

Medical Students’ Views on Medical Ethics Education-A Mixed Method Study

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ABSTRACT

Background: Medical Ethics (ME) is considered an integral component of medical education around the world. However, limited training is being offered to medical students in Pakistan.
Objectives: This study was designed to evaluate medical students' perspectives regarding medical ethics and to explore their experiences about medical ethics as a subject at a private medical college in Lahore, where Medical Ethics was formally introduced as part of the undergraduate curriculum in 2017.
Methods: This mixed-method study included medical students from all five years of medical college. Quantitative component included a survey questionnaire, and the sample size was 410. Convenient sampling technique was used. Qualitative component included focus group discussions. The students who have attended medical ethics lectures were included in the study.
Results: The response rate was 82.72%. There were more females in gender distribution; 76.1% were female and 23.9% were male. Most respondents (74.9%) found medical ethics classes interesting and 72% thought that lecture sessions were important in medical ethics.
Conclusions: Medical students find medical ethics as an important component of medical education. Although it is hard to correlate ethics education with their clinical experience as medical students, they believe that medical ethics education can be useful. Social and cultural issues inform clinical decision-making in Pakistan and hence these discussions should be incorporated into medical education. Further studies must be conducted on the actions that need to be taken to help students internalize the ethical issues.
Key Words: Medical Ethics, Bioethics, Undergraduate student, Ethics education

Doi: <https://doi.org/10.53685/jshmdc.v3i2.129>

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Received 31.10.2022, Revised 26.11.2022,
Accepted 01.12.2022

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INTRODUCTION

Ethics is a science of morals and encompasses the rules of conduct governing human interactions. Ethics has an important place in medicine and has been a prominent topic of discussion for a long time. The role of Medical Ethics (ME) comes into play in a

situation where there are two or more possible and justifiable paths to take in difficult situations.¹ It includes the methods, procedures, and the perspectives which are used for deciding how to act after analyzing complex problems and issues in medicine.² “The Hippocratic Oath”, penned down in the 4th Century BC, laid the foundation of ME. Since this oath is 2400 years old, World Medical Association adopted the Geneva Convention, also known as “The Physician Pledge” in 1948, which was revised in 2017.³

The importance of ME cannot be undermined. Medical Ethics Education (MEE) is now vital as we are progressing in a world of complex ethical situations and dilemmas faced by healthcare professionals daily. The application of the principles of the moral philosophy, where ME helps in analyzing and solving ethical issues arising in medicine and health care provision.⁴ According to the Federation of State Medical Boards (FSMB), disciplinary action is taken against 0.5% of the physicians each year, of which 0.1% are subjected to serious action that involves license revocation, suspension, or surrender.⁵ Extensive data regarding the disciplinary actions taken against physicians is not available in Pakistan. However, a cross-country survey in Pakistan showed that the frequency of informal payments to public health care providers (which should be free of cost) amongst the users of services is 96% in Pakistan most of these are demands from the providers at the health care facilities which highlights the lack of awareness about ME and unethical practices in healthcare professionals in Pakistan.⁶

Most universities in the developed world teach ME as part of their curriculum, but in

Pakistan, this subject is not given the right amount of importance. Despite numerous efforts by the Pakistan Medical Council (PMC), ME is not taught with due attention and is not a mandatory part of the undergraduate medical curriculum. Previous studies support the opinion that ME should be included as a compulsory part of the undergraduate medical curriculum. There is insufficient application of ME on surgical floors due to a lack of knowledge and experience.⁷ Keeping up with the need for ethics education for undergraduate medical students, Shalamar Medical and Dental College, Lahore (SMDC) established a Bioethics Department in 2017. ME is being taught to medical students as a longitudinal curriculum throughout medical school.

This study was conducted to explore the perceptions and experiences of medical students about MEE. Their opinions will be valuable in designing courses for future students and starting the department of ME in other medical colleges of Pakistan.

METHODS

The mixed-method study was designed to gain medical students’ perspectives and explore their experiences with ME. This approach allows for detailed contextualized data from the qualitative study and generalizable insight from the quantitative study, therefore the mixed-method approach was adopted to better get an in-depth understanding of the medical ethics. The quantitative component of it is a cross-sectional study, while the qualitative component of it is a Phenomenological study. The phenomenological approach is ideal to explore the experiences of the research participants. In the quantitative component, a self-administered survey questionnaire was used with the permission

of the author.⁸ The study included all students of SMDC, who have attended ME lectures and excluded students who have never attended a ME lecture. The students who did not attend any classes had no experience to share with the researchers, therefore they were excluded. Ethical approval was approved by institutional review board (SMDC/IRB/08-07/182). The data collection for the study started in August 2019 and finished in March 2020.

The questionnaire was filled out by undergraduate students of all five years at SMDC. SMDC has 700 undergraduate students. All students voluntarily agreed to participate in the study by agreeing to a written informed consent, with a 410-sample size, and confidence interval of 99%, while keeping the margin of error about 4%. A qualitative study was conducted for the detailed experiences, which included focus group interviews with medical students. A total of three focus groups of seven medical students were carried out by the principal investigator and co-principal investigator. The selection of students for one group is based on their availability. The students were asked about their experiences and their opinions and suggestions for ME classes at SMDC. The focus group interviews were audio recorded and field notes were also taken by investigators. The sample size for the qualitative component was 21 which included medical students from all five years of the medical college

Statistical Analysis

The quantitative data were analyzed using SPSS version 23, while the qualitative data was analyzed manually. For the qualitative component, the investigators transcribed the recordings and field notes. The investigators reviewed the transcribed

data to generate themes and analyze the results.

RESULTS

A total of 410 medical students from Shalamar Medical and Dental College participated in this study. In the quantitative component, the demographic factors of medical students were also noted. Table 1 reports the demographic characteristics of the participants. The responses of the medical students regarding knowledge and attitude towards MEE have been shown in Table 2. It also shows how different aspects of MEE have a significant association with the students' year of study.

In the qualitative part of the study, views from medical students on MEE were also recorded. The basic themes of this interview include the experience of ME lectures, the practical use of MEE, and their experiences of facing ethical dilemmas, and finally the suggestions of students based on their experiences

Table 1: Demographic Characteristics of the Medical Students

Characteristics	n (%)
Gender	
Male	98(23.9)
Female	312(76.1)
Religion	
Muslim	403(98.2)
Christian	4(1.0)
Hindu	1(0.2)
Atheist	2(0.5)
Others	--
Home Town	
Lahore	274(66.8)
Other	136(33.2)
Year of Study	
First year	32(7.8)
Second year	131(32)
Third year	122(29.7)
Fourth year	31(7.5)
Fifth year	94(23)

Table 2: Viewpoints of Medical Students Regarding Different Aspects of medical Ethics				
Questions asked from the students		n (%)	mean±SD	p-value
Medical Ethics classes are interesting	Totally agree	182(44.4)	1.87±0.940	0.000*
	Agree	125(30.5)		
	Neutral	72(17.6)		
	Disagree	28(6.8)		
Faculty should arrange more classes in Medical Ethics	Totally agree	115(28.0)	2.23±1.003	0.001*
	Agree	133(32.4)		
	Neutral	104(25.4)		
	Disagree	52(12.7)		
Lecture sessions are necessary in Medical Ethics	Totally agree	142(34.6)	2.00±0.928	0.124
	Agree	153(37.3)		
	Neutral	80(19.5)		
	Disagree	32(7.8)		
Learn Medical Ethics by observing hospital staff and residents	Totally agree	122(29.8)	2.18±1.013	0.095
	Agree	149(36.3)		
	Neutral	80(19.5)		
	Disagree	57(13.9)		
Physicians can improve patient care with knowledge of Medical Ethics	Totally agree	208(50.7)	1.69±0.824	0.354
	Agree	132(32.2)		
	Neutral	56(13.7)		
	Disagree	13(3.2)		
After each lecture, my knowledge in Medical Ethics has improved	Totally agree	122(29.8)	2.10±0.935	0.160
	Agree	162(39.5)		
	Neutral	85(20.7)		
	Disagree	38(9.3)		
Solving ethical dilemma requires organized knowledge not just common senses	Totally agree	156(38.0)	1.93±0.899	0.000*
	Agree	149(36.3)		
	Neutral	80(19.5)		
	Disagree	24(5.9)		
Content from Medical Ethics is useful in national and international exams	Totally agree	115(28.0)	2.18±0.938	0.084
	Agree	139(33.9)		
	Neutral	121(29.5)		
	Disagree	34(8.3)		
Ethical issues such as abortion & End of Life conflicts with religious beliefs	Totally agree	212(51.7)	1.69±0.833	0.062
	Agree	120(29.3)		
	Neutral	65(15.9)		
	Disagree	11(2.7)		
Universal ethical principles applicable in Pakistan	Totally agree	170(41.5)	1.77±0.774	0.006*
	Agree	167(40.7)		
	Neutral	62(15.1)		
	Disagree	8(2.0)		
Medical Ethics education enables me to solve ethical dilemmas in real life	Totally agree	139(33.9)	1.97±0.877	0.021*
	Agree	156(38.0)		
	Neutral	86(21.0)		
	Disagree	21(5.1)		
Medical Ethics education should be taught in all clinical rotations	Totally agree	174(42.4)	1.79±0.833	0.014*
	Agree	149(36.3)		
	Neutral	59(14.4)		
	Disagree	15(3.7)		
Medical Ethics education can make a student	Totally agree	189(46.1)	1.80±0.894	0.001*

into a good physician	Agree	124(30.2)		
	Neutral	67(16.3)		
	Disagree	20(4.9)		
Medical Ethics education can bring medical student success in learning & future career	Totally agree	169(41.2)	1.86±0.869	0.001*
	Agree	140(34.1)		
	Neutral	80(19.5)		
Medical Ethics education can prevent future malpractices claims	Disagree	16(3.9)		
	Totally agree	184(44.9)	1.82±0.881	0.007*
	Agree	126(30.7)		
Medical Ethics education cannot be taught because it relies on individual behavior developed since childhood	Neutral	78(19.0)		
	Disagree	16(3.9)		
	Totally agree	89(21.7)	2.44±1.053	0.002*
Medical Ethics education has no application in residency training	Agree	130(31.7)		
	Neutral	102(24.9)		
	Disagree	81(19.8)		
Malpractice claims result from medical negligence	Totally agree	65(15.9)	2.67±1.029	0.022
	Agree	108(26.3)		
	Neutral	128(31.2)		
Medical knowledge not ethics is the only essential thing for patient care	Disagree	104(25.4)		
	Totally agree	82(20.0)	2.57±1.065	0.007*
	Agree	109(26.6)		
	Neutral	117(28.5)		
	Disagree	98(23.9)		
	Totally agree	72(17.6)	2.72±1.091	0.000*
	Agree	96(23.4)		
	Neutral	109(26.6)		
	Disagree	128(31.2)		

Table 3: Views of Medical Students on Medical Ethics Education

Themes	Experience of the Bioethics lectures	Practical use of Bioethics lectures	Experience sharing by the students	Suggestions by the students
	“Lectures are quite informative in nature and sometimes the lectures change the way, we look at things; Lectures help us mark the boundaries.”	“To some extent it has helped us; we don't have independent interaction with patients but in supervised situations and there it has helped us.” (We do not break bad news)	A participant shared her experience with an orthopedic patient who had bad experiences at different hospitals and was dissatisfied with Drs. He was seeking medical advice from a medical student which she was not able to answer at that moment despite being a good medical student and she just reassured the patient that the doctor will soon see him "I don't know if this was close, but this is it experience sharing"	“Teachers cannot take us to the hospital and present us with a dilemma and ask us to solve it in real life.”
	“Lack of variety of topics & low attendance in lectures causes lack of interest” “We lack clinical experience to correlate Bioethics”	“In wards we do not have all the information about the patients and sometimes this leads to miscommunication with the families/patients”	“We feel confused when our seniors do not follow ethics, they were not taught ethics. So, we feel childish right now being in a hospital while caring towards our patients.”	Must be a part of the institutional curriculum and assessment based like USMLE part 1. "Attendance should be mandatory to attend the lectures.

DISCUSSION:

The study has been conducted to capture students' perceptions related to MEE and their experiences of MEE lectures. This will eventually lead to modifications in bioethics curriculum at Shalamar Medical and Dental College. A major issue highlighted in this study was the low attendance of students in ME classes. One of the reasons identified by students was that ME is a non-examining subject. Since it is not required by the university to be taught and examined as a subject in medical school, students tend to pay less attention to these classes as compared to the examining subjects. Since attendance is not mandatory, the students have little interest in attending these classes. The time slot allocated to these classes is also often not ideal as it is either in the late afternoon or near the weekend, so students lose interest. They do not make an effort to attend these classes since attendance is not mandatory. In this study, we also found out that 74.9% of students found ME classes interesting and 72% thought that lecture sessions were important.

In 1999, the World Medical Association's (WMA) 51st General Assembly suggested that ME and human rights should be taught at every medical institute as a compulsory subject and that students should be assessed from time to time in the subject. Teaching ME to the students from the start of their medical education can result in healthcare professionals with better ethics.⁹ In Pakistan; however, it should be made a mandatory subject in the undergraduate medical curriculum by Pakistan Medical Council. Since there is still room to improve the overall health ethics content at every level, public and private.¹⁰

In a study by Acharya RP and Shakya YL¹¹, 91.3% of the medical interns considered ME to be important. In another study by Sunil Kumar Jatana et al.¹² 57.9% of students stated that knowledge and implementation of ME are very important among doctors, while only 2% stated that it is unimportant. In our study, 74.9% students found MEE lectures interesting due to the variety of teaching methodologies used during lectures. The curriculum at SMDC includes teaching methodologies like case based-discussions, short videos, movies (with discussions and reflection by students) and role play, etc. D Souza and Vaswani found out that diversity in teaching methodologies is important in teaching ME to undergraduate students.¹³ We found that 83% of students felt that physicians can improve patient care with knowledge of ME and therefore felt it was important. 80.9% of the respondents also felt that ethical issues like abortion and end of life conflict with religious beliefs while 82.2% still felt that universal ethical principles applied in Pakistan.

An interesting observation was that 53.2% thought that ME could not be taught as it relied on individual behavior developed since childhood, while 19.8% disagreed with this statement. These are important findings as they reflect students' intentions to learn skills that they can incorporate into clinical practices and are patient-centered. Social and culturally relevant cases must be discussed with students so that they can appreciate the practical application of this theoretical knowledge, which seems to be important for them. D Souza and Vaswani found out that many curricula for undergraduate students were locally adapted and included their socio-culturally relevant

case-based discussions.¹³ Students should be provided with training classes, workshops, and seminars to allow them to be more confident to address ethical dilemmas and adopt ethical principles when they enter professional life. Asghari et al. noted that the most common themes in the needs assessment of undergraduate ME curriculum included professionalism and the patient-physician relationship. They found that despite the technological advancement in medical science leading to clinical ethical dilemmas, the most common need was found to be for medical students to learn the art of healing and patient-centered care.¹⁴

To overcome the challenges in ME education, a dedicated effort is required on an individual departmental level to arrange lectures spaced out properly throughout the year so that the students remain interested. A few excerpts from the study are quoted: "ME must be a part of curriculum and assessment based like USMLE 1." "Attendance should be a mandatory criteria for participation in lectures."

Making attendance mandatory is also another way to make sure that students participate and learn from these classes. Making classes more interactive with an emphasis on practical aspects of ethics as well as problem-based learning would make learning more exciting for students. Rabbani MW and colleagues¹⁵ compared the knowledge and awareness of ME in medical graduates of two medical colleges in Pakistan. They observed that the students who were taught ME in medical college were better informed than students who did not get the formal education in undergraduate medical training. Therefore, it is important to inculcate principles of ME into the curriculum from the very beginning

to ensure they are trained as good physicians with sound knowledge of ethical issues and principles.

In another study by Humayun et.al, it is observed that ME is inadequate in hospitals in Lahore. Doctors should be imparted formal training in ME and national legislation on ME is needed. Patients should be made aware of their rights to ME.¹⁶ Our students' opinions show that they believe that such knowledge will impact their skills and will help them be good physicians. This is important because they would like to be taught ME but they also know that only when it is assessed or examined will they be able to give more attention to this subject. It seems that students are overwhelmed with the assessed subjects that are taught in a very old-fashioned way in the form of lectures and even though they enjoy ME lectures/sessions that use various teaching methodologies, they still find it hard to attend ME classes. Here, D Souza and Vaswani's suggestion of including diverse strategies for teaching and assessment should be used and the impact of ME curricula must be thoroughly reviewed, is deemed significant.¹³

A number of studies have been done regarding ME and a few of them have taken students' perspectives on teaching it as a subject.¹⁷ K Mattick et al. 2006 reported that a combination of large and small group teaching, lecture-based learning, problem-based learning (PBL), project work, and presentations were used in twenty medical schools in the UK. According to this study, students found other methods more interesting for learning ethics. It was found that the small group discussion was the most effective way of learning in order to get a response from students' from his/her

arguments and ethical position.¹⁸ This research highlights the importance of teaching ME in an innovative and effective way by assessing the attitudes and exploring the experiences of medical students toward ME as a subject. This study can facilitate universities in designing a curriculum for ME in a way that is effective and beneficial to the students as well as to the health care system and by inculcating the suggestions of students, a more effective curriculum can be designed.

A study from Guatemala showed that teaching strategies including a case-based approach are being successfully used to teach ME. The authors are using students' feedback to improve their practical approach toward ME and to transform educational strategies throughout the country.¹⁹

A similar strategy is being applied at Shalamar Institute of Health Sciences, where post-graduate ME education was introduced. The feedback of participants has helped in improving not only the curriculum for post-graduate students but also for the undergraduate students at SMDC.²⁰

Our limitation is that this study was conducted in one private medical college therefore the results cannot be generalized, and more extensive studies are required for better understanding. Besides student education, it is also necessary that the faculty development programs on MEE for clinical teachers. Additionally, further studies can be conducted on the actions that need to be taken to help students internalize the ethical issues and feel the need of learning more.

CONCLUSION

The department of Bioethics was

established as an institution-wide pillar in November 2017 in a private medical college (SMDC). ME is being taught to students with the aim of preparing them to apply it in clinical settings. This will add up to improve the quality of healthcare in the country. It is recommended that ME should be taught in a practical manner where the theoretical concepts are applied in different scenarios. This is because students stated that observing hospital staff and residents would help them learn more effectively. Further studies are required to explore the need and ways to incorporate ME in medical education are required.

Recommendations

Based on the study results, following are some recommendations for the medical institutions in Pakistan:

Clinical experience to correlate with Bioethics is being neglected in the curriculum. Further studies can be conducted on the actions that need to be taken to help students internalize the ethical issues and feel the need of learning more. ME should be taught in a practical manner where the theoretical concepts are applied in different scenarios. This is because students stated that observing hospital staff and residents would help them learn more effectively.

The course should be taught in all clinical rotations and must be assessed. Lecture participation should be mandatory. The Higher Education Commission (HEC) of Pakistan and the Pakistan Medical Council (PMC- earlier referred to as PMDC, the status of the institution was changed to PMC in 2019) should enforce ME education in medical institutions throughout Pakistan.

Acknowledgements:

We are extremely thankful to the medical students who participated in the study.

Conflict of interest:

We have no conflicts of interest to declare.

Contributors:

SS: Substantial contributions to the conception, data analysis, Final approval of the version to be published

IGR: Manuscript writing, interpretation of data for the work

ON: Literature search, data Collection

SRR: Manuscript writing, formatting, proofreading

SN: Literature search, data collection, data analysis

All authors approved the final version and signed the agreement to be accountable for all aspects of the work.

Grant support and financial disclosure:

Authors declared no specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Data sharing statement:

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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