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Assessment of perceived needs and preferences with regard to the education of residents in Medical Ethics in King Abdulaziz University Hospital

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Abstract:

INTRODUCTION: Medical ethics is the branch of ethics that deals with moral issues in medical practice. Many postgraduate training programs have developed educational interventions in ethics to meet accreditation standards and prepare learners for certification examinations and clinical practice. The aim of this study was to assess the attitude of residents in King Abdulaziz University Hospital (KAUH) toward the need for ethics education and identify the most effective methods of teaching ethical issues.

MATERIALS AND METHODS: A cross-sectional study of residents in different specialties at KAUH was conducted using a self-administered questionnaire. The questionnaire consisted of four parts: demographic data, assessment of the educational need for ethics education, assessment of the impact of various learning methods, and assessment of the need for ethically important practices and behavior. SPSS version 16.0 was used for data entry and analysis. Descriptive analysis included frequency distribution, percentages, mean, and standard deviation (SD); Chi-square test and t-test were employed to determine statistical significance.

RESULTS: Eighty-eight of the 102 residents invited to participate in the study returned completed questionnaires, providing a response rate of 86.3%. Their ages ranged between 24 and 38 years with a mean of 27.7 (standard deviation 2.8) years. Approximately two-thirds of the residents (65.9%) agreed that medical ethics can be taught and learned while only 19.3% of them disagreed. The most effective methods of ethical education according to the residents were discussion groups of peers led by a knowledgeable clinician (78.4%), clinical rounds (72.7%), and an incorporation of ethical issues into lectures and teaching rounds (69.3%).

CONCLUSION: This study documents the importance residents placed on ethics education directed at practical, real-world dilemmas and ethically important professional developmental issues.

Keywords:

Ethics, needs, residents, Saudi Arabia

Introduction

Ethics is the study of morality – careful and systematic reflection on and analysis of moral decisions and behavior, whether past, present, or future. Medical ethics is the branch of ethics that deals with moral issues in medical practice. Ethics has been an integral part of medicine at least since the

time of Hippocrates, the Greek physician regarded as the founder of medical ethics, during the fifth century before the Christian era. From Hippocrates came the concept of profession, whereby physicians make a public promise that they will place the interests of their patients above their own.^[1]

Over the past three decades, medical practice has been increasingly complicated

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by the emergence of moral conflicts in medical care and clinical research, the development of sophisticated medical technology, and the influence of legal and health system issues on clinical care. For these reasons, medical ethics is now considered a key foundational component of the essential knowledge and skills required for good clinical practice.^[2]

The importance of ethics education at the postgraduate level is widely recognized. Many postgraduate training programs have developed educational interventions in ethics to meet accreditation standards and to prepare learners for certification examinations and clinical practice.^[3]

The aim of this study was to assess the views of residents in King Abdulaziz University Hospital (KAUH) on the need for ethical education, identify the residents' perspective on the most effective methods of teaching ethical issues, and identify the ethical topics on which residents need more education. As far as the researcher knows, this is the first study of its kind to aim at filling the gap in the literature for the Saudi residents.

Materials and Methods

A cross-sectional study design was adopted. All residents working in every department of KAUH during the study were invited to participate. A total of 102 residents participated in the study.

A self-administered validated questionnaire was adopted from a survey that was developed at the University of New Mexico, USA, 2005^[4] and modified by the researcher. The questionnaire included four sections: (1) demographic data, (2) assessment of the impact of various learning methods, (3) assessment of educational needs concerning ethically important practices and behavior, (4) assessment of the educational need for ethics education. Ten residents from the joint program of family medicine in Jeddah completed the questionnaires for the pilot study, which was then modified according to the results.

Written permission from the Research Ethics Committee at the Faculty of Medicine, King Abdulaziz University, was obtained before conducting the research. Questionnaires were distributed to physicians with a personalized cover letter. Anonymity was assured, and the confidentiality of the data was confirmed. By answering the questionnaires, the residents agreed to participate in the study.

Statistical analysis

The data were collected and verified by hand then coded before they were entered. The Statistical Package for the Social Sciences (SPSS) software, version 16.0,

was used for data entry and analysis. Descriptive statistics (e.g., number, percentage, range, standard deviation [SD], and arithmetic mean) and analytic statistics using Chi-square tests to test for the association and/or the difference between two categorical variables were applied; $p \leq 0.05$ was considered statistically significant.

Residents' perceived needs and attitude toward ethics education scores were assessed using 5-point Likert scale as follows: the participating residents were asked to respond to ten questions with "strongly disagree," "disagree," "neutral," "agree," or "strongly agree." In questions 2, 3, 5, 7, 9, and 10, "strongly agree" was given the highest score of 5, and "strongly disagree" was given the lowest score of 1. In questions 1, 4, 6, and 8, "strongly disagree" was given the highest score of 5, and "strongly agree" was given the lowest score of 1. The overall score was calculated so that the higher the score, the higher the perceived needs and attitude toward ethics education and vice versa. The median value of the overall score was used as a cutoff point for attitude categorization. Residents were classified as having a positive attitude toward ethics education if they had an overall score of ≥ 36 and as having a negative attitude if they had a score of < 36 .

Results

Overall, 88 of the 102 residents invited to participate in the study returned completed questionnaires, yielding a response rate of 86.3%. Table 1 shows their age range as between 24 and 38 years, with a mean of 27.7 (SD 2.8) years. Almost two-thirds of the participants (67%) were female, and most were Saudi (77.3%) and had Graduated from King Abdulaziz University (KAU) (72.2%). The main specialties of these residents were internal medicine (27.3%), pediatrics (20.5%), and obstetrics and gynecology (20.5%). The majority were enrolled in a residency program (89.2%), of which 33.3% were in R1 and 32.1% were in R2.

Table 2 displays perceived needs of residents for ethics education. More than half of the participants (59.1%) agreed that ethics should be formally taught in the residency curriculum while less than half (41.8%) agreed that attitudes and values were established by the time students reached residency. About 36% of the residents agreed that there were no right and wrong answers to ethical questions. More than half of the participants (58.3%) agreed that ethics was a discipline with its own methods, literature, vocabulary, and content. Most residents (71.6%) disagreed with the statement that attitudes and values were not an appropriate focus for residents' education. The majority (85%) disagreed with the statement that

training in ethics did not help residents deal with ethical conflicts. Only 13.8% of the residents agreed that the training they had had was adequate to handle the ethical conflicts they were likely to face.

Table 1: Characteristics of the participants (n=88)

Characteristics	N (%)
Age (years)	
<30	65 (73.9)
≥30	23 (26.1)
Range (years)	24-38
Mean±SD (years)	27.7±2.8
Gender	
Male	29 (33)
Female	59 (67.0)
Nationality	
Saudi	68 (77.3)
Non-Saudi	20 (22.7)
University of graduation (n=79)	
King Abdulaziz University	57 (72.2)
Others	22 (27.8)
Specialty	
Internal medicine	24 (27.3)
Pediatrics	18 (20.5)
Obstetrics and gynecology	18 (20.5)
Surgery	8 (9)
Radiology	6 (6.8)
Emergency medicine	5 (5.7)
Family medicine	4 (4.5)
Others	5 (5.7)
Type of residency (n=83)	
Program	74 (89.2)
Service	9 (10.8)
Level of residency (n=78)	
R1	26 (33.3)
R2	25 (32.1)
R3	16 (20.5)
R4	8 (10.3)
R5	3 (3.8)
Sponsor (n=80)	
King Abdulaziz University	55 (68.8)
Others	25 (31.2)

SD=Standard deviation

Residents' opinions on methods for ethical education are shown in Figure 1. The most effective methods of ethical education from the residents' perspective were discussion groups of peers led by a knowledgeable clinician (78.4%), clinical rounds (72.7%), incorporation of ethical issues into lectures and teaching rounds (69.3%), grand rounds presentations (68.2%), discussion of clinical ethics with ethics consultants (68.2%), and interaction with patients in routine training situations (67%). The least effective methods of ethical education from the residents' viewpoint were independent reading (29.6%), discussion groups of peers without the leadership of a clinician (34.1%), web-based educational approaches (35.2%), and lectures (38.6%), as shown in Figure 1.

Figure 2 displays ethical topics that required more attention. About 73% residents reported that they needed more instruction on how to engage patients in discussing the risks, benefits, and alternatives to the recommended treatment while 63.6% needed more guidance on how to obtain informed refusal from patients who decline the recommended treatment. Most residents (70.4%) reported that they needed more training on taking decisions on how much clinical information to share with patients. Approximately, two-thirds of the residents mentioned that they needed more guidance on deciding

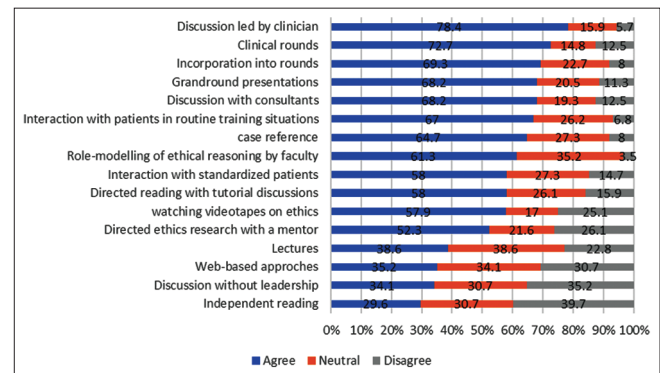


Figure 1: Residents' opinions on methods for ethical education (n = 88)

Table 2: Perceived need of residents for medical education (n=88)

Statement	Strongly disagree N (%)	Disagree N (%)	Neutral N (%)	Agree N (%)	Strongly Agree N (%)
1. Ethics should be formally taught in the residency curriculum	4 (4.5)	20 (22.7)	12 (13.6)	13 (14.8)	39 (44.3)
2. Attitudes and values are entrenched by the time students reach residency	9 (10.5)	8 (9.3)	33 (38.4)	21 (24.4)	15 (17.4)
3. No right and wrong answers to medical questions	17 (19.8)	13 (15.1)	25 (29.1)	16 (18.6)	15 (17.4)
4. Ethics is a discipline with its own methods, vocabulary, and contents	2 (2.4)	6 (7.1)	27 (32.1)	28 (33.3)	21 (25.0)
5. Attitudes and values are not an appropriate focus for resident education	47 (53.4)	16 (18.2)	10 (11.4)	8 (9.1)	7 (8.0)
6. Ethical conflicts are common in the everyday practice of medicine	0	4 (4.5)	16 (18.2)	31 (35.2)	37 (42.0)
7. Training in ethics does not help residents deal with ethical conflicts	43 (49.4)	31 (35.6)	6 (6.9)	6 (6.9)	1 (1.1)
8. Residents receive adequate training to handle the ethical conflicts they face	25 (28.7)	31 (35.6)	19 (21.8)	10 (11.5)	2 (2.3)
9. It is important that physicians in training take an oath or declaration to uphold the values of the profession	4 (4.7)	3 (3.5)	25 (29.1)	23 (26.7)	31 (36.0)

when to withhold information from patients (65.9%) and how to obtain informed consent from patients whose capacity to make decisions is compromised (64.8%). Figure 3 shows that approximately two-thirds of the residents who participated in the study (65.9%) agreed that medical ethics can be taught and learned, while only 19.3% disagreed.

Table 3 shows residents' opinions on some common ethical, social, philosophical, and legal topics. It shows that 29 residents (32.9%) reported that acceptance of gifts from patients is an issue that should receive more attention while 38 (43.1%) reported that the issue of receiving gifts and meals from drug companies should receive more attention. Approximately two-thirds of the participants reported that the topics involving interaction with patients' families (64.8%), responding to a colleague who was incapacitated (68.2%), resolving conflicts between allied health professionals (65.9%), and resolving conflicts between attending physicians and trainees (69.3%) should receive more attention. Exactly half of them reported that being asked to falsify clinical information is an issue that should receive more attention. Less than half of the residents (45.4%) reported that the learning procedures on cadavers should be

addressed while most (72.7%) reported that greater attention should be paid to the issue of confidentiality of medical records.

Table 4 shows factors associated with perceived needs and attitudes toward medical ethics education. More than half of the younger residents (52.3%) compared to 39.1% of those over 30 years old had a positive attitude toward education on medical ethics. However, this difference was not statistically significant. Residents' gender was not significantly associated with their perceived needs and attitude toward ethics education. Non-Saudi residents had more perceived needs and positive attitudes toward ethics education. However, it was not statistically significant. The universities from which the residents graduated were not significantly associated with their perceived needs and attitude toward ethics education. Slightly more than half of those in nonsurgical specialties (51.9%) had a positive attitude toward medical ethics education compared to residents (44.4%) in the surgical specialty. However, this difference was not statistically significant. The type of residency was not significantly associated with their perceived needs and attitudes towards ethics education. Slightly more than half of residents in levels R1–R3 (52.2%) compared to 4 residents in levels R4–R5 (36.4%) had a positive attitude towards medical ethics education. However, this difference was not statistically significant. The sponsor was not significantly associated with residents' perceived needs and attitude toward ethics education.

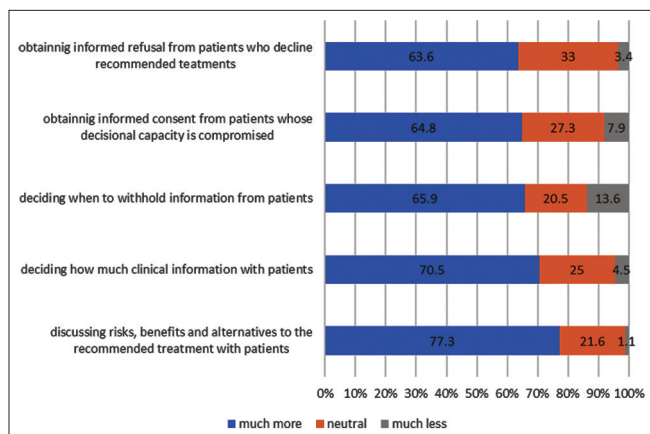


Figure 2: Residents' opinions on ethical topics that need more attention (% of agreement)

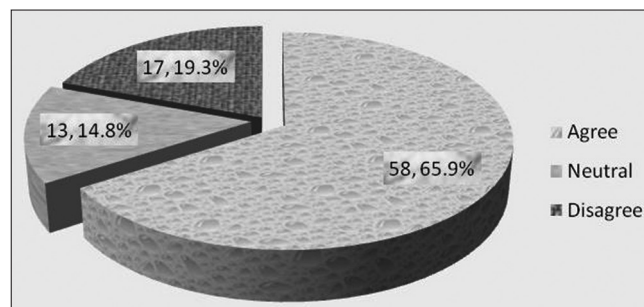


Figure 3: Residents' opinion regarding the possibility of teaching ethics

Table 3: Residents' opinions on some common ethical, social, philosophical, and legal topics (n=88)

Principle	Much less N (%)	Less N (%)	Neutral N (%)	More N (%)	Much more N (%)
1. Accepting gifts from patients	17 (19.3)	14 (15.9)	28 (31.8)	17 (19.3)	12 (13.6)
2. Drug companies supplying gifts and lunches	12 (13.6)	19 (21.6)	19 (21.6)	23 (26.1)	15 (17)
3. Learning procedures on cadavers	7 (8)	7 (8)	34 (38.6)	17 (19.3)	23 (26.1)
4. Interactions with patients' families	4 (4.5)	6 (6.8)	21 (23.9)	29 (33)	28 (31.8)
5. Confidentiality of medical records	1 (1.1)	2 (2.3)	21 (23.9)	33 (37.5)	31 (35.2)
6. Responding to an incapacitated colleague	0	3 (3.4)	25 (28.4)	29 (33)	31 (35.2)
7. Being asked to falsify clinical information	2 (2.3)	8 (9.1)	34 (38.6)	24 (27.3)	20 (22.7)
8. Resolving conflicts between attending's and trainees	1 (1.1)	4 (4.5)	22 (25)	37 (42)	24 (27.3)
9. Resolving conflicts between allied health professionals	2 (2.3)	5 (5.7)	23 (26.1)	32 (36.4)	26 (29.5)
10. Giving medical advice to friends and family	0	4 (4.5)	19 (21.6)	31 (35.2)	34 (38.6)

Table 4: Association between baseline characteristics of residents and perceived needs and attitudes towards ethics education

Characteristics	Perceived needs and attitudes		χ^2	p-Value
	Negative (n=45) N (%)	Positive (n=43) N (%)		
Age (years)				
<30 (n=65)	31 (47.7)	34 (52.3)	1.18	0.336
≥30 (n=23)	14 (60.9)	9 (39.1)		
Gender				
Male (n=29)	15 (51.7)	14 (48.3)	0.006	0.560
Female (n=59)	30 (50.8)	29 (49.2)		
Nationality				
Saudi (n=68)	36 (52.9)	32 (47.1)	0.390	0.356
Non-Saudi (n=20)	9 (45.0)	11 (55.0)		
University attended				
King Abdulaziz (n=57)	29 (50.9)	28 (49.1)	0.005	0.572
Others (n=22)	11 (50.0)	11 (50.0)		
Specialty				
Nonsurgical (n=52)	25 (48.1)	27 (51.9)	0.48	0.490
Surgical (n=36)	20 (55.6)	16 (44.4)		
Type of residency				
Program (n=74)	37 (50)	37 (50)	0.99	0.516
Service (n=9)	5 (55.6)	4 (44.4)		
Level of residency (n=78)				
R1-R3 (n=67)	32 (47.8)	35 (52.2)	0.95	0.329
R4-R5 (n=11)	7 (63.6)	4 (36.4)		
Sponsor (n=80)				
King Abdulaziz (n=55)	28 (50.9)	27 (49.1)	0.06	0.809
Others (n=25)	12 (48)	13 (52)		

Discussion

This study included 88 residents with a response rate of 86.3%. The high response rate, compared with the 58% reported by Roberts *et al.* in the USA, 2005,^[5] can probably be ascribed to the personal contact with the residents (both one-on-one and through E-mail communication) as well as the explanation of the purpose of the study, its scientific significance, and value to the residents. According to Rosnow *et al.* (2000),^[6] the techniques of making personal contact, using reminders and explaining the scientific importance and value of the study, and ensuring the participants' confidentiality are linked to increased participation in surveys.

There has been a gradual movement towards more developmental atonement in ethics education. However, most teaching of ethics and professionalism at the undergraduate and even postgraduate level is still broad and general.^[5] This study affirms the value of ethics preparation as viewed by the residents and documents the perceived need for greater attention to practical ethics and ethically important professional development topics in the curriculum of medical training. Medical education in ethics is not well developed in many, if not most, medical schools, especially during the years of clinical training.^[7,8]

As hypothesized, preclinical medical students compared to clinical students and residents more strongly endorse the need for substantial ethics preparation on the above topics. Similarly, women at all levels of training reported a greater need for additional ethics training. In comparing trainees across specialty programs, psychiatry residents expressed greater need for training-related ethics topics than their colleagues in primary care and other specialties. This seemed to be the trend for practice- and profession-related topics as well.^[4] Only residents were included in the current study. No psychiatric residents were present at the time of data collection. There was no significant difference between women and men.

To prepare residents for the ethical challenges they currently face and will encounter in the future, the ethics curricula should incorporate an evolving understanding of bioethics, demonstrable competence in performing ethically important tasks, professional developmental issues, specialty-specific training and differential values, and learning preferences of residents.^[5]

Residents expressed their strong interest in having greater attention paid to bioethics principles in the curriculum, informed consent-related topics, and special population issues in their training. The global impression

of perceived importance and increased need for ethics preparation of physicians early in their career replicates the findings of other studies.^[9-14]

Development of new approaches in ethics education will benefit from the guidance offered by the contributions of residents, who are entrusted with enormous responsibilities while they fulfill their own objectives of learning to become good doctors for their patients.^[4] In fact, there is evidence that medical ethics education can improve physician attitudes, awareness, confidence, knowledge, satisfaction, skills in ethical analysis, and decision-making ability.^[2] Formal curricula in medical ethics for residents have resulted in significant improvements in these attitudes, skills, and knowledge domains.^[15-17] In one study by Sulmasy and Marx in which medical house officers completed an innovative curriculum in medical ethics, improvements in knowledge, confidence, ability to recognize an ethical problem, and ability to reach a justifiable decision were sustained over 2 years.^[15] The ethics course in Sulmasy's study also resulted in significant changes in attitude and an increased proportion of residents recognizing the need for ethics to be a requirement of the residency curriculum.

In the present study, the residents believed that the most effective methods of ethical education were discussion groups of peers led by a knowledgeable clinician (78.4%). In a study of family medicine residents conducted by Levitt *et al.* in 1994,^[18] small-group case-oriented discussions appeared to have been the preferred teaching format, regardless of the ethical dilemma. In another study conducted by Kesselheim *et al.*, 2008,^[19] discussions with fellow residents with supervising attending physicians had the largest effect on respondents' ethics education. Formal teaching conferences, involvement in ethics consultations, and discussions with hospital ethicists were rated as having moderate or greater impact by 41.6%–53.3% of respondents.

Surveys of practicing physicians who had completed a course in medical ethics have shown an increased interest in and awareness and understanding of the ethical dimensions of practice, as well as a belief by physicians (after training) that medical ethics courses were advantageous in managing clinical dilemmas.^[20,21] Formal medical ethics training has also been shown to improve health professionals' abilities to analyze ethical issues in a critical manner.^[22] These studies provide strong evidence that the aims of medical ethics education defined by professional organizations and society are, in fact, attainable and that the achievement of these aims is highly valued by residents and physicians.

In the present study, except for a resident's specialty, the association between any of the studied factors and the

perceived need and attitude of residents toward medical ethics education was not statistically significant, most probably because of the small sample size. However, all residents available at the time of the study were invited to participate, and the response rate was adequate (86.3%). Therefore, a large-scale study including residents of all specialties from different areas of Jeddah is highly recommended.

The strengths of this study include the focus on salient practical ethics and ethically important professional development issues as well as the solid response rate and the comprehensiveness of the survey. Nevertheless, there are several limitations. The survey was reliant on self-report and involved a sample at a single institution. However, the agreement of our findings with similar work and the absence of specialty-specific differences among residents suggest that the results could be generalized.^[10,13,23,24] Its cross-sectional design provides insights into developmental issues relevant to professionalism and ethics education in medicine but does not show changes that longitudinal design would permit as training progresses.

It is important to note that the perspectives of learners cannot and should not be the sole guide to curricular content; nevertheless, it is clear that for teaching to be effective, it must be meaningful and relevant, useful, and connected to the ecological experience of learners. For these reasons, we suggest that this survey has value in informing curricular design.

One of the limitations of this research is the inclusion of residents from academic institutions only. A further study with residents from different institutions is necessary to make generalization of the results possible.

Conclusion

This study documents the importance of ethics education on practical, real-world dilemmas and ethically important professional developmental issues of residents. The results point to a need for more specialization in ethics, particularly for residents. Academic medicine may be better able to fulfill its responsibilities in teaching ethics and professionalism and in serving its trainees if greater attention is given to these topics and principles in undergraduate and graduate medical curricula.

Recommendations

- Medical ethics should be included in a positive way in residents' curriculum
- Evidence-based evaluation of ethics educational intervention is recommended
- Notwithstanding methodological difficulties, it is recommended that studies be designed in KSA to

assess the effect of various medical ethics education methods

- It is recommended that there should be meetings of medical educators in family medicine to share curricular innovation on medical ethics in faculty training to reinforce trainee education and collaborate with organizations with interest in family medicine education (JPFM) to develop a flexible model curriculum and a bank of teaching resources.

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Conflicts of interest

There are no conflicts of interest.

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