

Knowledge, attitude, and practice of medical ethics among health practitioners in Taif government, KSA

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ABSTRACT

Objectives: Medical ethics practice and the attitude and knowledge toward it was our concern and aim to investigate. **Methods:** A cross-sectional study was conducted on 1943 healthcare practitioners from three tertiary care hospitals. A questionnaire requesting demographic data and items related to the level of knowledge and awareness beside the real-life practice of medical ethics among healthcare providers was used. A score was given for each response and a total score was calculated. **Results:** Of the participants, 86.9% had studied medical ethics, 70.3% thought patients should know about their rights, 87.4% supported that the patient have the right to know and be informed if any malpractice happened, 61.8% never engaged in healthcare-related act on a patient without informed consent, 73% ensured that no one was present other than medical team during assessments or procedures, and 86.6% tried to give only what was necessary to the patient regarding their situation. Nursing specialists/technicians, with of 20-<30 years of practice and participants who had previous training in bioethics had significantly higher mean attitude scores than others. Females, laboratory specialists/technicians, and those who reported previous study of medical ethics had a significantly higher practice scores. A cogent positive correlation was found between the practice and attitude scores. **Conclusion:** Interduce medical ethics and insist on its importance in medical institutions will positively affect practitioners' knowledge, attitude, and practice.

Keywords: Ethics practice, knowledge, medicine

Introduction

Ethics assessment concerns the question of what is acceptable and unacceptable or right and wrong about a certain technology or practice.^[1]

Ethics of medicine practice address the standards of ethics for the practice of medicine and healthcare or dictates acceptable practice; medical ethics concerns are among the most significant relation to human life.^[2,3]

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Individuals of the healthcare callings are allowed powers and benefits that are not allowed to non-members.^[4]

Medical professionals may decide : (a) who will live and who will die, (b) how large amounts of money and scarce resources will be used and allocated, (c) how patient care is to be maintained and which patients should obtain the services, (d) what should and how much to be told to the patients about their condition, and (e) if the information provided to them by patients will be kept confidential and if not, with whom it will be exchanged, what kind of doctor-patient contact will occur^[5] In addition, ethics refers to a set of rules given to a person by an external source; they are moral codes to be conformed to by all and

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derived from the knowledge of what is right and wrong by people.^[6]

Medical ethics instruction in the medical profession can also be traced back 2500 years, but teaching it to medical students as an academic discipline is relatively recent.^[7]

The goal of ethics education for medical students is to enable them to identify difficult situations and deal with them in a rational and principled manner.^[8]

A study done in Italy shows that after the training program that called teaching of ethics in palliative care, most of the participants increased their ability to distinguish their personal and professional sphere from the patient's autonomy, focusing their attention on providing the most appropriate quality of life for the patient.^[9]

A study was conducted in the University of Mississippi Medical Center, USA

It showed that the majority of respondents stated that they were participating in spiritual activities, with (87.5%) reporting that their ethical decision-making was affected by their religious practices and (12.5%) stating that those decisions were not affected by practicing a religion.^[10]

A study conducted in India showed considerable differences between consultants' and senior residents' opinions on issues such as confidentiality compliance; some doctors showed paternalistic attitudes.^[11]

Medical ethics courses in the Kingdom of Saudi Arabia (KSA) have moved from lecture-based teaching to more interactive teaching with scope for inculcating the 'virtuous' characteristics that Muslim doctors should have.^[7,12]

In 2013, a research was carried out to evaluate the existing teaching methods and assessment tools used by the Saudi public medical schools. The study showed that 42.8% of Saudi medical colleges had no ethics department, and most of the faculty staff created curricula. (85.7%).^[7] In this study, the main ethical issues experienced in Saudi by public and healthcare providers were as follows: (a) rights of patients, (b) resources equity (c) confidentiality of patient, (d) safety of patient, (e) conflict of interest, (f) working together with the opposite sex, (g) end and beginning of life, and (h) ethics healthcare team.

In addition, the healthcare system in Saudi Arabia is diverse in terms of different nationalities, cultural backgrounds, and religious beliefs.^[13]

It should be noted that a literature search has revealed that studies that evaluate the knowledge, attitude, and practice (KAP) of medical ethics between health practitioners in KSA are scarce. Thus, the aim of this study was to assess the KAP of medical ethics between health practitioners in Taif city, KSA.

Methods and Subjects

Design of the study and time frame: This research was a cross-sectional descriptive study and was carried out between January and February 2018.

Study settings: The three tertiary care hospitals in Taif city, KSA (King Abdulaziz Specialist Hospital (KAASH), Al-Hada Armed Forces Hospital, and King Faisal Medical Complex) were the study settings.

Sampling methodology: All specialists technicians and nurses in all departments in the three hospitals were contacted to participate in the study. The response rate was 71.4% and the 1943 respondents were the study participants.

Study instrument: Our questionnaire was developed from previously published literature to collect demographic data, job title, practice duration, previous study of medical ethics, previous training in bioethics, presence in the institution of an ethics committee, and previous experience of an ethical issue and how was dealt with. The questionnaire included items on the KAP of the participants regarding healthcare ethics. A score was given for every response to KAP items which ranged from 0 to 2, where the highest score was given for the correct response. Total scores were calculated for each KAP components.

Data analysis: Data were analyzed using SPSS version 16.0 (SPSS, Inc, Chicago, IL, USA). Qualitative data were expressed as numbers and percentages, and quantitative data were expressed as mean and standard deviation (mean \pm SD), where Mann-Whitney and Kruskal-Wallis test as appropriate were used to assess the relationship between variables. A *P* value of <0.05 was considered statistically significant.

Ethical considerations: The research ethics centers of the three hospitals approved the study and verbal consent has been received from all respondents.

Results

In the present study, 705 (36.3%) participants were from KAASH, 803 (41.3%) were from KFMC, and 435 (22.4%) were from Al-Hada hospital. Of them, 63.1% were females and the majority were nursing specialists or technicians [Figure 1].

Table 1 shows that most of the participants had a duration of medical practice of less than 10 years, 86.9% of them had studied medical ethics, 35.9% had attended a post graduate training in bioethics, and 51.3% reported that there is an ethics committee in his/her institution. Of the participants (46%) reported facing an ethical issue, where (38%) consulted their senior, and 31.8% solved it themselves as a response to that ethical issue.

Table 2 shows that most of the participants (61%) knew that medical ethics is more important for certain specialty than

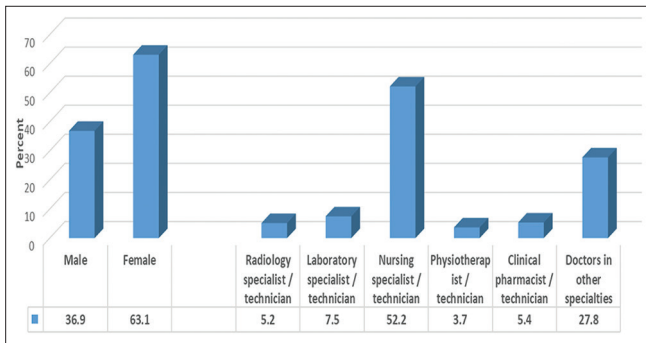


Figure 1: Distribution of the participants according to their gender and job title

Table 1: participants by their training and professional conduct related to health care ethics

Variable	n (%)
For how long you have been practicing?	
<10 years	1309 (67.4)
10-<20 years	475 (24.4)
20-<30 years	104 (5.4)
≥30 years	55 (2.8)
Have you studied medical ethics?	
Yes	1688 (86.9)
No	255 (13.1)
Have you attended training in bioethics?	
Yes	697 (35.9)
No	1246 (64.1)
Is there an ethics committee in your institution?	
Yes	996 (51.3)
No	310 (16)
I don't know	637 (32.8)
Have you ever faced an ethical issue?	
Yes	893 (46)
No	1050 (54)
How did you deal with it?	
I solved it myself	284 (31.8)
I consulted my senior	339 (38)
I talked to a friend	64 (7.2)
I informed the ethical committee at my hospital	160 (17.9)
I informed the police or the security	25 (2.8)
I didn't do anything	21 (2.4)

others, (70.3%) knew that it is good for patients to recognize their own rights through the Internet and/or books, and only (43.1%) knew when to stop futile therapy.

Of the participants (54.5%) reported that the healthcare providers know best no matter what the patient's opinion is, and (87.4%) accepted that patients should be notified of misconduct. About half of the participants (51.3%) agreed that the patient's needs must always be met, regardless of the opinion of a doctor, (40.6%) agreed that as medicine is advancing confidentiality can't be maintained, and only (29.9%) agreed that consent is required only for surgical procedures not for medications or investigations. Only (17.3%) of the participants supported abortion, where most of them (81.5%) supported it before 40 days of pregnancy [Table 3].

Table 4 shows that most of the participants (61.8%) reported that they have never engaged in healthcare-related act with a patient without informed consent, and (73%) reported that they always ensure nobody present other than medical team during assessments or procedures. On the other hand, only 27% had ordered some tests/procedures/prescriptions/imaging only for patient satisfaction even if not indicated, 59.3% reported that they discuss the case with relatives and co-patients all the time, and most of them (86.6%) reported that they always try to give only what is necessary to the patient regarding his situation. Of the participants, 38.4% said that patients should not have access to medical guidelines online, and 65.4% said that they believe highly demanding patients are annoying and interfering with decision making.

Table 5 shows the practice and attitude scores were found to have a highly important positive correlation, while a non-significant positive association between practice and knowledge scores has been found.

Table 6 showed a significant relationship as found between the mean attitude scores and job title when compared to other specialties, nursing specialist/technician had a significant higher mean attitude score ($P < 0.001$). In the same time, participants with a duration of medical practice of 20-<30 years had a significant higher mean attitude scores compared with other participants (0.01). Participants who reported having previous training in bioethics had a significant higher mean attitude scores compared with those had had not ($P < 0.001$). On the other hand, there was a non-significant association between mean attitude scores and gender and prior medical ethics studies ($P = 0.95$ and 0.18 , respectively).

An important relationship between the mean scores of practice and gender was shown in Table 7, job title, and previous studying of medical ethics. As females ($P < 0.001$), laboratory specialist/technician ($P < 0.001$), and those who reported previous studying of medical ethics ($P = 0.003$) had a significant higher practice scores compared to other groups.

Discussion

Ethics plays a vital role in primary healthcare, and it is a skill that primary care physician must master because they are the first line of patient conflict.

The current study showed that most of the respondents had the opportunity to come across the basics of bioethics either during their studying or as a post graduate training, as (86.9%) of them had studied medical ethics and (35.9%) had attended a post graduate training in bioethics. However, the engagement in the post graduate training in medical ethics appears to be much less as compared to the academic studying during college years. This result is lower than that recorded in the previous Saudi study done in Riyadh city, where only 69% of doctors have ever received formal bioethics teaching.^[14]

Table 2: Participants’ knowledge about healthcare ethics

Variable	n (%)
Medical ethics is more important for certain specialty (critical care and EM) than others	
Yes	1185 (61)
No (correct answer)	501 (25.8)
I don’t know	257 (13.2)
It is good for patients to know about their own rights via the Internet and/or books:	
Yes (correct answer)	1366 (70.3)
No	375 (19.3)
I don’t know	202 (10.4)
Do you know when to stop futile therapy	
Yes (correct answer)	663 (34.1)
No	442 (22.7)
I don’t know	838 (43.1)

Table 3: Participants’ attitude towards healthcare ethics

Variable	n (%)
Health care providers know best no matter what the patient’s opinion is:	
Agree	1058 (54.5)
Disagree (correct answer)	885 (45.5)
Patients should be informed of wrongdoing:	
Agree (correct answer)	1699 (87.4)
Disagree	244 (12.6)
Patient’s wishes must always be adhered to irrespective of the doctor opinion:	
Agree	997 (51.3)
Disagree (correct answer)	946 (48.7)
As medicine is advancing confidentiality can’t be maintained	
Agree	789 (40.6)
Disagree (correct answer)	1154 (59.4)
Consent is required only for surgical procedures not for medications or investigations:	
Agree	580 (29.9)
Disagree (correct answer)	1363 (70.1)
Do you support abortion?	
Yes	
No (correct answer)	336 (17.3)
If yes (No. 336):	1607 (82.7)
Before 40 days of pregnancy	274 (81.5)
After 40 days of pregnancy	62 (18.5)
Patient who wishes to die should be assisted in doing so:	
Agree	481 (24.8)
Disagree (correct answer)	1462 (75.2)

The present study showed that only 46% of the sampled healthcare workers are facing ethical issues. This figure is much lower than that reported in an Egyptian study where 98% of medical residents reported facing ethical issues.^[15]

Moreover, the ethics committees is the higher command level for studying and clearing any ethical conflict as well as considering and overcoming legal medical dilemmas. Hospital ethics committees are currently mostly untested, unproven, and unknown entities.^[16]

This work showed that almost half of the respondents (51.3%) reported that they have an ethical committee in their institutions.

This result agrees with that observed in a study done in the United States, where “invisibility” of the ethics committee was expressed.^[17]

In contrast the present lack of the ethical committees could explain that 46% of the participants faced ethical issues in their daily practice.

It was reported that practitioners tend to rely on their seniors in solving ethical issues or trying to solve it themselves rather than seeking medical ethics expert advice. In addition, the fear of liability and fear of punishment as well could be contributing factors.^[17]

A very well-recognized misconception of medical ethics is that it isn’t equally as important among different healthcare workers, which in the current study represents 61% of the healthcare system, and it’s a held believe that ER and ICU doctors are more likely to deal with ethical issues and decisions that is wrong.

In regard to futile therapy, only 43.1% of the participants knew when to provide futile therapy. This result is much lower compared to a previous study in Saudi, where the majority of attending physicians (78%) prefer to provide a straightforward guideline for deciding whether the therapy is unsuccessful.^[14]

The present work showed that 54.5% of the participants reported that the healthcare providers know best no matter what the patient’s opinion is, and 87.4% accepted that the patients should be aware about misconduct. In previous study done in India, physicians were not in favor of exposing the failure of physicians to patients.^[11]

Additionally, another study done in the same country showed that most participants (73%) accepted that patient should be told of any misconduct concerning his or her treatment.^[8]

About half of the participants (51.3%) accepted that patient expectations could still be fulfilled regardless of the doctor’s view. The same result was reported in a study done in India, where many senior workers did not believe that the needs of the patient could always be adhered to.^[18]

On the other hand, another study done in India showed different results, where most of the participants (87%) agreed to adhering to the patients’ wishes, nearly 65% thought that, regardless of the viewpoint of patients, physicians can do what is right.^[18]

The present study showed that 40.6% of the participants agreed that as medicine is advancing confidentiality can’t be maintained, and only 29.9% agreed that consent is required only for surgical procedures not for medications or investigations. Whereas A study done in India showed that 46% of the respondents objected that modern care cannot preserve secrecy, 64.7% does not accept the fact that the consent is necessary just for operations rather than medications or laboratory test.^[11]

Table 4: participants’ practice of healthcare ethics

Variable	n (%)
I never engaged in healthcare related act (history taking, examination, blood sample, radiological procedure, medication prescribing) to a patient without informed consent	
Yes (correct answer)	1200 (61.8)
No	743 (38.2)
I’ve ordered some tests/procedures/prescriptions/imaging only for patient satisfaction even if not indicated:	
Yes	525 (27)
No (correct answer)	1418 (73)
I always ensure nobody present other than medical team during assessments or procedures:	
Yes (correct answer)	525 (27)
No	1418 (73)
I discuss the case with relatives and co-patients all the time	1152 (59.3)
Yes	791 (40.7)
No (correct answer)	1
I always try to give only what is necessary to the patient regarding his situation.	
Yes (correct answer)	1682 (86.6)
No	261 (13.4)
Patients should not have access to medical guidelines online	
Yes	747 (38.4)
No (correct answer)	1196 (61.6)
I believe highly demanding patients are annoying and interfering with decision making:	
Yes	1271 (65.4)
No (correct answer)	672 (34.6)

Table 5: Spearman correlation between the mean value of practice scores and both the mean values of knowledge and attitude scores

Variable	Practice score	
	r	P
Knowledge score	0.027	0.24
Attitude score	0.24	<0.001

Only 17.3% of the participants supported abortion, of them (81.5%) supported it before 40 days of pregnancy. A study done in India showed that only 10% of participants disagreed that if the law permits abortion, physicians should not hesitate to do it.^[18]

Most of the participants (61.8%) reported that they have never engaged in healthcare-related act given to a patient without informed consent, a result that disagrees with that reported in another study where all the participants reported taking written informed consent.^[19]

Based on the study, participants (73%) reported that they always ensure nobody other than medical team is present during assessments or procedures, 27% had ordered some tests/procedures/prescriptions/imaging only for patient satisfaction even if not indicated, and (59.3%) reported that they discuss the case with relatives and co-patients all the time. In agreement to that, the previously mentioned Indian study has shown that 61.7% of the participants accepted that the relative who are close to the patients should be informed about their status.^[8]

The present work showed that 86.6% of the participants said that they always try to give information only what is necessary to the patient regarding his situation. A previous study has shown that nurses from the UK had a great commitment to the patients’ autonomy than did any of the US groups.^[18]

In the present study, nursing specialist/technician had a significant higher mean attitude score compared to other specialties. This promising result is much better than that reported in a study done in Nepal, where only a small percentage of resident doctors and nurses were aware of the Hippocratic oath.^[19] It is also better than that reported in a study done in Barbados, where nurses didn’t think that ethical knowledge is important.^[11]

Participants with a duration of medical practice of 20-<30 years had a significant higher mean attitude scores compared with other participants. Since healthcare is not taught during the undergraduate level in most of the medical colleges, it is more likely that senior doctors (either by age or qualification) have better knowledge of healthcare ethics either because of experience or increased attendance at conferences and workshops.^[8] In agreement with this result is that observed in another study, where physicians with work experience over 8 years were 1.3 times more likely to have favorable attitudes than physicians who had worked from 4 to 8 years.^[20]

Participants who reported having a previous training in bioethics had a significant higher mean attitude scores compared with those had had not. The same result was observed in a study done in Nepal which showed interest in understanding the ethics of healthcare seemed to be expressed by doctors and they seemed to get more knowledge and workshops about medical ethics.^[19]

There was a major relationship between the mean practice scores and gender, as females had a significant higher practice scores compared to other groups. The same result was revealed from a study done in Ethiopia, where male doctors were less likely than female doctors to inquire about the code of ethics.^[20]

Limitations

A limitation of this research was the use of a self-reported questionnaire that might report bias. Another limitation was being a cross-sectional study that revealed the relationship among variables, but prevented the cause-effect relationship from being established.

Conclusion

Based on our results, supplying information and practicing medical ethics in medical centers will have a positive effect on practitioners’ knowledge, attitude, and practice. There is a call for ethics teaching in the first year, and the pre-clinical phase.

Table 6: Relationship between attitude scores and selected participants' personal characteristics

Variable	Attitude score (Mean±SD)	Test	P
Gender			
Male	11.65±1.63	*0.05	0.95
Female	11.71±1.47		
Job title			
Radiology specialist/technician	11.39±1.49	**66.84	<0.001
Laboratory specialist/technician	11.53±1.6		
Nursing specialist/technician	11.62±1.49		
Physiotherapist/technician	11.49±1.6		
Clinical pharmacist/technician	10.87±1.73		
Doctors in other specialties	12.08±1.45		
For how long you have been practicing?			
<10 years	11.62±1.52	**11.42	0.01
10-<20 years	11.85±1.48		
20-<30 years	11.86±1.72		
≥30 years	11.54±1.71		
Have you studied medical ethics?			
Yes	11.71±1.51	*1.79	0.18
No	11.53±1.65		
Have you attended training in bioethics?			
Yes	11.84±1.46	*5.59	<0.001
No	11.41±1.62		

N.B.: *Mann-Whitney test, **Kruskal Wallis test

Table 7: Relationship between practice scores and selected participants' personal characteristics

Variable	Practice score (Mean±SD)	Test	P
Gender			
Male	11.07±1.3	*6.21	<0.001
Female	11.45±1.29		
Job title			
Radiology specialist/technician	10.95±1.33	**47.44	<0.001
Laboratory specialist/technician	11.45±1.48		
Nursing specialist/technician	11.47±1.3		
Physiotherapist/technician	10.85±1.25		
Clinical pharmacist/technician	10.92±1.32		
Doctors in other specialties	11.17±1.22		
For how long you have been practicing?			
<10 years	11.32±1.32	**6.07	0.1
10-<20 years	11.34±1.27		
20-<30 years	11.19±1.33		
≥30 years	10.9±1.2		
Have you studied medical ethics?			
Yes	11.34±1.3	*3.02	0.003
No	11.06±1.32		
Have you attended training in bioethics?			
Yes	11.28±1.33	*0.85	0.39
No	11.32±1.29		

N.B.: *Mann-Whitney test **Kruskal Wallis test

In addition, In the clinical process it is important to incorporate medical ethics to make students understand its significance and relevance to their practice.

Our recommendation is to apply this study in all KSA hospitals to assess and identify the medical ethics practice and investigate the current ethical conduct among healthcare practitioners

to improve the health care practice and implementing an ethical-based practice for all healthcare providers, which is an investment of the vision 2030.

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Conflicts of interest

There are no conflicts of interest.

References

- Ronald GM. Method in bioethics: A troubled assessment. *J Med Philos* 1990;15:179-97.
- Amer AB. The health care ethics: Overview of the basics. *Open J Nurs* 2019;9:183-7.
- Ashley S, Benedict M, deBlois J. *Health Care Ethics: A Catholic Theological Analysis*. 5th ed. Washington, DC: Georgetown University Press; 2006.
- Gregory EP. *Classic Cases in Medical Ethics*. 3rd ed. New York: McGraw-Hill Higher Education; 2000.
- Thomas AM, DeGrazia D, editors. *Biomedical Ethics*. 6th ed. New York: McGraw-Hill Higher Education; 2006.
- Dickenson DL. Practitioners' attitudes towards ethical issues at the end of life: Is the UK actually more autonomy-minded than the US?. *J Palliat Care* 1999;15:57-63.
- AlKabba AF, Hussein GM, Kasule OH, Jarallah J, Alrukban M, Alrashid A. Teaching and evaluation methods of medical ethics in the Saudi public medical colleges: Cross-sectional questionnaire study. *BMC Med Educ* 2013;13:122-30.
- Baldwin DC, Dugherty SR, Rowley BD. Unethical and Unprofessional conduct observed by residents during their first year of training. *Acad Med* 1998;73:1195-200.
- De Panfilis L, Tanzi S, Perin M, Turola E, Artioli G. "Teach for ethics in palliative care": A mixed-method evaluation of a medical ethics training programme. *BMC Palliat Care* 2020;19:149. doi: 10.1186/s12904-020-00653-7.
- Famuyide M, Compretta C, Ellis M. Neonatal nurse practitioner ethics knowledge and attitudes. *Nurs Ethics* 2019;26:2247-58.
- Singh S, Sharma PK, Bhandari B, Kaur R. Knowledge, awareness and practice of ethics among doctors in tertiary care hospital. *Indian J Pharmacol* 2016;48(Suppl 1):S89-93.
- Hussein G. Democracy: The forgotten challenge for bioethics in the developing countries. *BMC Med Ethics* 2009;10:3-7.
- Ministry of Health. *Annual Statistical Book*. Riyadh: Ministry of Health; 2017.
- AbuAbah F, Alwan A, Al-Jahdali Y, Al Shaikh A, Alharbi A, Al-Jahdali H. Common medical ethical issues faced by healthcare professionals in KSA. *J Taibah Univ Med Sci*

- 2019;14:412-7.
15. Mohamed AM, Ghanem MA, Kassem A. Knowledge, perceptions and practices towards medical ethics among physician residents of University of Alexandria Hospitals, Egypt. *East Mediterr Health J* 2012;18:935-45.
 16. Denham MJ, Foster A, Tyrrell DA. Work of a district ethical committee. *Br Med J* 1979;2:1042-5.
 17. Hern HG. Ethics and human values committee survey: (AMI Denver Hospitals: Saint Luke's, Presbyterian Denver, Presbyterian Aurora: Summer 1989). A study of physician attitudes and perceptions of a hospital ethics committee. *HEC Forum* 1990;2:105-25.
 18. Iswarya S, Bhuvaneshwari S. Knowledge and attitude related to medical ethics among medical students. *Int J Community Med Public Health* 2018;5:2222-5.
 19. Adhikari S, Paudel K, Aro AR, Adhikari TB, Adhikari B, Mishra SR. Knowledge, attitude and practice of healthcare ethics among resident doctors and ward nurses from a resource poor setting, Nepal. *BMC Med Ethics* 2016;17:68-76.
 20. Tiruneh MA, Ayele BT, Beyene KG. Knowledge of, and attitudes toward, codes of ethics and associated factors among medical doctors in Addis Ababa, Ethiopia. *Medicoleg Bioeth* 2019;9:1-10.