



Knowledge, Attitudes and Practices of Medical Residents towards Healthcare Ethics in the Islamic Hospital, Jordan

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ABSTRACT

Objective: To assess the baseline knowledge, attitudes and practices of medical residents in the Islamic Hospital in Amman, Jordan towards healthcare ethics.

Methods: This was a cross-sectional study conducted among 111 medical residents in the Islamic Hospital in the period from February to April 2017. Data were collected using a self-administered questionnaire, and Pearson's chi-square test was used to test the statistical significance of differences between male and female medical residents at P values <0.05 .

Results: The majority of the respondent medical residents (76.6%) were aware of the content of the Hippocratic Oath. Ethical dilemmas at some point during clinical practice were reported by 68.0% of medical residents; however, only 6.3% reported encountering such dilemmas on a daily basis. Books, lectures and Media were the most frequent sources used by medical residents for learning about healthcare ethics, while supervisors, chiefs of residents and heads of departments were the most frequently preferred for consultation on both ethical and legal problems. The majority (91%) of respondents showed an interest in learning healthcare ethics. However, gaps in knowledge and negative attitudes were observed. Statistically significant differences between male and female residents were found in the issues related to paternalism in case of disagreement with patients/ families, seeking consent for surgeries but not for tests or medications as well as disclosure of tuberculosis-positive status.

Conclusions: There are some gaps in knowledge and negative attitudes towards healthcare ethics among medical residents, where some residents are even unaware of the content of the Hippocratic Oath. Because a substantial proportion of medical residents encounter ethical problems at some point during their clinical practice, there is a necessity to incorporate ethics education into medical curricula, which should be directed at practical real-world dilemmas. Future physicians must learn how to adhere to the four basic principles of healthcare ethics (autonomy, beneficence, justice and nonmaleficence) early in their career.

Keywords: Knowledge, Attitude, Practice, Medical resident, Ethics, Jordan

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1. Introduction

Ethics implies an understanding of any conflicts that may arise from the moral imperatives and the best ways to address them.⁽¹⁾ In particular, it is concerned with conflicts in possible outcomes or with duties and obligations. Ethics does not essentially determine the moral rightness but rather the best actions in the light of the demanding duties and obligations. Health ethics is an interdisciplinary discipline that focuses on understanding the values supporting decisions and actions in health care, research and policy in addition to providing guidance for action in case of conflicting values. Health ethics is distinct from medical ethics, which focuses on the ethical issues within a clinical context pertaining to the care of specific patients, and from bioethics, which deals with ethical issues related to the health of all living beings.^(2, 3)

Medical ethics has been included in the curricula of many undergraduate and graduate medical programs worldwide. However, few studies have been conducted to evaluate the impact of the curriculum content on medical practice and physician-patient relationship.^(4–6) Studies suggest that integration of medical ethics education into these curricula can lead to a significant improvement in the knowledge and confidence of future physicians in handling ethical dilemmas by providing them with the essential skills to analyze and resolve such dilemmas. Further development of medical ethics education is needed to support the positive professional growth of physicians and improve the delivery of healthcare to patients. Therefore, such education should be directed at practical real-world dilemmas as well as professional and developmental issues of ethical significance by physicians-in-training.^(7–14)

The four basic principles of healthcare ethics: autonomy, beneficence, justice and nonmaleficence, which were included in the Hippocratic Oath (400 BCE), form the moral ground of clinical

practice. Future physicians must learn and abide by these principles early in their career.^(15–19) Several studies revealed that medical residents face many ethical challenges, sometimes on a daily basis, in addition to their negative attitudes and low level of knowledge.^(20–29) Therefore, the present study aimed to assess the baseline knowledge, attitudes and practices (KAPs) of medical residents in the Islamic Hospital in Amman (2017) towards healthcare ethics.

2. Methods

2.1. Study design, setting and participants

This was a cross-sectional study conducted in the Islamic Hospital, a private, multi-specialty teaching hospital in Amman - Jordan, in the period from February to April 2017. All medical residents enrolled in the residency programs of the Islamic Hospital at the time of data collection were invited to participate in this study. One hundred and eleven respondents were enrolled after obtaining their written informed consent. Data were then collected using self-administered questionnaires.

2.2. Questionnaire development

Based on literature review, a 30-item standardized self-administered questionnaire was used in this study. Several items and sections of this questionnaire were used by other studies.^(20, 24, 27) This questionnaire was pilot-tested on 15 medical residents to identify ambiguous or difficult questions, acceptability of questions and the time needed to complete the questionnaire. Respondents were asked to give their feedback and their comments on an external sheet, and minor changes were made accordingly. A cover page was added to explain the aim of the study. The Hippocratic Oath was translated into Arabic and written as adopted by the Jordanian Medical Association.

The questionnaire was divided into three main sections. The first section included questions about demographic characteristics of the study



participants (age, gender and year of residency), frequency of ethical dilemmas encountered in clinical practice, sources of learning about healthcare ethics and preference for consultation when an ethical or legal problem arises. Finally, respondents were asked if they know the content of the Hippocratic Oath. The second section included eight questions to identify residents' attitudes towards ethical challenges such as physician-patient-family relationship, abortion and treatment of children without parental consent. The third section included 14 questions about practical real-world ethical issues faced daily by physicians-in-training.

2.3. Data analysis

Data were analyzed using IBM SPSS Statistics for Windows®, version 21.0 (IBM Corp., Armonk, NY, USA). Pearson's chi-square test was used to test differences between categorical variable, and differences were considered statistically significant at P values <0.05 .

3. Results

3.1. Demographic characteristics of respondents

Table (1) shows that the majority of medical residents participating in the study were males (62.2%), aged between 25 and 35 years (85.6%) and in the first year of residency program (29.7%).

3.2. Sources of learning about healthcare ethics

Table (2) shows that ethics books (58.6%), lectures such as Continuous Medical Education (CME) lectures (54.1%) and Media such as TV and newspapers (49.5%) were the most frequent sources used by medical residents for learning about healthcare ethics. On the other hand, panel discussions were the least preferred source of learning about healthcare ethics.

Table 1. Demographic characteristics of medical residents in the Islamic Hospital, Amman, Jordan (2017)*

Characteristic	n (%)
Gender	
Male	69 (62.2)
Female	42 (37.8)
Age (years)	
<25	3 (2.7)
25-35	95 (85.6)
>35	13 (11.7)
Year of residency	
First	33 (29.7)
Second	24 (21.6)
Third	28 (25.2)
Fourth	19 (17.1)
Fifth	7 (6.3)

*Total number of respondents was 111.

Table 2. Preferred sources of learning about healthcare ethics among medical residents in the Islamic Hospital, Amman, Jordan (2017)*

Source of learning	n (%)
Ethics journals	48 (43.2)
Ethics books	65 (58.6)
General texts	51 (45.9)
Media (newspapers/TV)	55 (49.5)
Workshops	50 (45.0)
Lectures (UG/CME)	60 (54.1)
Panel discussions	29 (26.1)
Case conferences	49 (44.1)

*Total number of respondents was 111; Respondents were given the option to choose more than one source.

3.3. Frequency of ethical dilemmas and preference for consultation

Table (3) shows that 32.0% of medical residents never encountered ethical dilemmas during their clinical practice. Of the 68.0% medical residents who encountered ethical dilemmas at some point during their clinical practice, only 6.3% reported encountering such dilemmas on a daily basis.

Table 3. Frequency of ethical dilemmas in clinical practice encountered by medical residents in the Islamic Hospital, Amman, Jordan (2017)*

Frequency of ethical dilemmas	n (%)
Never	36 (32.4)
Daily	7 (6.3)
Weekly	23 (20.7)
Monthly	20 (18.0)
Yearly	25 (22.5)

*Total number of respondents was 111.

Regarding the preferred type of consultation on the ethical problems encountered during clinical practice, seeking consultation from supervi-



sors (55.0%), chiefs of residents (54.1%) and heads of departments (52.3%) were the most frequent types of consultations reported by medical residents. However, consultations with close friends or family (10.8%), texts or Internet (16.2%) or professional associations (20.7%) were the least preferred types of consultation by medical residents (Table 4).

Table 4. Preference for consultation regarding ethical problems encountered in clinical practice by medical residents in the Islamic Hospital, Amman, Jordan (2017)*

Preferred consultation	n	(%)
Close friend/ family	12	(10.8)
Text or Internet	18	(16.2)
Professional association	23	(20.7)
Matron	33	(29.7)
Hospital administration	39	(35.1)
Ethics committee	44	(39.6)
Colleague	54	(48.6)
Head of department	58	(52.3)
Chief of residents	60	(54.1)
Supervisor	61	(55.0)

* Total number of respondents was 111. Respondents were given the option to choose more than one preference.

Table 5. Preference for consultation regarding legal problems encountered in clinical practice by medical residents in the Islamic Hospital, Amman, Jordan (2017)*

Preferred consultation	n	(%)
Trade union	8	(7.2)
Professional insurance company	18	(16.2)
Matron	37	(33.3)
Colleague	43	(38.7)
Hospital administrator	56	(50.5)
Chief of medical staff	58	(52.3)
Lawyer	58	(52.3)
Supervisor	64	(57.7)

* Total number of respondents was 111. Respondents were given the option to choose more than one preference.

With respect to the preferred type of consultation on the legal problems encountered during clinical practice, seeking consultation from supervisors (57.7%), lawyers (52.3%), chiefs of medical staff (52.3%) and hospital administrators (50.5%) were the most frequent types of consultations reported by medical residents. However, consulta-

tions with trade unions (7.2%), professional insurance companies (16.2%) were the least preferred types of consultation by medical residents (Table 5).

3.4. Attitudes of medical residents towards certain issues in healthcare ethics

Table (6) shows that the majority of medical residents of the Islamic Hospital (85.6%) agreed on the importance of confidentiality of relationship with patients, with no statistically significant difference between male and female medical residents. In addition, 55%, 60.4%, 72.1% and 73.0% of medical residents agreed on the adherence to patients' wishes, paternalism regarding doing their best for the patients irrespective of their opinions, refusal to perform abortions even if permitted by law and parental consent for the treatment of children, respectively. However, no statistically significant differences were observed between the attitudes of male and female medical residents.

Concerning the principle of nonmaleficence, 64% of medical residents agreed that patients should always be informed of wrongdoing, and 46.8% agreed that close relatives should always be told about the patient's condition. However, there were no statistically significant differences between male and female residents. On the other hand, more than half of medical residents (51.4%) agreed on the paternalistic attitude of residents in case of disagreement between patients/families and healthcare professionals about treatment decisions. Moreover, there was a statistically significant difference ($P = 0.029$) in such a paternalistic attitude of residents, where 59.4% of male residents and 38.1% of female residents agreed that their decision should be final.



Table 6. Medical residents' attitudes towards certain issues related to healthcare ethics in the Islamic Hospital in Amman, Jordan (2017)

Issues in healthcare ethics	Attitudes		P value
	Agree n (%)	Disagree n (%)	
Confidentiality of patients is not important			
Male residents	9 (13.0)	60 (87.0)	0.598
Female residents	7 (16.7)	35 (83.3)	
Total	19 (14.4)	95 (85.6)	
Patient wishes must always be adhered			
Male residents	38 (55.1)	33 (44.9)	0.975
Female residents	23 (54.8)	19 (45.2)	
Total	61 (55.0)	52 (45.0)	
Doctor should take action irrespective of the patient's opinion			
Male residents	41 (59.4)	28 (40.6)	0.795
Female residents	26 (61.9)	16 (38.1)	
Total	67 (60.4)	44 (39.6)	
If the law permits abortion, doctors cannot refuse to perform it			
Male residents	19 (27.5)	50 (72.5)	0.906
Female residents	12 (28.6)	30 (71.4)	
Total	31 (27.9)	80 (72.1)	
Children should never be treated without the consent of their parents			
Male residents	51 (73.9)	18 (26.1)	0.775
Female residents	30 (71.4)	12 (28.6)	
Total	18 (73.0)	30 (27.0)	
Patients should always be informed of wrongdoing			
Male residents	46 (66.7)	23 (33.3)	0.447
Female residents	25 (59.5)	17 (40.5)	
Total	71 (64.0)	40 (36.0)	
Close relatives should always be informed of the patient's condition			
Male residents	33 (47.8)	36 (52.2)	0.791
Female residents	19 (45.2)	23 (54.8)	
Total	52 (46.8)	59 (53.2)	
In case of disagreement between patients/families and healthcare professionals about treatment decisions, doctor decision should be final			
Male residents	41 (59.4)	28 (40.6)	0.029*
Female residents	16 (38.1)	26 (61.9)	
Total	57 (51.4)	54 (48.6)	

* Statistically significant at $P < 0.05$.

3.5. Perceptions and practices of healthcare ethics among medical residents

Table (7) shows that the majority of respondents showed interest in learning healthcare ethics (91%), perceived the necessity of incorporating ethics education into undergraduate curricula (97.3%) and teaching it as a part of the syllabus in medical/nursing teaching institutions (82.9%). However, 35.1% of them believed in the importance of ethical conduct only to avoid legal problems. It is noteworthy that there were no statistically significant differences according to the gender with respect to the above-mentioned perceptions.

Concerning residents' practice, the majority of medical residents agreed on the refusal to examine a female patient in the absence of chaperone (65.8%), disclosure of tuberculosis-positive status

to prevent transmission (72.1%), serving in remote areas and underserved populations (89.2%), luring of doctors by drug companies (55%) and sin of cheating in degree exams (56.8%). However, the majority of medical residents disagreed on the possibility of not adhering to confidentiality when it is difficult (77.5%), seeking consent only for surgeries but not for tests or medications (59.5%), having benefits from referring patients (63.1%) and documentation of neurological examination or blood pressure findings as normal without performing them (63.1%). Although the majority of medical residents were against euthanasia, 18.9% agreed to assist patients who wish to die.



Table 7. Medical residents' perceptions and practices regarding issues of healthcare ethics in the Islamic Hospital in Amman, Jordan (2017)

Issues in healthcare ethics	Responses		P value
	Yes n (%)	No n (%)	
Interest in learning about healthcare ethics			
Male residents	64 (92.8)	5 (7.2)	0.406
Female residents	37 (88.1)	5 (11.9)	
Total	101 (91.0)	10 (9.0)	
Necessity of incorporating healthcare ethics into undergraduate curricula			
Male residents	67 (97.1)	2 (2.9)	0.87
Female residents	41 (97.6)	1 (2.4)	
Total	108 (97.3)	3 (2.7)	
Teaching ethics as part of syllabus in medical/ nursing teaching institutions			
Male residents	55 (79.7)	14 (20.3)	0.255
Female residents	37 (82.9)	5 (11.9)	
Total	92 (88.1)	19 (17.1)	
Ethical conduct is only important to avoid legal actions			
Male residents	26 (37.7)	43 (62.3)	0.471
Female residents	13 (31.0)	29 (69.0)	
Total	39 (35.1)	72 (64.9)	
Confidentiality should be abandoned when becomes difficult to keep			
Male residents	17 (24.6)	52 (75.4)	0.494
Female residents	8 (19.0)	34 (81.0)	
Total	25 (22.5)	86 (77.5)	
Physicians can receive commission for referring patients for medical tests			
Male residents	27 (39.1)	42 (60.9)	0.539
Female residents	14 (33.3)	28 (66.7)	
Total	41 (36.9)	70 (63.1)	
Consent is only required for surgeries but not for tests or medications			
Male residents	23 (33.3)	46 (66.7)	0.047*
Female residents	22 (52.4)	20 (47.6)	
Total	45 (40.5)	66 (59.5)	
Copying answers in degree examinations is bad/a sin			
Male residents	40 (58.0)	29 (42.0)	0.741
Female residents	23 (54.8)	19 (45.2)	
Total	63 (56.8)	48 (43.2)	
Acceptability of recording neurological examination or blood pressure as normal for completion of documentation			
Male residents	26 (37.7)	43 (62.3)	0.835
Female residents	15 (35.7)	27 (64.3)	
Total	41 (36.9)	70 (63.1)	
If a patient wishes to die, he or she should be assisted in doing so			
Male residents	13 (18.8)	56 (81.2)	0.978
Female residents	8 (19.0)	34 (81.0)	
Total	21 (18.9)	90 (81.1)	
Physicians are influenced by drug company inducements, including gifts			
Male residents	41 (59.4)	28 (40.6)	0.226
Female residents	20 (47.6)	22 (52.4)	
Total	61 (55.0)	50 (45.0)	
Disclosure of tuberculosis-positive status to neighbors should be done to prevent transmission of tuberculosis			
Male residents	55 (79.7)	14 (20.3)	0.022*
Female residents	25 (59.5)	17 (40.5)	
Total	80 (72.1)	31 (27.9)	
It is ethical to refuse the examination of patients of the opposite sex at a given situation			
Male residents	48 (69.6)	21 (30.4)	0.280
Female residents	25 (59.5)	17 (40.5)	
Total	73 (65.8)	38 (34.2)	
Physicians must serve hard to reach remote areas and underserved populations			
Male residents	61 (88.4)	8 (11.6)	0.733
Female residents	38 (90.5)	4 (9.5)	
Total	99 (89.2)	12 (10.8)	

*Statistically significant at $P < 0.05$

Table (7) shows that differences between male and female residents were only statistically significant in case of their attitudes towards seeking consent for surgeries but not for tests or medications

(33.3% vs. 52.4% of male and female residents, respectively; $P = 0.047$) and disclosure of tuberculosis-positive status (79.7% vs. 59.5 % of male and female residents, respectively; $P = 0.022$).



4. Discussion

To the best of our knowledge, this is the first study to assess the KAPs of medical residents towards the ethical principles of healthcare in the Islamic Hospital in Amman as the first step to construct an effective, practice-based teaching curriculum. The finding that about three-quarters of medical residents (data not presented) in the present study were aware of the content of the Hippocratic Oath is higher than that (66.9%) reported among Nepalese residents.⁽²⁰⁾ The knowledge of the ethical principles included in the Hippocratic Oath by physicians-in-training as the moral ground of clinical practice could be attributed to the fact that all medical residents swear that Oath during graduation.

The most preferred sources reported by respondents for learning about healthcare ethics were books, lectures and Media. Such finding is consistent with that reported among Nepalese medical residents,⁽²⁰⁾ but it is inconsistent with that among health professionals from Barbados,⁽²⁴⁾ where ethics journals were the most preferred source of learning. It is noteworthy that panel discussions were the least preferred sources of learning about healthcare ethics despite being a valuable way to trigger an exchange of viewpoints regarding healthcare ethics among experts.

In the present study, about a third of medical residents reported no ethical problems during their clinical practice, and only 6.3% encountered such problems on a daily basis. These findings disagree with that reported among physician residents from Alexandria - Egypt,⁽²⁷⁾ where 37% of residents stated facing ethical problems on a daily basis. The lower rate of daily ethical problems in the Islamic Hospital could be attributed to either the high commitment of its residents to ethical practices or their inability to recognize such problems because of inadequate awareness of ethical challenges.

In general, residents prefer to consult their seniors because they consider them as their mentors. Accordingly, the majority of medical residents in the present study preferred to consult their supervisors, chiefs of residents and heads of departments on emergent ethical issues. Therefore, seniors are expected to act as role models for their juniors and to be conscious of the ethical dilemmas encountered in clinical practice and the best ways to deal with them.

The present study revealed that consulting supervisors is the most preferred consultation type when legal problems arise during clinical practice, which was even higher than the consultation of lawyers. This may reflect a separation of ethical and legal conducts in the perception of medical results or to the presence of some barriers such as financial barriers that prevent them from consulting lawyers. Although many residents are registered with a trade union, less than 10% only opted to consult them, which is a very serious problem necessitating the enhancement and strengthening of their roles in providing the guidance for physicians regarding ethical and legal problems.

Although most medical residents in the present study expressed their interest in learning about healthcare ethics and perceived the necessity of incorporating ethics education into undergraduate and graduate curricula, about a third misconceived that ethics education is only important to avoid legal problems. Residents showed positive attitudes towards adherence to confidentiality, refusal of performing abortion and treating children without parental consent. However, they showed somehow negative attitudes towards paternalism and nonmaleficence. Most residents also expressed positive attitudes towards several aspects of ethics practice such as infection control, consent seeking and physical examination of opposite sex. However, negative attitudes were also substantially expressed in other aspects such as luring of physicians by drug com-



panies, cheating in degree exams and false documentation of examinations. Of particular interest, the proportion (18.9%) of medical residents who agreed on the assistance of patients wishing to die is considerably higher than those reported in other studies.^(20, 24, 27) Such finding is disturbing since euthanasia is illegal in Jordan and forbidden by the Islamic beliefs.

The present study is limited by the fact that it was conducted in a single hospital. Therefore, its findings cannot be generalized to the medical residents of the entire country. In addition, the small sample size of the study also limits its generalizability, which is mainly due to the lack of cooperation by some residents.

5. Conclusions

There are some gaps in knowledge and negative attitudes towards healthcare ethics among medical residents, where some residents are even unaware of the content of the Hippocratic Oath. Because a substantial proportion of medical residents encounter ethical problems at some point during their clinical practice, there is a necessity to incorporate ethics education into medical curricula, which should be directed at practical real-world dilemmas. Future physicians must learn how to adhere to the four basic principles of healthcare ethics (autonomy, beneficence, justice and nonmaleficence) early in their career.

Ethical considerations

The study protocol was approved by the administration of the Islamic Hospital, Amman, Jordan and the Research Ethics Committee of the Faculty of Medicine at Yemen University of Science and Technology, Jordan Branch.

Authors' contributions

FA designed the study, analyzed and interpreted the collected data. FA and AAM designed the questionnaire. WA and AA collected the data for the study, reviewed literature and wrote the initial manuscript. FA and AAM drafted the manuscript for publishing. All authors approved the final draft of the manuscript.

Competing interests

The authors declare that they have no competing interests associated with this article.

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