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Attitude Towards End of Life Communication of Austrian Medical Students

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Abstract

Medical students have to acquire theoretical knowledge, practical skills, and a personal attitude to meet the emerging needs of palliative care. The present study aimed to assess the personal attitude of Austrian medical students towards end of life communication (EOLC), as key part of palliative care. This cross-sectional, mono-institutional assessment invited all medical students at the Medical University of Vienna in 2015. The assessment was conducted web-based via questionnaire about attitudes towards EOLC. Additional socio-demographic and medical education-related parameters were collected. Overall, 743 medical students participated in the present report. Differences regarding the agreement or disagreement to several statements concerning the satisfaction of working with chronically ill patients, palliative care, and health care costs, as well as the extent of information about palliative disease, were found for age, gender, and academic years. The overall attitude towards EOLC in the present sample can be regarded as quite balanced. Nevertheless, a considerable number of medical students are still reluctant to inform patients about their incurable disease. Reservations towards palliative care as part of the health care system seem to exist. The influence of the curriculum as well as practical experiences seems to be important but needs further investigation.

Keywords Medical students · End of life · Palliative care · Attitudes · Communication

Introduction

Although the cancer incidence is rising over the last decades, modern oncological treatment options currently result in a considerable proportion of patients suffering from cancer as chronic disease with prolonged survival. Often, this does not allow to make a clear distinction between curative and palliative patients [1]. This trend poses a professional challenge to future doctors as discussions with patients have to focus on

risk communication, weighting benefits, and risks in situations characterized by uncertainty, with the disclosure of sensitive information such as prognosis, remaining treatment options, quality of life, or expected symptoms. In the communication with these emotionally vulnerable patients, the attitude of the physician is especially important to diminish anxiety and emotional distress [2].

Communicating these sensitive issues, especially about the course of the disease as well as cure rates and prognosis, will be a core task of future medical doctors. Good communication can reduce the distress of receiving bad news and influence patients' psychological as well as physical functioning and adaptation to a new situation [3]. It supports the patient-clinician relationship and is leading to high patient satisfaction and compliance [4]. In cancer care, mutual trust in particular is a key factor considering the patients' fear and uncertainty when confronted with incurable diseases [3].

To meet the emerging challenges of this currently changing and growing patient cohort, fundamental competencies in communication and end of life discussions are nowadays taught at many medical universities throughout Europe [5] and the USA [6]. Consequently, the Medical University of Vienna integrated communication skills, medical ethics, and

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palliative care in their medical curriculum [5, 7]. Especially during the pre-clinical and clinical years (i.e., the first four of 6 years total in the Medical Curriculum Vienna), several compulsory and elective lectures, seminars, and practical workshops on communication skills, end of life, and palliative care are available. These courses provide students with a basis for further voluntary specialization. Nevertheless, the attitude of medical students at the Medical University of Vienna towards end of life communication (EOLC) has never been assessed so far, but serves as fundamental element of future medical doctors [8]. Additionally, it is unknown, if socio-demographic (i.e., age, gender, place of origin, and personal experience with relatives at the end of life) or medical education-related parameter (i.e., academic year) has an influence on their attitude.

Therefore, the aim of this cross-sectional report was to investigate the attitude towards EOLC in Viennese medical students and to identify possible associations with socio-demographic and medical education-related parameter.

Methods

Study Design and Participants

The presented study was a cross-sectional, mono-institutional assessment of the attitude towards EOLC of medical students at the Medical University of Vienna. Between September and November 2015, all 7191 currently enrolled medical students received invitations via e-mail to participate in the survey.

The assessment was conducted web-based through the university's information management system "Med.Campus." The study was additionally announced to students every time they logged into the information management system during the study period. No incentives were offered to participating students. The study protocol was approved by the data protection committee of the Medical University of Vienna.

The Medical Curriculum Vienna consists of three sections of 2 years each, i.e., pre-clinical, clinical, and practical, with several compulsory and elective lectures and seminars about the end of life, communication skills, and medical ethics throughout the years.

Assessment

The questionnaire about attitudes towards EOLC consisted of 13 items with specific statements, which could be confirmed or rejected to varying degrees with four answer categories "totally agree," "agree," "disagree," and "totally disagree." To avoid acquiescence bias, neutral answer categories were not included in the questionnaire. In addition, balanced response sets with positive and negative statements were applied.

The statements were collected during a preceding pilot project with open interviews involving clinical oncologists. This approach should ensure a certain degree of representativeness for this Austrian collective by taking the socio-cultural background into account.

Statistical Analyses

Descriptive results are presented with absolute numbers and percentages. The information is pooled into the percentage of students with agreement versus rejection to the single statements, summarizing the answer categories "totally agree" and "agree" versus "totally disagree" and "disagree."

Pearson's chi-square tests were applied to evaluate differences between two or more groups in regard to the binary outcome (agreement versus rejection of statements). In case of an expected frequency < 5, Fisher's exact test was used.

Hypotheses were tested two sided with a significance level of 1% to avoid type I errors of multiple testing. All statistical analyses were performed using the statistical analysis software SPSS v.22.0 (SPSS Inc., Chicago, IL, USA).

Results

Overall, 743 of 7191 students at the Medical University of Vienna participated in the present study (response rate of 10%). Their socio-demographic and medical education-related characteristics are shown in Table 1.

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Overall agreement on the single statements is displayed in Table 2. Questionnaires missing answers to more than 50% of items were excluded from the analysis ($n = 16$). Considering socio-demographic characteristics of participants, the only differences in the agreement on statements were found in gender and age. Male students significantly more often agreed that palliative care increases health care costs ($p = 0.001$) and that taking care of chronically ill patients is not satisfactory ($p = 0.004$) compared to female students. The age of students was divided in two groups according to the median of all participants. Younger students (age 17 to 23 years) more often thought that too much information about cure rates and prognosis can increase the patients' suicide risk ($p \leq 0.001$), that only patients who spontaneously ask about cure rates and prognosis are able to cope emotionally with the information ($p = 0.006$), and that palliative care increases health care costs ($p \leq 0.001$) compared to older students (age 24 to 62 years). In contrast, older students significantly more often agreed that discussions about the end of life are too time consuming in daily clinical routine ($p = 0.002$) as opposed to younger students. There were no significant differences in the

Table 1 Students' socio-demographic and medical education-related characteristics (N = 743)

Variable		Median (range)
Age		23 years (17–62)
		N (%)
Gender	Female	406 (54.6%)
Academic year	1	170 (22.9%)
	2	161 (21.7%)
	3	104 (14.0%)
	4	150 (20.2%)
	5	71 (9.6%)
	6	85 (11.4%)
	Missing	2 (0.3%)
Nationality	Austria	538 (72.4%)
	Germany	123 (16.6%)
	EU other	51 (6.9%)
	Europe (not EU)	24 (3.2%)
	Missing	7 (0.9%)
Former residence	Urban	415 (55.9%)
	Rural	322 (43.3%)
	Missing	6 (0.8%)
Experience with relatives at the end of life?	Yes	462 (62.2%)
	Missing	3 (0.4%)
Preference for specialty	Internal medicine	118 (15.9%)
	Surgery	156 (21.0%)
	Oncology	23 (3.1%)
	Radiology	17 (2.3%)
	Psychiatry	26 (3.5%)
	Neurology	54 (7.3%)
	Pediatric medicine	76 (10.2%)
	Obstetrics and gynecology	33 (4.4%)
	Other	228 (30.6%)
	Missing	12 (1.6%)
Experience in the care area	Yes	290 (39.0%)
	Missing	5 (0.7%)

agreement on any single statement whether students had experiences in the nursing sector originally came from rural or urban areas or if they already had personal experience with relatives at the end of life.

Considering medical education-related characteristics, the academic year of participants was analyzed, as the gained practical experiences through medical clerkships as well as clinical rotation in the last 2 years of the curriculum of students were considered as interdependent variables, representing general study progress with very similar results. The overall agreement that palliative care increases health care costs as well as the belief that too much information about cure rates and prognosis can increase the patients' suicide risk significantly decreased over the academic years (both $p \leq$ 0.001). Considering the extent of information patients should receive, students in earlier years significantly more often thought that patients should be informed by all means about their cure rates and prognosis ($p \leq$ 0.001). They additionally agreed significantly more often to use euphemisms and vague language to make information more tolerable or leave room for hope (both $p \leq 0.001$) as compared to students from higher academic years. Furthermore, students at the beginning of their education significantly more often approved to be able to weight risks and benefits of palliative treatments for

Table 2 Attitudes about end of life communication. Results indicate frequency (%) of respondents who "agreed" or "totally agreed" with the statement (N = 727)

Statement	Agreement
I talk about the option of an advanced directive with all progressive cancer patients.	608 (81.8%)
Advanced cancer patients should be informed by all means about their cure rates and prognosis.	569 (76.6%)
I provide information regarding cure rates and prognosis with the help of statistics and time frames.	523 (70.4%)
I can estimate how much information is tolerable for my patients.	483 (65.0%)
If relatives ask for cure rates and prognosis without the patient being present, I will not provide this information.	470 (63.3%)
As a doctor, I can sufficiently weigh risks and benefits of a palliative treatment for my patients.	387 (52.1%)
Palliative medicine increases the costs in the health care system.	336 (45.2%)
In end of life discussions, I use euphemisms to make the information more tolerable for the patient.	281 (37.8%)
Providing too much information regarding cure rates and prognosis increases the suicide risk.	250 (33.6%)
I try to keep my statements regarding cure rates and prognosis as vague as possible, to leave some room for hope.	220 (29.6%)
The treatment of patients with chronic diseases is not satisfactory work.	205 (27.6%)
Patients should in general not be confronted with any statistics regarding cure rates and prognosis.	165 (22.2%)
End of life discussions are too time consuming in clinical routine work.	143 (19.2%)
Only patients who ask spontaneously about cure rates and prognosis are able to cope emotionally with the information.	113 (15.2%)

their patients as well as feeling able to estimate how much information is tolerable for their patients ($p \leq 0.001$ and $p = 0.004$, respectively).

Discussion

Caring for instead of curing patients is going to be one of the most central tasks of medical doctors in oncology in the forthcoming decades. Medical education as well as practice should include three crucial aspects to face patients not only with competence but also with humanity: theoretical knowledge, practical skills, and the personal attitude of the doctor or student [8]. The present study aimed to assess the personal attitude of Austrian medical students towards EOLC, as key part of palliative care.

Considering the overall attitude of medical students towards palliative care in the present study, almost 30% of students thought that caring for chronically ill patients is not a satisfying work. This is similar to the results from the USA, where the same percentage of students thought that caring for dying patients is not as satisfying as caring for other patients [9], which might reflect the still common perception of medicine as a healing profession. This opinion significantly differed between male and female students; the latter being more fond of working with chronically ill patients than males. This might be explained due to socio-cultural influences that are still apparent in informal caregiving, where the majority of family caregivers is still female [10].

Additionally, younger and male students significantly more often agreed that palliative care increases the health care costs, which has already been disproven in several studies [11, 12]. Although the age difference might be explained due to

inexperience with the health care system and especially palliative care, the gender difference needs further investigation.

Besides symptom management, palliative care includes challenging end of life discussions, with the disclosure of sensitive information such as prognosis, remaining treatment options, quality of life, or expected symptoms. Simultaneously, it needs to consider patients' preferences for the amount of information as well as their emotional state to cope with it [13]. A positive attitude towards end of life communication of the treating physician can give patients the necessary trust to initiate these discussions [2].

Medical students seem to quite agree upon the extent of information palliative patients should receive about their disease. Almost three quarter of all participants agreed that patients should be informed about the incurable state as well as the prognosis of their disease, additionally with the help of statistics and time frames. According to the majority of medical students in this sample, patients can be emotionally ready to cope with these difficult issues even if they not ask actively for this information. This attitude is consistent with existing literature about the information preference of patients [13, 14], where between 70 and 80% of cancer patients request information about their cure rates and prognosis, often with additional quantitative estimates (such as 5-year survival rates), and without negative emotional effects [15]. Nevertheless, one quarter of students in the present study believes that patients should not be informed about their palliative situation and over half of all participants agreed to be able to estimate how much information is tolerable for their patients. In medical consultations, where patients often expect the physician to tell them all relevant news about their disease, this attitude might lead to limited end of life conversations, resulting in poorly

informed patients and a conspiracy of silence [16, 17]. This conspiracy of silence is an unspoken agreement between patient and physician, where both sides are reluctant to address the difficult issue of their terminal disease, resulting in fear and distress in the patient because of the remaining uncertainty.

This reluctance of medical students towards full disclosure has also been shown in China, where only 30% of study participants agreed to include all available information in the medical disclosure [18]. Nevertheless, these results should be considered with regard to socio-cultural differences, as a survey from Lloyd-Williams et al. [19] showed that the vast majority of students in the UK agreed that patients should be told the truth, if they are asking about their prognosis. In the present study sample, younger students significantly more often agreed that only patients who ask spontaneously about their cure rates and prognosis are able to emotionally cope with this information, which suggests that more experience leads to more confidence in the patients' coping mechanisms.

When considering the study progress of medical students, more advanced students became significantly more hesitant in informing patients about their cure rates and prognosis. This development surprises at first glance, when considering the increasing contact to patients due to clerkships and clinical rotations in later years. This observation was already described in former studies as *erosion of empathy* [20, 21], where the empathy of medical students declined after increases in patient-student relations. This erosion of empathy is further described as desensitization to ethical dilemmas in clinical practice in order to reduce their own distress [21]. Possible explanations can be the lack of positive role models, time pressure, and patient and environmental factors [20]. Nevertheless, Austrian medical students do not have compulsory clinical placements in oncology and/or palliative care during their medical course, impeding a potential source of impacting their attitude.

Twenty percent of Austrian medical students additionally agreed that end of life discussions are too time consuming in daily clinical routine. This agreement is elevated in older students and has a strong tendency to increase with academic years, which might be explained due to personal experiences in the health care system, as well as through clerkships and clinical rotations.

The reluctance in talking openly about the end of life with patients might also originate in the students' agreement that too much information increases the patient's suicide risk. Younger students as well as students in earlier academic years even more often agreed with this statement. Causes for suicide attempts are extremely difficult to investigate, but clinical experience suggests no elevated suicide risks after prognostic disclosure [22]. The decrease in agreement over age and academic years suggests that experiences as well as theoretical courses about palliative care and medical ethics improve students' attitude.

Regarding the language used in end of life conversations, 40% of medical students agreed that euphemisms make the information more tolerable for patients and 30% planned to keep their statements about cure rates and prognosis as vague as possible, to leave some room for hope. On the contrary, students in the USA stated that a physician can tell patients the truth about their terminal diagnosis and still maintain hope [9]. This attitude of Austrian medical students is contradictory to recommendations about end of life communication. In their clinical practical guidelines for the communication of end of life issues, Clayton et al. [23] suggest avoiding euphemisms or jargons that could easily be misunderstood. Furthermore, patients evaluated doctors who use euphemisms or unclear language in medical consultations as more negative as compared to realistic doctors. Vague statements were additionally regarded to diminish their hope [24].

Study Limitations

A limitation of the present study is the cross-sectional assessment of medical students, which does not allow to draw strong conclusions regarding the development of their attitude over time. Nevertheless, as all participating students are currently trained within their 6-year medical curriculum, cohort effects seem to be negligible. Additionally, our sample was drawn from only one medical university, which limits to some extent the generalizability of the report. However, regarding the curriculum as well as entry requirements (i.e., an Austrian-wide standardized entrance examination), the Medical University of Vienna is very similar to other medical universities in Austria.

A strength of the present report is the relatively large sample size. The response rate can also be regarded as quite high in this online setting, compared to 8.6% in a survey on students' anamnestic competence and history taking [25]. Nevertheless, a certain sampling bias might have occurred as only students with higher interest in palliative care participated in the study.

Clinical Implications

Austrian medical students demonstrate a quite balanced attitude towards EOLC, as the majority of participants showed favorable and consistent responses. Nevertheless, there seems to be a considerable number of medical students with preconceptions and reluctance towards palliative care as well as full disclosure to patients about their incurable disease. Differences over the course of academic years seem to indicate the influence of contents of the curriculum as well as practical experience through clerkships and clinical rotations, but need further investigation. The influence of continuous education throughout medical school, residency, and daily clinical routine should not be dismissed but rather encouraged. A future research project will focus on the attitude towards EOLC of oncologists (i.e., academic instructors) at the Medical University of Vienna, hypothesizing that the attitude of teachers could have an impact on the attitude of medical students. The results of both projects should be used to

sensitize academic instructors as well as possibly influence curriculum development in order to support students in their development of a positive attitude towards EOLC.

Compliance with Ethical Standards

The study protocol was approved by the data protection committee of the Medical University of Vienna.

Conflict of Interest   The authors declare that they have no conflict of interest.

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