and interaction level of patient
	Ignoring patient history and information
	Ignoring privacy and confidentiality of patient information
	Lack of a psychiatrist for incurable patients
	Patients' ignorance of their rights
Weak evaluation system	Lack of evaluation system to observe ethical issues
	Biased assessment system in entrance and class tests
Subcategories	Concepts
Immoral and inappropriate behavior	Humiliating behavior of staff and professors
	Lack of respect for the patient's personality
	Discriminatory behavior of staff and professors
	Lack of kindness and intimate relationship
	Machine-like behavior (lack of empathy) with the patient
	Lack of emotional communication between the staff and the patient
	Lack of mutual respect and cooperation between staff
	Unfamiliarity of student with how to interact with the patient
Negative attitude towards medicine and lack of healthy interaction and participation	Lack of participation / cooperation and unhealthy competition among students
	Lack of social interaction and healthy professional relationships between students
	Lack of characterization of physicians to themselves
	Society's pessimism towards doctors
Lack of sense of responsibility towards duties and others	Lack of commitment to respect professional ethics
	Lack of the sense of responsibility in the diagnosis and treatment process
	Lack of the sense of responsibility of students in the assigned affairs

students”. Most of the interviewees noted humiliating and discriminatory attitudes towards the students, pride of professors, and lack of proper attention and training to the general practitioner as the principal issues in the relationship between professors and students in the hidden curriculum.

Of course, one of the most important factors in the hidden curriculum in medicine is “professors’ relationships with medical staff, students and patients.” Most interviewees noted poor behavior of professors with nurses led to bad behavior of nurses towards students, along with failure to introduce professors and physicians to the patient, lack of attention to gaining the patient’s trust by the physician, and lack of responsiveness to the

patient and his companion. Students and patients were together were described as “hidden” in the curriculum.

And finally, one of the factors of relationships in the hidden curriculum in medicine is “treatment staff relations with patients”. Most of the interviewees mentioned knowing the person from his / her illness and not from his / her identity and a poor tone or harsh tone of treatment staff towards the patient as the most important issues in the relationship between the treatment staff and patients in the hidden curriculum.

Discussion

The current article aims to identify the dimensions of the hidden curriculum in medical trends by emphasizing

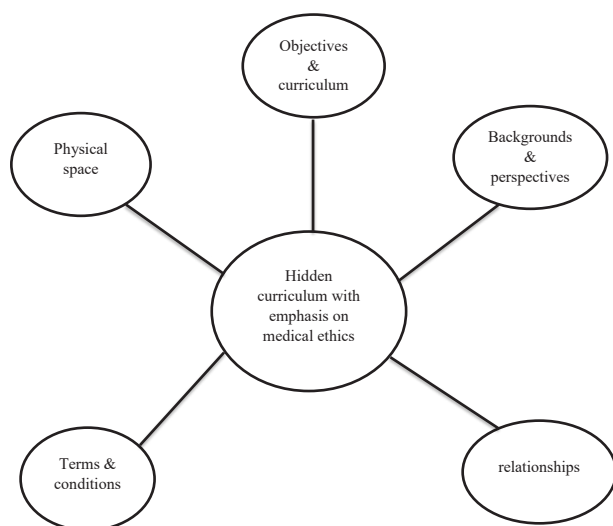


Figure 1. Dimensions of Hidden Medical Curriculum

medical ethics and presenting an experimental study model of the hidden curriculum and medical ethics at the Tabriz University of Medical Sciences. Our findings showed that the main dimensions of the hidden curriculum with an emphasis on medical ethics resulted in identification of five factors: objectives and curriculum, physical space, backgrounds and perspectives, laws and regulations, and relationships. Given that physicians have the most sensitive job in human society, medical ethics are of paramount importance. Accordingly, paying attention to the ethical characteristics of this job plays an important role in the process of treating patients. However, in university courses and formal medical education curricula, the emphasis is on scientific and specialized courses about disease along with the process of treatment and control of the disease. Attention to the patient is often not taught in medical texts, and appropriate behaviors of physicians and medical staff are generally omitted. Therefore, the hidden curriculum plays a vital role in resolving these shortcomings in formal medical education curricula. Paying attention to hidden goals and the hidden curriculum can be a crucial factor in promoting medical ethics among today's students and tomorrow's doctors. In terms of objectives and curriculum, the findings of the present study are consistent with other results.^{2,5,13-15} In this regard,^{2,5,13-15} it has been shown that it is very important to pay attention to ethical issues and patient communication education, including goals and curricula in medical disciplines, but the level of compliance is not optimal. Therefore, to improve students' medical ethics, it is necessary to include certain items in the curriculum. In addition, due to teachers' experiences of the hidden curriculum, more attention will be needed from professors, educators, and educational administrators. In addition, educational and workshop programs are needed to be able to explain the important role of professors in shaping student behavior. In the field of physical space, the results of this research are

in line with studies^{16,17,18} that show that compliance with the necessary standards in the design and construction of physical space and medical schools increases students' morale and happiness, which can directly teach, motivate and influence them. Of course, no matter how ideal a college's physical space is, if it lacks suitable professors and staff, this also causes frustration and weakens student morale and interest. The impact of environmental and family conditions is so important that it can be seen in this study. The results of other studies^{19,20,21} are consistent with this study and show the most important factors in the formation of ethics, attitude and behavior of medical students. Consistent with other results,^{19,20,21} in this study, teaching students how to deal with patients is important in addition to specialized knowledge and skills in the field of science. Thus ideal medical education seeks to develop and reinforce values, attitudes, ethical norms, social skills, and other characteristics that shape a physician's behavior or professional skills. According to medical education experts, the hidden curriculum is the strongest way to transmit medical values. As a result, paying attention to ethics may be as effective as providing specialized training to students in treating patients. In addition, other research^{22,23} has shown that the following conditions can lead to students' self-esteem and appropriate education: two-way relationships between faculty and students, medical staff and patients, medical staff with students and patients, students and patients; ability to communicate appropriately with medical ethics; no discrimination in teacher's behavior towards students; no contempt on the teacher's part towards students among patients; and respect for students and medical staff by professors is consistent with the findings. The results of other studies^{24,25} have shown that students' communication skills are directly related to patient-centered curriculum, and communication skills play an important role in learning medical ethics and professional behavior. Therefore, it is necessary for students to acquire these skills in patient-centered care, to respect cultural diversity, and to take on responsibilities needed to serve the patient. In addition, medical staff can assist in the process of patient recovery without any bias towards students while providing services to patients and cooperating with students in this field.

Conclusion

According to the findings, medical ethics can be viewed based on the role of goals and curriculum, physical space, attention to contexts and perspectives, rules and regulations, and relationships. In this study, students' experiences of medicine and medical ethics were studied and categorized and a model was developed based on the identified dimensions of the medical curriculum. Future researchers in this field can use the model of this study to study the involvement of the hidden medical ethics curriculum along with the hidden items of the medical ethics curriculum. The designers of medical

ethics questionnaires and the hidden program of medical ethics can design structures and dimensions of their questionnaires from the dimensions and themes identified in this study. Extractive dimensions are neutrally adapted and studied by studying and applying the hidden curriculum model.²⁶ For practicing medicine in medical centers, it is suggested that university textbook planners in the field of medicine should pay more attention to effective aspects of medical ethics to increase its importance and make it clearer for students to improve the course of patients' disease. In addition, due to major experiences in such ethical cases in dealing with patients, in addition to specialized and scientific training, professors should include ethical and specialized cases in the content of their curriculum. Another suggestion is that medical center officials and university officials should monitor the behavior of professors and physicians towards medical staff, students and patients to establish good relations between professors, medical staff and students.

Ethical Approval

All participants of the study were requested to fill out a consent form and the researchers assured them that the research results would be confidential. This research is taken from the student of Islamic Azad University, Tabriz Branch, and has received ethics approval with the number IR.IAU.TABRIZ.REC.1398.094.

Acknowledgement

I would like to thank all those who played an effective role in the research process, Dr. Mehran Seif Farshad, Dr. Dorna Omranifar, Dr. Rana Kayhanmanesh, and Dr. Farzin Soleimanzadeh Ardabili.

Conflict of interest

According to the author, this article has no conflict of interest, and is not funded by any department or organization.

Author Contributions

A Ph.D. student in Curriculum Planning, along with 2 supervisors and a consultant, participated in designing and conducting this research.

References

1. Alsubaie MA. Hidden curriculum as one of current issue of curriculum. *J Educ Pract*. 2015;6(33):125-8.
2. Mosalanejad L, Morshed Behbahani B. The role of teachers in shaping hidden curriculum: a qualitative study. *Stride Dev Med Educ*. 2013;10(2):130-41. [Persian].
3. Vaz M. The ethics of teaching in medicine: a personal view. *Indian J Med Ethics*. 2019;4(3):221-6. doi: 10.20529/ijme.2019.037.
4. Asemani O, Iman MT, Moattari M, Tabei SZ, Sharif F, Khayyer M. An exploratory study on the elements that might affect medical students' and residents' responsibility during clinical training. *J Med Ethics Hist Med*. 2014;7:8.
5. Cheng LF, Yang HC. Learning about gender on campus: an analysis of the hidden curriculum for medical students. *Med Educ*. 2015;49(3):321-31. doi: 10.1111/medu.12628.
6. Tabeie SZ, Pasalar M, Kiyani M. Medical ethics in the summary of wisdom. *Journal of Medical Ethics and History*. 2011;4(4):23-30. [Persian].
7. Czarny MJ, Faden RR, Sugarman J. Bioethics and professionalism in popular television medical dramas. *J Med Ethics*. 2010;36(4):203-6. doi: 10.1136/jme.2009.033621.
8. Rogers DA, Boehler ML, Roberts NK, Johnson V. Using the hidden curriculum to teach professionalism during the surgery clerkship. *J Surg Educ*. 2012;69(3):423-7. doi: 10.1016/j.jsurg.2011.09.008.
9. MacLeod A. The hidden curriculum: is it time to reconsider the concept? *Med Teach*. 2014;36(6):539-40. doi: 10.3109/0142159x.2014.907876.
10. Arasteh HR, Motalebi Fard AR. Analytical and theoretical study of ethical principles and components of teaching in higher education with emphasis on the view of Murray et al. *Proceedings of the First International Conference on Management, Foresight, Entrepreneurship and Industry in Higher Education*; 2011; Sanandaj, Sanandaj University.
11. Haj Bagheri A, Parvizi M, Salsali M. *Qualitative Research Methods*. Tehran: Bashari Publications; 2010. [Persian].
12. Sobhaninejad M, Hosseini Yazdi AS. Review of correlation relationships and explanatory contribution of components of hidden curriculum with dimensions of research comprehensive approach of educational sciences students of Tehran public universities. *Curriculum Planning Knowledge & Research in Educational Sciences*. 2014;11(14):116-34. [Persian].
13. Mashayekhi J. (2019). Investigating the violations and problems of medical ethics in the country. 7th Annual Iranian Medical Ethics Congress, The Evolution of Medical Ethics in the Second Step of the Revolution. Available from: <https://civilica.com/doc/999707>. Accessed 20 April 2021.
14. Safari Y, Khatony A, Khodamoradi E, Rezaei M. The role of hidden curriculum in the formation of professional ethics in Iranian medical students: a qualitative study. *J Educ Health Promot*. 2020;9(1):180-. doi: 10.4103/jehp.jehp_172_20.
15. Yamani N, Liaghatdar MJ, Changiz T, Adibi P. How do medical students learn professionalism during clinical education? a qualitative study of faculty members' and interns' experiences. *Iran J Med Educ*. 2010;9(4):382-95. [Persian].
16. Nalini A. The significance of the hidden curriculum in medical ethics: literature review with focus on students' experiences. *International Journal of User-Driven Healthcare*. 2013;3(4):1-12. doi: 10.4018/ijudh.2013100101.
17. Rogers DA, Boehler ML, Roberts NK, Johnson V. Using the hidden curriculum to teach professionalism during the surgery clerkship. *J Surg Educ*. 2012;69(3):423-7. doi: 10.1016/j.jsurg.2011.09.008.
18. Azmand S, Iman MT, Ebrahimi S, Asmani O. Patients and their effects on students' moral behaviors. Fourth Annual Iranian Medical Ethics Congress and Fourth Annual Nursing Ethics Congress; 26-29, 2015; Tehran. p. 50.
19. Farahbakhsh F, Nuhi E, Zolali F. The importance of ethics in education and the level of complying with it from the perspective of nursing students of Kerman University of Medical Sciences. *Education and Ethics in Nursing*. 2016;5(1):1-7. [Persian].
20. Michalec B, Hafferty FW. Stunting professionalism: the potency and durability of the hidden curriculum within medical education. *Soc Theory Health*. 2013;11(4):388-406.

- doi: 10.1057/sth.2013.6.
21. LeBlanc C. Exploring the” Hidden Curriculum” in Emergency Medicine Training Programs [dissertation]. Mount Saint Vincent University; 2007.
 22. Soleymani Lehmann L, Sulmasy LS, Desai S. Hidden curricula, ethics, and professionalism: optimizing clinical learning environments in becoming and being a physician: a position paper of the American College of Physicians. *Ann Intern Med.* 2018;168(7):506-8. doi: 10.7326/m17-2058.
 23. Khaghanizade M, Maleki H, Abbasi M, Abbaspour A. Essence of designing a model for medical ethics curriculum with Islamic approach. *Education Strategies in Medical Sciences.* 2010;3(3):93-9. [Persian].
 24. Andarvazh MR. Development a Diagnosis Framework of Hidden Curriculum in Clinical Education. Tehran: Shahid Beheshti University of Medical Sciences; 2018. [Persian].
 25. Safari Y, Yoosefpour N. Data for professional socialization and professional commitment of nursing students - a case study: Kermanshah University of Medical Sciences, Iran. *Data Brief.* 2018;21:2224-9. doi: 10.1016/j.dib.2018.11.088.
 26. Tahmasebzadeh Sheikhlar D, Mahmoudi F, Farajpoor Bonab F. The Role of Hidden Curriculum Components in the Professional Adaptation of Tabriz University Students. *Education Strategies in Medical Sciences.* 2018;11(4):78-87. doi: 10.29252/edcbmj.11.04.10.