

PERCEPTIONS AND PRACTICES OF HOUSE OFFICERS TOWARDS ETHICS IN MEDICAL PRACTICE IN SOHAG FACULTY OF MEDICINE

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ABSTRACT

Background: Teaching and practicing medical ethics to medical students is not only a fundamental part of medical education, but it is also crucial to the advancement of the bio-psycho-social medical mode of modern medicine. **Aim of the work:** The present work aimed to assess perception of house officers about medical ethics and measure their knowledge about the subject with comparison between two batches of training doctors from two different educational programs (six plus one and five plus two) in Sohag Faculty of Medicine. **Subjects and Methods:** A comparative cross-sectional study from two different educational programs [five plus two (group 1) and six plus one (group 2)] in Sohag University Hospital. This study was conducted over 3 months duration via an online survey using a Google Form for a questionnaire based on the CEM (Code of Medical Ethics) and modified from tools that have been verified in literature, 376 of participants included. **Results:** The study showed that more than 50% of both groups didn't know the code of medical ethics or what their university's ethical committee was for; a considerable percent of both groups didn't know how to deal with clinical cases in their practical life. **Conclusion:** From the present study it was released that house officers of both groups of study had defective knowledge in medical ethics and clinical dilemmas, indicating insufficient medical curriculum during basic study. **Recommendation:** Modification of the current course of basic medical ethics. The need of more post graduate ethical courses and seminars with discussion of different common practical cases.

Keywords: Perceptions, Ethics, House officers, Questionnaire, Curriculum.

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INTRODUCTION

The word "ethics" is derived from the Greek word, ethos, which means custom or character. Ethics is an understanding of the nature of conflicts arising from moral imperatives and how best we may deal with them (Thatte, 2007). It deals with the choices we make and our actions in relation to those choices. It deals with the choices made by both clinicians and patients and the duties and obligations of clinicians to their patients. Medical ethics also deals with the choices made by society, the distribution of resources, and access to health care, and the dilemmas arising from them (Geneva, 2000).

In the last few decades, medical ethics has become an important aspect of the education of new doctors. A doctor with ethical competencies is more likely to be a trustworthy doctor. In order to further increase patients' trust in new doctors, however, it is important that the ethics

curriculum be homogenous across medical schools (Lakhan et al., 2009).

During clinical years of training, a more effective way to deliver ethics education might be an ethics expert and a clinical expert co-leading ethics clerkship sessions (Favia et al., 2013).

Teaching and practicing medical ethics to medical students is not only a fundamental part of medical education, but it is also crucial to the advancement of the bio-psycho-social medical mode of modern medicine (Ousager and Johannessen 2010).

However, it is discovered that medical students frequently lack ethical awareness during the process of reviewing ethical applications for clinical research projects. The fact that a large portion of medical students' time and energy is dedicated to classroom and laboratory research during their time in medical school limits their involvement in clinical practice, which leads to a lack of

clinical experience, a lack of understanding of medical ethics, and a lack of awareness and protection of the rights and interests of clinical practice participants. During clinical practice, common problems include participants not receiving enough information about their informed consents and confusing informed consent forms for clinical research and therapy for clinical research (*Cornejo and Gómez 2012*), obtaining certain medical data without the subjects' consent, unintentionally revealing subjects' privacy, putting their rights, interests, and possibly health at danger (*Lad and Dahl 2013*).

Increased utilization of technology and paradigm shifts in patient attitudes towards their physicians has made the law a crucial aspect of health care today. Clinical skills and medical ethical knowledge are equally essential to the practice of medicine (*Sudharson et al., 2023*).

Being a health care practitioner is the greatest opportunity, responsibility, and commitment that any human being may have; this also indicates the requirement for technical skills, scientific knowledge, moral profession understanding, and knowledge of relevant laws of career (*Kallianpur et al., 2022*).

Although "Medical Ethics" is listed as a compulsory course for undergraduates by most medical schools, yet it is only taught for one semester (*Lehmann et al., 2004*), at that stage, medical students typically place more emphasis on basic medical theories than on clinical experience or patient contacts (*Carrese et al., 2011*). The study of medical ethics, which is considered a "useless compulsory course," thus amounts to memorization of theories and fail to fulfill the original intent of medical ethics education (*Mills and Bryden, 2010*).

THE AIM OF THE WORK

The aim of the present work was to assess the perception of house officers about medical ethics and to assess their knowledge level about the subject with comparison between two batches of training doctors (house officers) from two different educational programs (six plus one and five plus two) in Sohag Faculty of Medicine.

SUBJECTS AND METHODS

A comparative cross-sectional study was conducted to assess the perception of house officers about medical ethics and to assess their level of knowledge about the subject with comparison between two batches of training doctors (house officers) from two different educational programs [five plus two (group 1) and six plus one (group 2)] in Sohag University Hospital. This study was conducted via an online survey using a Google Form for a questionnaire based on the CEM (Code of Medical Ethics) and modified from tools that have been verified in literature (*Conselho Federal de Medicina, 2010; Brasil, et al. 1996*).

Participants:

Participants in the study were consisted of house officers from Sohag university Hospital. The Power and Sample Size Calculations program was used to determine the sample size. Based on data from related research, determined that 200 participants would be the minimum required to get the best possible outcomes. Snowball sampling technique was used (questionnaire form had been sent through WhatsApp to house officers and asked them to keep sending more to their colleagues) to obtain the necessary sample size. Inclusion criteria include being currently employed as a house officer and willing to participate in the study.

Data Collection:

Data were collected over 3 months duration using a structured questionnaire specifically designed to assess the house officers' knowledge of medical ethics. House officers received a request to use Google Forms to conduct an online survey. Participants used a website link to complete the online survey (<http://forms.office.com>). There were three sections to the questionnaire: the initial section included the sample's socio-demographic data; there were 25 hypothetical questions concerning medical ethics in the second; the third included 12 questions that addressed ethical dilemmas in clinical situations pertaining to the profession's practice. The questionnaire was pilot tested with a small group of house officers for validity and reliability. With a Cronbach's alpha of 0.871 (>0.7), a multi-item scale has a

high level of internal consistency. The online questionnaire was then applied during April, May and June 2024 and included 376 house officers of the two groups five plus two (178 out of 383) and six plus one (198 out of 380) at Sohag University Hospital.

Instrumentation:

The questionnaire was designed based on established frameworks and guidelines for assessing knowledge of medical ethics among healthcare professionals. Questionnaire was developed to cover key concepts in medical ethics and was reviewed by a panel of experts in medical ethics to ensure content validity.

Statistical Analysis:

The data were described at simple and percentage frequencies by statistical analysis, and Pearson's chi square test was used to assess the relationships between variables. The significance level of 5% ($p < 0.05$).

Ethical considerations:

The Institutional Review Board and the Research Ethics Committee of Sohag University gave their approval to the study. Registration number: Soh-Med-24-05-09PD. Participants' informed consent was obtained by including a consent statement in the survey.

RESULTS

This study set out to assess perception of house officers about medical ethics and to assess their knowledge about the subject with comparison between two batches of training doctors (house officers) from two different educational programs (six plus one and five plus two) in Sohag Faculty of Medicine.

Table (1) discussed demographic data of participants; the participants' mean age was 24.72 years, of which half was females (50.6%). The group of six plus one (group 2) house officers was representing (52.7%) of the study group. Most of the study groups were from urban residence (66.4%).

According to **table (2)** while comprising the two groups as regard their answers, most of the studied groups (75.3% of five plus two (group1) and 65.7% of six plus one (group2) would not read the Code of Medical Ethics in full. Also, it was found that there was a statistically significant difference between the

two groups as regard their answers on the importance of medical ethics in relation to other undergraduate medical curriculum topics (P value=0.010). Most of the studied groups (69.7% of group1 and 63.3% of group2) had confirmed the importance of medical records in solving ethical dilemma. Nearly, half of group 2 (50.5%) didn't know what their university's ethics committee was for. There was a statistically significant difference between the two studied groups regarding the possibility to refuse a patient care in their clinic (P value<0.001). Most of the studied group (84.3% of group1 and 78.8% of group 2) had confirmed that there was no possibility of refusing medical attention to a patient at a hospital emergency room. Regarding the informed consent form used in research and clinical practice, about (88.8% of group 1 and 83.8% of group 2) respectively were agreeing that it is essential. There was a statistically significant difference between the two studied groups as regard of providing a death certificate to a patient who visited the clinic but passed away at home, or a basic health unit patient accompanied by them and who passed away at home (P value<0.001). Most of group 2 (89.9%) didn't know the Declaration of Helsinki. Most of group 1 (79.8%) had got their knowledge of medical ethics during their undergraduate education. Most of the studied groups (67.4% of group 1 and 55.6% of group 2) didn't know if their university had distinct committees to review research involving humans and animals or not. Most of group1 (95.5%) were not considering that the theoretical teaching was sufficient to learn medical ethics. About half of group 2 (53.5%) was taking into account the importance of practical learning in developing and understanding medical ethics. As regard their answers on case scenario there was a statically significant difference between the two groups (P value<0.001, <0.001, 0.007, 0.020, <0.001, <0.001, <0.001) respectively, which means that the knowledge was not the same between the two groups as shown in **table (3)**.

Table (1): Demographic data of study participants.

	Total (n=376)	
	N	%
Age		
Min. – Max.	22-30	
Mean ± SD	24.72±1.555	
Median (IQR)	24(24-25)	
Gender		
Male	377	49.4%
Female	386	50.6%
Residence		
Rural	256	33.6%
Urban	507	66.4%

N: number, Min: minimum, Max: maximum, SD: standard deviation, IQR: Inter Quartile Range.

Table (2): Comparison between five plus two (n=178) and six plus one (n=198) groups on knowledge and perception of medical ethics.

	Five plus two (group 1) (n=178)		Six plus one (group 2) (n=198)		Total (n=376)		x ²	P
	N	%	N	%	N	%		
Have you read the Code of Medical Ethics in full?								
Yes	44	24.7%	68	34.3%	112	29.8%	4.151	0.042*
No	134	75.3%	130	65.7%	264	70.2%		
Do you consider having enough knowledge to deal with ethical dilemmas?								
Yes	84	47.2%	90	45.5%	174	46.3%	0.114	0.736
No	94	52.8%	108	54.5%	202	53.7%		
Do you consider the absence of medical ethics in the medical curriculum harmful?								
Yes	172	96.6%	186	93.9%	358	95.2%	1.488	0.223
No	6	3.4%	12	6.1%	18	4.8%		
If you don't have medical ethics as a discipline, how harmed do you feel about it?								
Little	24	13.5%	22	11.1%	46	12.2%	4.814	0.09
Very much	116	65.2%	114	57.6%	230	61.2%		
Extremely	38	21.3%	62	31.3%	100	26.6%		
Do you find medical ethics as important as other medical undergraduate curriculum components?								
Yes	162	91.0%	162	81.8%	324	86.2%	6.647	0.010*
No	16	9.0%	36	18.2%	52	13.8%		
How do you evaluate your level of knowledge in medical ethics?								
Poor	14	7.9%	10	5.1%	24	6.4%	2.927	0.403
Reasonable	88	49.4%	88	44.4%	176	46.8%		
Good	72	40.4%	94	47.5%	166	44.1%		
Very good	4	2.2%	6	3.0%	10	2.7%		
How important do you consider the medical record in solving ethical dilemmas?								
Very important	124	69.7%	114	57.6%	238	63.3%	15.465	<0.001**
Not Important	0	0.0%	14	7.1%	14	3.7%		
I don't know	54	30.3%	70	35.4%	124	33.0%		
What is your university's ethics committee for?								
To promote symposia on medical ethics	14	7.9%	8	4.0%	22	5.9%	26.875	<0.001**
To oversee animal and human research	0	0.0%	4	2.0%	4	1.1%		
To ensure the ethical practice of lecturers	6	3.4%	18	9.1%	24	6.4%		
All previous	80	44.9%	58	29.3%	138	36.7%		
None of the previous	0	0.0%	10	5.1%	10	2.7%		
I don't know	78	43.8%	100	50.5%	178	47.3%		
During the course, outside of ethics-related disciplines, how often has a lecturer cited ethics as important in a medical career?								
Never	14	3.7%	19	5.0%	33	4.3%	5.147	0.161
Occasionally	116	30.3%	141	37.1%	257	33.7%		
Sometimes	196	51.2%	181	47.6%	377	49.4%		
Always	57	14.9%	39	10.3%	96	12.6%		
Do you think there is a possibility of denying care to a person in your clinic?								
Yes	48	27.0%	72	36.4%	120	31.9%	15.421	<0.001**
No	88	49.4%	108	54.5%	196	52.1%		
I don't Know	42	23.6%	18	9.1%	60	16.0%		
Do you think there is a possibility of denying care to a person in the emergency room of a hospital?								
Yes	16	9.0%	34	17.2%	50	13.3%	6.352	0.042*
No	150	84.3%	156	78.8%	306	81.4%		
I don't Know	12	6.7%	8	4.0%	20	5.3%		

Do you consider the informed consent form essential in clinical and research practice?								
Yes	158	88.8%	166	83.8%	324	86.2%	9.255	0.010*
No	0	0.0%	10	5.1%	10	2.7%		
I don't Know	20	11.2%	22	11.1%	42	11.2%		
Are you required to give a death certificate to a patient who died at home and who attended the clinic?								
Yes	36	20.2%	24	12.1%	60	16.0%	27.673	<0.001**
No	40	22.5%	96	48.5%	136	36.2%		
I don't know	102	57.3%	78	39.4%	180	47.9%		
Are you required to give a certificate of death of a Basic Health Unit patient accompanied by you and who passed away at home?								
Yes	74	41.6%	84	42.4%	158	42.0%	24.597	<0.001**
No	18	10.1%	56	28.3%	74	19.7%		
I don't know	86	48.3%	58	29.3%	144	38.3%		
Should health care staff, when confirming brain death, communicate to the family about the possibility of organ donation?								
Yes	64	36.0%	82	41.4%	146	38.8%	6.72	0.035*
No	34	19.1%	52	26.3%	86	22.9%		
I don't know	80	44.9%	64	32.3%	144	38.3%		
Do you know the Hippocratic oath?								
Yes	108	60.7%	114	57.6%	222	59.0%	0.372	0.542
No	70	39.3%	84	42.4%	154	41.0%		
Do you know the Nuremberg Code?								
Yes	16	9.0%	12	6.1%	28	7.4%	1.166	0.28
No	162	91.0%	186	93.9%	348	92.6%		
Do you know the Declaration of Helsinki?								
Yes	32	18.0%	20	10.1%	52	13.8%	4.88	0.027*
No	146	82.0%	178	89.9%	324	86.2%		
How did you get your knowledge of medical ethics?								
During undergraduate education	142	79.8%	114	57.6%	256	68.1%	30.318	<0.001**
Reading	4	2.2%	20	10.1%	24	6.4%		
In lectures, symposiums or seminars	14	7.9%	18	9.1%	32	8.5%		
Others (internet, newspapers, reports, court cases, etc.)	12	6.7%	42	21.2%	54	14.4%		
I have no knowledge in medical ethics	6	3.4%	4	2.0%	10	2.7%		
Does your university have separate committees to review animal and human research projects?								
Yes	36	20.2%	24	12.1%	60	16.0%	22.346	<0.001**
No	22	12.4%	64	32.3%	86	22.9%		
I don't know	120	67.4%	110	55.6%	230	61.2%		
How would you act by witnessing a violation of ethical conduct by your future colleagues?								
I feel obligated to report them to the medical council	20	11.2%	18	9.1%	38	10.1%	3.514	0.319
I would talk to them	136	76.4%	142	71.7%	278	73.9%		
I'd refuse to take any action	4	2.2%	8	4.0%	12	3.2%		
I wouldn't know what to do	18	10.1%	30	15.2%	48	12.8%		
Do you consider theoretical teaching sufficient to learn medical ethics?								
Yes	8	4.5%	40	20.2%	48	12.8%	20.767	<0.001**
No	170	95.5%	158	79.8%	328	87.2%		
How important do you consider the practical learning to build knowledge in medical ethics?								
Not very relevant	0	0.0%	16	8.1%	16	4.3%	16.593	<0.001**
Moderately relevant	32	18.0%	28	14.1%	60	16.0%		
Very relevant	92	51.7%	106	53.5%	198	52.7%		
Extremely relevant	54	30.3%	48	24.2%	102	27.1%		
Do you consider that the teaching of ethics is sufficient in the basic course or it is insufficient and should be included in the clinical course and during internship?								
It is sufficient, no need to include it in clinical and internship periods	16	9.0%	28	14.1%	44	11.7%	2.553	0.279
It is insufficient and it needs to be included in the clinical and internship periods	154	86.5%	160	80.8%	314	83.5%		
I don't know	8	4.5%	10	5.1%	18	4.8%		
What is the maximum tolerance for the professional on duty and waiting for the colleague who will replace him?								
15 minutes	10	5.6%	12	6.1%	22	5.9%	11.881	0.018*
30 minutes	26	14.6%	28	14.1%	54	14.4%		
60 minutes	26	14.6%	26	13.1%	52	13.8%		
Do not leave the duty shift	60	33.7%	96	48.5%	156	41.5%		
I don't know	56	31.5%	36	18.2%	92	24.5%		

N: number, P-value>0.05: Non significant, P-value<0.05 :Significant, P-value<0.01: Highly Significant

Table (3): Comparison between five plus two (n=178) and six plus one (n=198) groups on ways to address ethical conflicts.

	Five plus two (group 1) (n=178)		Six plus one (group 2) (n=198)		Total (n=376)		x ²	P
	N	%	N	%	N	%		
Scenario 1: Adolescent patient admits suicidal ideations. Should the professional preserve the patient's privacy, respecting the bioethical principle of autonomy, keeping the report confidential?								
Yes	60	33.7%	116	58.6%	176	46.8%	23.865	<0.001**
No	110	61.8%	74	37.4%	184	48.9%		
I don't know	8	4.5%	8	4.0%	16	4.3%		
Scenario 2: According to the Code of Medical Ethics, should the physician amputate a patient member in emergency, even with refusal of family member?								
Yes	44	24.7%	76	38.4%	120	31.9%	19.438	<0.001**
No	90	50.6%	104	52.5%	194	51.6%		
I don't know	44	24.7%	18	9.1%	62	16.5%		
Scenario 3: Physician assisting terminal patient hides information about experimental treatment. Is this physician's conduct ethical and legal?								
Yes	4	2.2%	14	7.1%	18	4.8%	9.969	0.007*
No	158	88.8%	152	76.8%	310	82.4%		
I don't know	16	9.0%	32	16.2%	48	12.8%		
Scenario 4: Terminally ill patient wishes to die and asks to administer morphine him or herself, using an infusion pump. In place of this physician, would you fulfil the patient's wish?								
Yes	10	5.6%	12	6.1%	22	5.9%	0.487	0.784
No	150	84.3%	170	85.9%	320	85.1%		
I don't know	18	10.1%	16	8.1%	34	9.0%		
Scenario 5a: Requesting abortion related to rape. Should the physician require any legal document attesting the crime to perform the procedure?								
Yes	124	69.7%	162	81.8%	286	76.1%	7.785	0.020*
No	10	5.6%	8	4.0%	18	4.8%		
I don't know	44	24.7%	28	14.1%	72	19.1%		
Scenario 5b: As for the legal aspect in scenario 5a, the physician should:								
Call the police immediately, testify, and collaborate with State legal proceedings against the woman	84	47.2%	84	42.4%	168	44.7%	1.515	0.469
Should not call the police or give any details about the consultation with the patient	36	20.2%	50	25.3%	86	22.9%		
I don't know	58	32.6%	64	32.3%	122	32.4%		
Scenario 5c: As for the procedure requested in scenario 5a, the physician may:								
Refuse to carry it out, leaving the woman in charge of the next physician, claiming that the procedure goes against his or her religious principles	116	65.2%	114	57.6%	230	61.2%	4.6	0.1
Perform the procedure, even going against his or her religious precepts, for the good of the patient	22	12.4%	20	10.1%	42	11.2%		
I don't Know	40	22.5%	64	32.3%	104	27.7%		
Scenario 6a: Insurer wants the physician's testimonial about patient before paying life insurance to the patient's family. The physician is called. How should he or she behave?								
The physician should not provide any details about what happened during the consultation.	42	11.0%	38	10.0%	80	10.5%	2.114	0.347
Must collaborate by telling the truth about the patient's "blackouts" prior to the accident	116	65.2%	114	57.6%	230	61.2%		
I don't Know	76	42.7%	72	36.4%	148	39.4%		
Scenario 6b: Insurance sues the hospital for access to the medical record, in which the physical reports what happens in the consultation. Should the hospital then provide the medical record?								
The hospital must provide medical record to insurer	12	6.7%	44	22.2%	56	14.9%	24.021	<0.001**
The hospital must provide medical record to insurer after court decision	94	52.8%	74	37.4%	168	44.7%		
The hospital should not provide medical record to insurer	18	10.1%	10	5.1%	28	7.4%		
I don't know	54	30.3%	70	35.4%	124	33.0%		
Scenario 7a: Do you think the physician should take into account a facially disfigured patient's request to keep confidential his or her desire for suicide?								
Yes	36	20.2%	58	29.3%	94	25.0%	53.527	<0.001**
No	138	77.5%	90	45.5%	228	60.6%		
I don't know	4	2.2%	50	25.3%	54	14.4%		
Scenario 7b: What else should be considered when deciding about scenario 7a? (choose only one alternative)								
The patient's dignity	30	16.9%	24	12.1%	54	14.4%	18.242	<0.001**
The patient's human rights	58	32.6%	62	31.3%	120	31.9%		
The law	22	12.4%	18	9.1%	40	10.6%		
The risks	38	21.3%	78	39.4%	116	30.9%		
Other	30	16.9%	16	8.1%	46	12.2%		
Scenario 8: Patient with indication for tubal ligation procedure. Do you think the physician should ethically ignore the husband's opinion and take into account his or her perception of the indication, along with the patient's desire?								
Yes	10	5.6%	24	12.1%	34	9.0%	12.173	0.002*
No	158	88.8%	148	74.7%	306	81.4%		
I don't know	10	5.6%	26	13.1%	36	9.6%		

N: number, P-value > 0.05: Non significant, P-value < 0.05 :Significant, P-value < 0.01: Highly Significant

DISCUSSION

For health professionals, formal ethics education is essential, especially in light of the humanization of their professional training. Ethics has only lately been introduced into the curriculum of medical schools, despite its importance and the Hippocratic Oath's reference to the natural relationship between ethics and medicine (*Ferreira-Padilla, 2016; Boulianne, 2013*).

Since 2015, World Medical Association (WMA) has determined its teaching to be mandatory in all academic courses (*Rego and Palacios, 2017; Neves et al., 2016*).

In Sohag University, communication skills and medical ethics studies are considered as a compulsory course for undergraduates put it is studied during the first year of medical study only, after graduation there is a gap of time between studying the course and applications of such ethical dilemmas in their daily practical life.

The rise in professional lawsuits in courts of law could be attributed to this gap in medical training (*Godoy, 2014*).

This study aimed to assess house officer's perception about medical ethics and to assess their knowledge about the subject with comparison between two batches of training doctors from two different educational programs (six plus one and five plus two) in Sohag Faculty of Medicine.

Theoretical and practical medical humanities education ought to be incorporated into professional medical education, spanning from undergraduate and graduate programs to resident training and ongoing education (*Carrese et al., 2011*). Medical students should be prepared with concepts related to medical ethics, humanistic care, privacy protection, doctor-patient communication, genetic sample management, and bioinformatics security during their undergraduate studies. Medical ethics education moves from theoretical study to practical application when medical students participate in clinical practice more and more during their graduate and postgraduate studies. At that stage, it is advised to explain practical ethical issues via role-playing, situational teaching, real-case analysis (*Carrese et al., 2011*). The focus of ethics

educations changes to increase the relationships between medical and ethical values, cognitive traits, and behavioral modes during resident training or ongoing education. Most answers of questionnaire of both groups of the current study were not of statistical significant differences as the two patches studied the same medical ethics curriculum, moreover, the curriculum was fewer and the period of study was shorter in five plus two group.

In the present study, technical questions compiled participants' views on their capacity for dispute resolution in the context of medical ethics. Surprisingly, most of the two studied group participants didn't read about the Code of Medical Ethics (CME) in full [75.3 % of five plus two group (group 1) and 65.7% of six plus one group (group 2)].

Fortunately, most of participants found that medical ethics education was helpful and important and it's absence from medical curriculum is harmful [96.6% in group 1 and 95.2% in group 2], this correspond to a study by *Aacharya and Shakya, (2015)*, in which 91.3% of students found medical ethics to be important, In another study by *Jatana et al. (2018)*, 57.9% of students stated that knowledge and implementation of ME are very important among doctors.

Most of persons in the studied groups (91% of group 1 and 81.8% group 2) considered that medical ethics was as important as other components learnt in medical undergraduate curriculum while a considerable percent had evaluated their level of knowledge in medical ethics as reasonable and good (49.4% and 40.4% in group 1 and 44.4% and 47.5% in group 2).

Most of studied groups (69.7% of group 1 and 57.6% of group 2) had confirmed the importance of medical records in solving ethical dilemmas, these data converge with higher score rate 89.8% found in the work of *Babu et al. (2013)* and with a higher rate of 98.6% and 97.6% in the two groups of *Victor et al. (2019)* study, while 30.3% of group 1 and 35.4% of group 2 in the present study didn't know whether medical records are important or not.

on the other hand, it's not surprisingly that nearly half of both groups (52.8% of group

land 54.5% of group 2) considered themselves lacking experience of dealing with ethical dilemmas after completing the medical ethics course, similarly to results of *Victor et al. (2019)* who found that (91.6%) of undergraduates considered themselves unprepared to solve ethical dilemmas, this may be due to defective undergraduate ethics curriculum of their universities.

These values are different from that found by *Silverman and collaborators (2013)*, who observed that (60.8%) of participants considered themselves able to deal with ethical dilemmas, this difference can be due to different teaching curriculum and different methods of education in their university.

It was disappointing to find that [(50.5%) nearly half of group 2] didn't know what their university's ethics committee was for, also it was 43.8% in group 1, it is not taught in ethical curriculum.

A question of whether any lecturer outside ethics related disciplines stated the importance of ethics in medical career, 33.7% of participants of the total of both groups stated that lecturers occasionally mention the importance of medical ethics and 49.4% of both groups said that lecturers sometimes cited ethics during the lecture.

About 12.6 % of participants mentioned that lecturers always cited the importance of ethics in medical practice which was considered as a satisfactory percent.

A question regarding professional ethical posture in clinical practice (27.0% of group 1 and 36.6% of group 2) mentioned the possibility to refuse treating patients in special clinic while 9% of group 1 and 17.2% of group 2 stated that it was feasible to refuse treating patients in a hospital emergency room which is a catastrophic thinking, coincided with *Victor et al. (2019)* who found that 19% and 12.5% of their studied groups can refuse to treat patients in emergency services.

Regarding the informed consent form used in research and clinical practice, 88.8% of group 1 and 83.8% of group 2 were agreeing that it is essential as that in *Silverman et al. (2013)* who found that 87.8% of participants felt safe when obtaining a legally valid form of consent.

Regarding death certificate knowledge (57.3% of group 1 and 39.4% of group 2) didn't know if they had to deliver a death certificate to a patient who passed away in a hospital or at home, also 48.3% of group 1 and 29.3% of group 2 didn't know if providing a death certificate is necessary to a Basic Health Unit patient who passed away at home, these results coincided with that found in the two groups of *Victor et al. (2019)*, together with *Neves et al. (2016)*, which concluded that legal documentations were among the least discussed subjects.

When the participants were asked about family communication about organ donation possibility after brain death confirmation (36% group 1 and 41.4% of group 2) accepted, (19.1% of group 1 and 26.3% of group 2) didn't accept to communicate with family for organ donation and (44.9% of group 1 and 32.3% of group 2) didn't know what to do.

As regard Hippocratic Oath, 39.3% of group 1 and 42.4% of group 2 didn't know Hippocratic Oath, in *Victor et al. (2019)*, 12.9% of group 1 and 27.5% of group 2 responded negatively corresponding to the present work.

Asking about specified terms in ethical considerations of research, 91% of group 1 and 93.9% of group 2 didn't know Nuremberg Code which is a set of ethical research principles for human experimentation created by *Katz (1996)*, in Victor study, 27.9% of G1 and 15.2% of G2 only knew it.

Few participants of both groups (18% of group 1 and 10.1% of group 2) noted that they knew Declaration of Helsinki which is an international document that regulates human subjects medical research practice (*Millum et al., 2013*), also few students of *Victor et al., (2019)* (23.1% of group 1 and 8.8% of group 2) mentioned that they were aware of it.

When participants asked about the source of their knowledge of medical ethics, 79.8% of group 1 and 57.6% of group 2 said that their knowledge was during undergraduate education, while a percent of participants knowledge was from reading, seminars, internet or even court cases, unfortunately, 3.4% of group 1 and 2% group 2 didn't have knowledge in medical ethics at all.

In the current work, 67.4% of group 1 and 55.6% of group 2 didn't know whether their university has distinct committees that evaluate studies involving humans and animals, this situation is comparable to that reported in a different study with 371 students, when 89.1% of graduates from Midnapore Medical College were unaware that the institution had an institutional ethics council (*Chatterjee and Sarkar, 2012*), all these items indicated defects in current medical ethics curriculum and must be modified.

Since medical ethics are essential to clinical research as well as clinical practice, clinical medicine and ethics experience should be a requirement for medical ethics faculty. Using University of Chicago's ethics curriculum as an example (*Yang et al., 2014*), Teaching physicians and ethics specialists represented the majority of the faculty teaching medical ethics courses, some of whom have doctorates in both philosophy and medicine. It is suggested to set a requirement for recruiting teaching faculty, such as passing relevant classes, completing training, or continuing education (*Nash, 2007*).

Medical research must be covered by strict ethical and moral principles, with total protection and respect for those who are objects of study (*Carlindo Machado, 2020*).

A survey of medical staff and medical students showed (46.64%) of surveyed were aware of hospital committee of medical ethics, while 53.32% of persons were not well informed, indicating that ethics education was inadequate during compulsory and continuing education classes (*Suzuki and Sato, 2016*).

When participants had asked about their action while witnessing violation of ethical conducts by their colleagues, 11.2% of group 1 and 9.1% of group 2 thought it necessary to report to medical council, 76.4% of group 1 and 71.7% of group 2 would talk friendly to their colleagues, 10.1% of group 1 and 15.2% of group 2 didn't know what to do.

In the current work, 95.5% of group 1 and 79.8% of group 2 considered theoretical teaching was not sufficient to learn medical ethics and considered practical learning was the main cornerstone to build knowledge in medical ethics.

A single undergraduate course is insufficient to foster medical students' ethical awareness; it is necessary to carry out medical ethics education throughout the entire medical career, and strengthen ethics awareness repeatedly throughout continuous clinical practices and scientific researches (*Eckles et al., 2005*).

85.5% of group 1 and 80.8% of group 2 said that basic course of medical ethics was insufficient and ethics learning need to be covered in clinical course and the internship, this was the same as found in other research in which many students prefer broader ethics teaching, *Silverman et al. (2013)* and with active methodologies (*Sheehan et al., 2015; Warmling et al., 2016*).

Also these results related to these found in *Victor et al. (2019)* in which 80.3% considered it insufficient and should include clinical period and internship.

Enquiring about the professional's maximal tolerance while waiting for his colleague who replace him, there was a statistical significant difference between the groups of study as (33.7% of group 1 and 48.5%) decided not to leave the duty shift till the colleague arrive, while 31.5% of group 1 and 18.2% of group 2 didn't know what to do.

On the other hand, 87.1% of group 1 of the study of *Victor et al. (2019)*, acknowledged that getting out of the duty shift constituents critical violation of ethics and a medical professional is not allowed to do this, while only 57.3% of group 2 participants of his study which was more than detected in the present study, indicating their better awareness of patient rights.

Analyzing clinical cases answered by participants, there was a statistical significant difference between the two groups of study, group 1 had a larger percentage of accurate responses compared to group 2, questions which one can observe their difference were those covered significant subjects as patients' autonomy and confidentiality.

A good correct answers were achieved by group 1 participants regarding patient autonomy, amputation case, research consideration in terminally ill patient and insurance issues.

Group 2 had more correct answers regarding abortion case documentation; unfortunately, a high rate of both groups will call police immediately in rape cases which could cause many problems in our society.

A disappointing point in case scenario discussion was that a considerable percentage of both groups didn't know how to deal with cases, indicating the need of studying more medical ethical dilemmas during undergraduate courses.

We can discuss the interaction between a doctor and patient, and human research. Ultimately, this study found that deeper and more critical debates about the aims and reasons of bioethical questions are needed, order to properly encourage and integrate technical and ethical education into graduate-level medical courses, where students can then practice what they have learnt.

CONCLUSION

From the present study it was released that house officers of both groups of the study (five plus two and six plus one) had defective knowledge in medical ethics and clinical dilemmas and most of them could not answer ethical questions and did not know how to deal with clinical cases, indicating insufficient medical curriculum during basic study, to guarantee better professionals in the future, medical education strategies must be reviewed.

RECOMMENDATIONS

- Modification of the current course of basic medical ethics.
- The need of more post graduate ethical courses and seminars with discussion of different common practical cases.

Limitations of the study:

Limitations of this study include the potential for response bias due to self-reported data and the use of a snowball sample, which may limit the generalizability of the findings. Additionally, the cross-sectional design limits the ability to establish causality between variables.

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تصورات وممارسات أطباء التدريب نحو أخلاقيات الممارسة الطبية بكلية طب سوهاج

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المقدمة:

إن تنفيذ تعليم وممارسة الأخلاقيات الطبية لطلاب الطب ليس فقط متطلبًا أساسيًا في التعليم الطبي ، ولكنه أيضًا لا غنى عنه في تطوير الوضع الطبي الحيوي والنفسي والاجتماعي للطب الحديث.

الهدف من الدراسة: الهدف من العمل الحالي هو تقييم تصورات أطباء التدريب حول أخلاقيات مهنة الطب وقياس معرفتهم بالموضوع من خلال المقارنة بين دفعتين من الأطباء المتدربين (أطباء الإمتياز) من برنامجين تعليميين مختلفين (١+٦ و ٢+٥) بكلية طب سوهاج

طرق العمل: هذه دراسة وصفية مقطعية ذات منهجية كمية، تم الحصول على البيانات من خلال استبيان مقتبس من أدوات تم التحقق من صحتها في الأدبيات وعلى أساس مدونة أخلاقيات مهنة الطب. مقارنة بين دفعتين من أطباء التدريب من برنامجين تعليميين مختلفين.

تم تقسيم الإستبيان إلى ثلاثة أقسام: الأول غطي البيانات الاجتماعية والديموغرافية للعينة وفي الثاني هناك ٢٥ سؤالاً نظرياً حول أخلاقيات مهنة الطب؛ أما الثالث فيتكون من ١٢ أسئلة تناولت المعضلات الأخلاقية في الحالات السريرية في ممارسة المهنة

النتائج: أظهرت الدراسة أن أكثر من ٥٠% من كلا المجموعتين لم يعرفوا قواعد أخلاقيات مهنة الطب أو الغرض من لجنة الأخلاقيات في جامعتهم؛ ونسبة كبيرة من كلا المجموعتين لم تعرف كيفية التعامل مع الحالات السريرية في حياتهم العملية.

الخلاصة: من هذه الدراسة تم الوصول إلى أن أطباء التدريب من كلا المجموعتين من الدراسة لديهم معرفة معيبة في أخلاقيات مهنة الطب والمعضلات السريرية، مما يشير إلى عدم كفاية المناهج الطبية خلال الدراسة الأساسية.

التوصيات: تعديل المنهج الحالي لأساسيات الأخلاقيات الطبية، الحاجة إلى المزيد من الدورات والندوات في الأخلاقيات الطبية للدراسات العليا مع مناقشة مختلف الحالات العملية الشائعة.