



## Medical Students' Ethical, Legal and Cross-Cultural Experiences during their Clinical Studies

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**Key words:** clerkship, ethics culture, law, clinical experience, humanistic practice skills

### Abstract

**Background:** Many medical school curricula include training for ethical considerations, legal comprehension, implementation of patients' rights, awareness of cultural differences, and communication skills (ELCE).

**Objectives:** To explore medical students' perceptions of their ELCE training during the clinical phase as well as the relationship between humanistic practice skills' experiences and the quality of clinical training.

**Methods:** A cross-sectional survey was carried out in two cohorts during their clinical year period at Tel Aviv University's Sackler Faculty of Medicine at the end of their Internal Medicine and Surgery clerkships in the 2002 academic year. The research tool was an 18 item Likert-type questionnaire (ELCEQ), based on the literature of biomedical ethics, legal aspects and behavior of practice skills. The content validation of the questionnaire was established by consulting experts among the school's faculty. It was circulated among the students by representatives of the Unit of Medical Education.

**Results:** The response rate was 88%. Students reported only a few opportunities for gaining experience in humanistic practice skills. A weak correlation was found between students' assessment of the quality of clinical training and their experiences in humanistic practice skills.

**Conclusions:** A wider and more relevant range of active experiences in humanistic practice skills should be available to students during the clerkships. Correspondingly, there is a need for the clinical faculty to find innovative ways to internalize their task as role models and ensure that students acquire and are able to practice those skills.

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During the period of undergraduate medical education, it is expected of the students as future physicians of any specialty to acquire standards of professionalism including humanistic practice skills. Therefore, most medical schools now emphasize the teaching of the ethical aspects of treatment, legal comprehension of patients' rights and awareness of cultural differences (ELCE) as part of the students' education in professional behavior [1]. This approach is based not only on the nature of medicine but also on the Charter on Medical Professionalism [2] accepted by most North American and European countries as well as by the Israel Society of Internal Medicine, which encompasses, among the principles of professionalism, respect for the patient's autonomy, ensuring that

the patient makes an informed decision about his/her treatments and promoting social justice with regard to healthcare resources. Mastery of humanistic practice skills such as ethical considerations, legal understanding, social responsibility and communication skills are considered part of a wider approach to professionalism [3]. Cross-cultural communication is a particularly important component of clinical communication skills related to medical ethics [4].

ELCE is included within the basic science curriculum and is mostly delivered by means of structured teaching such as didactic lectures and discussions. During their clinical training, students are expected to internalize ELCE skills in their routine patient care, bedside teaching and their encounters with role model physicians during clinical rounds [5]; there is no structured instruction. However, if teaching and learning those aspects are left to unsupervised and unstructured interactions at the clinical sites, it is not clear to what extent students are exposed to and internalize the ELCE aspects. Moreover, what methods of informal encounters contribute effectively to the students' future performance as physicians according to the Charter [2] and the requirements of the 1996 Israeli Act of Patient Rights [6], and how adequately do the instructors-physicians serve as good role models in the spirit of those documents.

The curriculum at Tel Aviv University's Sackler Faculty of Medicine consists of 3 years of basic sciences, including behavioral sciences, and 3 years of clinical studies. During the basic sciences studies the students attend lectures and participate in small group discussions and are exposed to the clinic outside of the class. In that phase the topics of ethics, law and clinical communication are taught formally within a comprehensive humanistic program [7]. The clinical studies (4-6 years of the curriculum) are conducted in clerkships for small groups (between two and six students). Here the main emphasis is on clinical bedside teaching and tutoring in the affiliated teaching departments of hospitals, outpatient clinics and primary care clinics. The most important and longest clerkships for the physicians-to-be are in Internal Medicine (12 weeks) and Surgery (9 weeks). These clerkships are conducted in 15 internal medicine wards, and in 12 surgery wards in 7 hospitals. During that phase almost no systematic formal teaching of ELCE is included.

ELCE = ethical, legal and cross-cultural experiences

The main objective of the present study was to determine the extent of ethical, legal and cross-cultural experiences of students – both as passive observers in clinical situations and discussions and as active participants in implementing ELCE skills – during their major clinical clerkships in Internal Medicine and Surgery. Another question we wished to address is the relationship between the quality of the clinical training in the clerkships and the students' ethical, legal and cross-cultural experiences as perceived by the students.

## Methods

The population of this initial survey comprised Israeli medical students during their 4th and 5th years at Tel Aviv University's Sackler Faculty of Medicine in 2002. Of the 164 students, 144 responded to the research questionnaires (88% response rate) and were divided into two cohorts as follows: 85 (90%) 4th year students finishing their Internal Medicine clerkship and 59 (84%) 5th year medical students after the clerkship in Surgery. The questionnaires were administered at the end of the clerkship by representatives of the Medical Education Unit.

The research tool was an 18 item questionnaire on ethical, legal and cross-cultural experiences (ELCEQ). It was constructed according to the prevailing principle list in biomedical ethics [8] and was validated by experts in the field in Israel. Seven items of the questionnaire are based on the following principles and professional aspects of bioethical ethics:

- Consideration of the ethical aspects of medical treatment
- Commitment to improve quality of life
- Respect for patients' autonomy
- The principle of non-maleficence.
- The obligation of obtaining informed consent for medical treatment.
- Respect for patients' personal privacy.
- Commitment to patients' confidentiality

The questionnaire also includes six items representing the physician's obligation to be concerned with social justice, his patients' socioeconomic circumstances, cultural awareness (taking into account religious factors), and the application of cross-cultural communication principles [4]. The relevant topics included:

- The economic constraints of medical treatments.
- Patients' cultural and religious backgrounds
- Obtaining cross-cultural communication skills
- Patients' world views

In addition, in two items, students were asked to assess their familiarity with "The Israeli Patient Rights Act" [6] and their awareness of the importance of this act. The last three items asked students to rate the quality of training in their clerkship. To assess the overall quality of the instruction during the clerkships, the students rated an overall assessment of the quality of teaching in the ward, the contribution of the ward director to their training, and the quality of tutoring.

The items of the questionnaire related to both the active performance of the students (i.e., behaviors carried out by the students) and passive experiences (i.e., participation in discussions as reported by students). Items 1–13 asked the students to indicate

how many times they had performed or participated in such activities during their clerkship. These items of the ELCEQ were scored on a 4 point scale, with 0 indicating no participation in an ethical discussion or no active student experience, 1 = one-time participation, 2 = two times, and 3 = 3 or more participations. Items 14 and 15 asked students to rate their familiarity and awareness of the Israeli Patient's Rights Act [6] on a 4 point Likert-type scale format, where 0 equals no knowledge and 3 equals very good knowledge. The following section, items 16–18, asked students to rate the quality of training in their clerkship on a 4 point Likert-type scale, ranging from 1 (lowest evaluation) to 4 (highest evaluation).

Data analysis included Simple Descriptive Statistics which were computed for each of the questionnaire items. For the correlation and comparison tests, the threshold of statistical significance was fixed at 0.05.

Although the questionnaire is short and intended not to overburden the respondents, its content validation was established by consulting with experts in the fields of medical ethics and behavioral sciences. The internal consistency of the ELCEQ was tested and found satisfactory (Cronbach's alpha = 0.78).

## Results

### ELCE of medical students during clinical clerkships

Means and standard deviations of all ELCEQ items are shown in Table 1. The mean scores for the majority of items were below 2 (out of 3), indicating that in most cases, during the period of 9–12 week clerkships, students participated passively in less than two discussions/situations concerning humanistic practice skills and, actively, applied humanistic and legal considerations less than twice. Nevertheless, students reported that they asked for informed consent from patients before performing a medical procedure more than twice (active role). Students also reported that, during the Internal Medicine clerkship, they had participated more than twice in a discussion about a patient's quality of life (passive role), made sure patients had privacy, and inquired whether a patient was using alternative or traditional healing (active roles).

It might be argued that since professional behavior depends also on context [9], students might find that their experiences during a clerkship in Internal Medicine are different to those in the surgery departments. It was decided not to mix those different contexts and experiences and to compare the training of the two major clerkships: Internal Medicine and Surgery. Mean scores of the experiences were significantly higher during the clerkship of Internal Medicine concerning most of the major ethical and cultural aspects – patient confidentiality, patients' privacy, and active experience in obtaining informed consent – than in the clerkship in Surgery. The students in Internal Medicine clerkship were also exposed to significantly more occasions for experiencing cultural awareness. Yet, the item relating to the awareness of the importance of patient rights (item 15) was scored about the same by the two groups.

### Relationship between humanistic practice skills' experiences and quality of training

This research question was tested by correlating two factors within the questionnaire: Factor 1 consisted of items 1–13 (ethical

**Table 1.** Mean scores\* and standard deviations of the ELCEQ and difference between internal medicine and surgery students

Question	Internal Medicine		Surgery		Significance of difference	
	Mean	SD	Mean	SD	P value	t-value
<b>Ethics</b>						
<b>Passive experiences</b>						
Ethical aspect (q. 1)	1.44	0.94	1.28	1.07	0.357 (NS)	0.92
Patient confidentiality (q. 2)	0.73	0.93	0.28	0.66	0.001	3.32
Quality of life (q. 3)	2.13	0.83	1.96	1.13	0.350 (NS)	0.94
Economic constraints (q. 4)	1.90	0.87	1.42	1.17	0.010	2.63
<b>Active experiences</b>						
Privacy (q. 5)	2.90	0.33	1.73	1.24	0.000	6.69
Informed consent (q. 6)	2.69	0.68	2.20	1.28	0.014	2.51
Reading (q. 7)	0.53	0.89	0.10	0.30	0.000	4.00
<b>Culture</b>						
<b>Passive experiences</b>						
Ethnic or educational background (q. 8)	1.09	1.03	0.52	0.89	0.001	3.31
Religious or traditional authority (q. 9)	0.68	0.87	0.22	0.54	0.000	3.81
<b>Active experiences</b>						
Translator (q. 10)	1.06	0.93	0.77	0.99	0.091 (NS)	1.70
Alternative or traditional healing (q. 11)	2.07	0.89	0.50	1.00	0.000	9.55
World view (q. 12)	0.90	0.93	0.18	0.65	0.000	4.83
Reading (q. 13)	0.26	0.63	0.00	0.00	0.001	3.58
<b>Law</b>						
Familiarity with patient's rights (q. 14)**	1.12	0.89	0.78	0.95	0.048	2.00
Importance of familiarity with patient's rights** (q. 15)	1.59	1.07	1.89	1.09	0.132 (NS)	-1.52

\* The scoring ranged from 0 to 4 as follows: 0 = no participation, 1 = one-time participation, 2 = two-time participation, 3 = three or more times participation.

\*\* Scoring of these items ranged from 0 = no knowledge to 3 = much knowledge.

considerations, cultural awareness, and economic considerations) and factor 2 of items 14–15 (legal awareness), with three items (items 16–18) covering the students' assessment of the quality of teaching in the ward by the ward's director and the tutor. In the case of students in the surgical wards, a significant positive ( $P < 0.05$ ) yet weak relationship (ranging between 0.44 and 0.26) was found. In the case of internal medicine wards, insignificant, nearly unexciting (0.12–0.06) correlations were found between items 1–13 of the questionnaire and the three aspects of the wards' assessment. The correlation between experiences in legal awareness and the ward assessments, ranging from 0.37 to 0.41, were somewhat stronger and highly significant.

### Discussion

This survey suggests that medical students have only limited exposure and experiences necessary to implement humanistic practice skills such as ethical and legal considerations and cross-cultural communication during their main clinical clerkships. According to the results, students rarely participated, even as passive observers, in discussions on ethical aspects of the patient's treatment or confidentiality. They rarely used translators for communication with patients who could not speak Hebrew, nor were they exposed to the importance of economic, cultural and religious factors in patient care. Most students were not adequately informed concerning the Israeli Act of Patient Rights and therefore were not sufficiently aware of its importance.

Interestingly, students reported more frequent experiences of actively manifesting proper professional behaviors in the case of obtaining informed consent and keeping patients' privacy. It is reasonable to conclude that, following the introduction of the Israeli Patients Rights Act and the increase in the number of law suits, the Israeli health system has taken some steps towards emphasizing some of the legal requirements that are part of this act. Most probably, these behaviors are now becoming standard practice in Israeli clinical departments, and students are internalizing the behavior of role models who actively exhibit proper practice.

Surprisingly, only weak relationships were noted between ELCE aspects and the quality of clinical training as perceived by the students. It may be an indication that students do not view professional behaviors and good role modeling as a parameter for quality teaching in the clinical wards.

At present, it seems that although there is an understanding in the Israeli health services, following the implementation of the Israeli Patients Rights Act [5] and the Physician Charter [2], about what should be required from a professional health provider, it has not yet been fully translated into methods of teaching and learning objectives within the educational arena of the Sackler Medical School. As a result, there appears to be a need for innovative methods of instruction in the clinical phase and a better selection of key faculty members as "good role models" to develop training strategies for the students.

The current study is based upon student reports. Ideally, further

studies should include direct observations of students interacting with patients in the departments. Future studies should also enlarge the sample, to include additional medical schools and clerkships, and should draw comparisons between hospital wards and outpatient clinic sites. An additional issue that calls for further research is the impact of teaching faculty as role models on the formation of the future physician.

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## Capsule

### Prions and mutations

Clinical cases of variant Creutzfeldt-Jakob disease (vCJD), the human counterpart of bovine spongiform encephalopathy (BSE, or mad cow disease), has only been found in individuals homozygous for methionine at polymorphic residue 129 of the prion protein. Primary transmission of BSE or vCJD prions to transgenic mice expressing human PrP valine 129 exhibits a substantial transmission barrier, with a low rate of both clinical prion disease and subclinical prion infection. Wadsworth et al. report that this transmission barrier is not reduced upon second

passage in these mice. A valine residue at position 129 of human PrP severely restricts the propagation of both BSE and vCJD prions, and this result suggests that humans of this genotype will be relatively resistant to BSE prion infection. If they do become infected, it will probably be as a result of propagation of a distinct prion strain that results in a disease phenotype distinct from that of vCJD.

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E. Israeli

## Capsule

### Myxoma virus and rabbits

In the middle of the last century, the Australian government took advantage of the species specificity of myxoma virus to control the spread of European wild rabbits, then considered a pest. Although other poxviruses display specificity to varying degrees, it is not clear what influences host/virus compatibility. Wang et al. observed that myxoma virus infection of primary mouse embryo fibroblasts, which are non-permissive for replication of this virus, activated the kinase Erk1/2. In the presence of an Erk1/2 inhibitor or in cells with impaired Erk1/2 expression, viral replication increased, suggesting that this kinase normally represses this virus. Erk1/2 is linked with interferon regulatory factor 3, which in

turn induces expression of type I interferons (IFNs). The possibility that these cytokines maintain the non-permissive state induced by Erk1/2 activation is supported by the fact that cells unable to produce IFNs or the IFN-dependent transcription factor STAT-1 became susceptible to myxoma infection. Furthermore, STAT-1-deficient mice succumbed to inocula of the virus that had no effect on wild-type animals, raising the possibility that similar cellular mechanisms may govern species specificity of other poxviruses.

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