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Medical Students' Skills and Needs for Training in Breaking Bad News

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Abstract This study assessed medical students' perception of individual vs. group training in breaking bad news (BBN) and explored training needs in BBN. Master-level students (N=124) were randomised to group training (GT)—where only one or two students per group conducted a simulated patient (SP) interview, which was discussed collectively with the faculty—or individual training (IT)—where each student conducted an SP interview, which was discussed during individual supervision. Training evaluation was based on questionnaires, and the videotaped interviews were rated using the Roter Interaction Analysis System. Students were globally satisfied with the training. Still, there were noticeable differences between students performing an interview (GT/IT) and students observing interviews (GT). The analysis of the interviews showed significant differences according to scenarios and to gender. Active involvement through SP interviews seems required for students to feel able to reach training objectives. The evaluation of communication skills, revealing a baseline heterogeneity, supports individualised training.

Keywords Breaking bad news · Medical students · Individual vs. group training · Communication skills · Training needs

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Introduction

Most physicians have no training in breaking bad news [1], feel a lack of confidence when performing this task [2–5], and rely on role models, which are not uncommonly negative [6]. To ameliorate this situation, so-called communication skills training (CST)—introduced over the last two decades and demonstrated to be effective [7–12]—have been rapidly developed [1, 13].

As specified in a recent European Consensus statement [1], CST should reach all level of education, including pregraduate training of medical students. However, on the pregraduate level, CST have not been systematically introduced and the evidence for their effectiveness is still limited [14–16].

At the Faculty of Biology and Medicine of the University of Lausanne (Switzerland), the teaching of physician–patient communication for medical students consists in the first year of an introduction (8 h, plenary sessions), followed in the second year by an analysis of videotaped consultations and role plays in small groups (two 2-h sessions in groups of 12 students) and plenary lectures (6 h), in the third year by supervised interviews with patients and simulated patients (six 2-h sessions in groups of 12 students) and in the fourth year by an introduction to breaking bad news based on videotaped interviews with simulated patients (two 2-h sessions in groups of 12 students). Since in the fourth year, only two students of each group have the possibility to conduct an interview with a simulated patient (while the other students observe and then discuss together with faculty the videotaped interview), an individualised training for breaking bad news has been conceptualised.

The aim of this exploratory study was: (1) to evaluate how an individual versus a group training in breaking bad news is perceived by the students and (2) to gain information on students' communication skills and training needs.

Methods

Training in Breaking Bad News

Students of the academic year 2009/2010 were randomised to either group training (GT) or individual training (IT). GT consisted of two 2-h sessions with 12 students; during each session, one of the students conducted a videotaped interview (for about 20 min) with a simulated patient (conducting group, CG), which was observed by the other students (observing group, OG) and then discussed with the faculty, while replaying the video. Teaching was provided by two of the authors of this article (AB or FS) and the simulated patients were played by a male and a female actor with extensive experience in pre- and postgraduate CST. The scenarios, also utilised in postgraduate CST [17, 18], consisted of breaking bad news with a middle-aged woman diagnosed with a stage I breast cancer for whom adjuvant chemotherapy with curative intent is proposed and with a middle-aged man with stomach cancer for whom chemotherapy with palliative intent or best supportive care is proposed. Discussion of the videotaped interviews focused on (1) structure of the interview, (2) exchange of information, (3) response to emotions, (4) relational aspects of communication and specific elements concerning breaking bad news (e.g. give warnings, assess what patient already knows, etc.).

IT consisted of the same scenarios played by the same actors, randomly attributed to the students. After conducting the videotaped interview of about 20 min, the student visualised it during the following days, before meeting the faculty who also visualised the interview beforehand and indentified sequences to focus on during a 1-h supervision of the student. Discussion during IT supervision focused on the same elements as in GT (see above).

Students' Evaluation of GT and IT

The evaluation of GT and IT was based on a questionnaire, developed and regularly utilised by the medical education unit of the Faculty of Biology and Medicine of the University of Lausanne, which assesses the students' perception of the training, rated on Likert scales. Examples of questions were: *The objectives of the training were clear*; *The training allowed you to gain new knowledge and/or skills*; *You had the possibility to have a sufficiently active role*; *The training allowed you to improve in the domain of physician–patient communication*.

The questionnaire was analysed by calculating frequencies of responses; differences between the three groups of students (those conducting the interview in GT, those observing the interview in GT, and those who participated in IT) were recorded if they were greater than 10 %; students also had the opportunity to add personal remarks on the evaluation sheets.

Assessment of Students' Communication Skills

Students' communication skills were assessed with the Roter Interaction Analysis System (RIAS), a reliable and validated interaction analysis system developed by Roter [19, 20], which has been used in various oncology settings to describe and/or assess communication behaviours [21]. The RIAS provides 42 mutually exclusive and exhaustive coding categories reflecting the content—exchanges about medical condition, treatments, lifestyle behaviours and psychosocial issues—and form—informative, interrogative, persuasive, affective and process-oriented statements—of the medical interaction. The analysis is applied to patient's and clinician's communication units, defined as *utterances*, to which a distinct meaning can be assigned (i.e. a single word, a simple sentence, or a sentence fragment). The RIAS coding categories may be subdivided into emotion-(socio-emotional exchange) and task-focused categories, ultimately corresponding to the two main objectives of a medical encounter: information exchange and development of a good interpersonal relationship.

Based on general principles defining a patient-centred communication [22–24]—e.g. attention to patient's physical as well as psychosocial needs, disclosing concerns, conveying a sense of partnership and involving the patient in decision-making [24]—specific RIAS categories such as *empathy/legitimise*, *partnership*, *check*, *asking for opinion or understanding* are considered to indicate patient centeredness.

The analysis was performed directly from the videotaped interviews, which is a distinctive feature of the RIAS, allowing to take the tonal qualities of interaction into account. The coder (CB) was trained by a Canadian group, trained by Roter, who developed the French version of the RIAS used in this study and a software allowing a computerised coding; the coder had already gained experience with the RIAS in a study assessing postgraduate CST.

Statistical Analysis

Mean frequencies were computed for the RIAS categories to get an overview of the basic characteristics of the data set. Analysis of variance and *t* tests were performed with RIAS categories as dependent variables to analyse between-subject variables such as gender. The analyses were computed by the statistical software SPSS 18.00 (for Windows). The alpha was typically set at 0.05.

Since our study is neither a pre/post intervention nor a between-group study, the analyses are considered to be exploratory and not hypothesis testing.

Results

Students' Evaluation of Training

Of the 124 medical students, 75 participated in GT (14 conducted an interview (CG) and 61 were observers (OG)) and 49 participated in IT. Of the 119 students (five students participated in the Erasmus project—a European Union student exchange programme—and then left Switzerland) who received the questionnaire evaluating the training, 65 (55 %) responded; 34 of them participated in GT (with 10 of them having conducted the interview and 24 observing it) and 31 in IT.

Overall, students were very satisfied with this introduction to breaking bad news; none of the 11 questions produced more than 20 % disagreement and the satisfaction level for items was high.

There was a marked difference between students who performed an interview and those who only observed the interview. Of the students, who conducted an interview in GT (CG, $N=10$), who participated in IT ($N=31$) and who observed the interviews (OG, $N=24$), the specific items were answered differently (difference, >10 %): question 2 (*training allowed to reach objectives*) was approved by 100 % of students of CG, 97 % of IT, and 54 % of OG; question 5 (*training allowed to gain new knowledge and/or skills*) was approved by 100 % of CG, 97 % of IT, and 79 % of OG; question 6 (*prior knowledge was sufficient to follow training*) was approved by 90 % of CG, 84 % of IT, and 71 % of OG; question 7 (*possibility to have a sufficiently active role*) was approved by 100 % of CG, 100 % of IT, and 50 % of OG; and question 9 (*training allowed to improve in the domain of physician-patient communication*) was approved by 100 % of CG, 97 % of IT, and 71 % of OG.

Students in GT who added remarks ($N=25$, of which 13 were observers) stated that each student should have the possibility to conduct an interview; one student considered it difficult to conduct an interview in front of peers. Students in IT who added remarks ($N=9$) stated that they benefited from the personalised feedback of the trainers and that each student should have the opportunity of participating in IT.

Analysis of the Student Interviews

Content of the Interviews

Of the 17,735 identified utterances, the students produced 58.51 % (10,376 utterances; *mean*, *164.84*; *SD*, *58.110*; *range*, *62–346*) and the simulated patients 41.49 % (7,359 utterances; *mean*, *116.79*; *SD*, *40.086*; *range*, *50–215*). The most predominant RIAS category for students was *medical/therapeutic information giving* (41.95 % of utterances) and for simulated patients *psychosocial information giving* (31.24 % of utterances). The second major category for both students and simulated patients was *agreement*—which was in the student sample combined with *back-channel responses* (indicators of attentive listening or encouragement which do not serve to take the floor from the speaker)—(12.39 and 18.67 %, respectively), then followed in the student sample *lifestyle and psychosocial counselling* (7.15 %), *paraphrasing/checking for understanding* (5.42 %) and *psychosocial closed-ended questions asking* (2.47 %) and in the simulated patient sample *medical/therapeutic information giving* (10.11 %), *concern showing* (6.71 %) and *disapproval showing* (4.72 %). To summarise, while the major RIAS categories in the student sample were mainly task-focused, they were mainly emotion focused in the simulated patient sample. Considering the set of all coding categories, 21.17 % of student utterances were emotion focused and 78.83 % task focused while for the simulated patients, 35.93 % of the utterances were emotion focused and 64.07 % task focused.

The students used, compared to open questions, 2.5 times more often *closed questions* about all topics (5.52 vs. 2.11 %), four times more often *closed medical/therapeutic questions* (2.19 vs. 0.52 %) and about two times more often *closed psychosocial/lifestyle questions* (3.13 vs. 1.59 %). The patients asked 12 times more often open than closed questions about *medical condition/therapeutic regimen* and about *lifestyle and psychosocial issues* (6.71 vs. 0.54 %).

In total, the students more often provided information (42.86 % of their total utterances) than gathered information (7.63 %); the same is true for the simulated patients (45.36 vs. 7.28 % of their total utterances).

Score Range of RIAS Categories

In RIAS categories with mean frequencies of more than 2, students showed an important variability with regard to the minimum and maximum number of utterances or range. It consisted in more than 20 utterances for the emotion-oriented categories *agreement* (2–33) and *back-channel responses* (0–27) and the task-oriented categories *checking for understanding* (1–22), *asking closed psychosocial questions* (0–22), *medical information giving* (7–106), *therapeutic information giving* (8–85), and *lifestyle/psychosocial counselling* (0–63).

Analysis According to Interview Scenarios

Comparison of the student interviews based on scenarios—curative (breast cancer) vs. palliative (stomach cancer)—showed significant differences in 5 RIAS categories: students facing the curative scenario ($N=33$) produced proportionally more utterances coded as *closed-ended therapeutic questions* (1.45 vs. 1.01 %; $F(1,61)=12.279$, $p=0.001$), *medical information giving* (23.33 vs. 16.10 %; $F(1,61)=53.136$, $p=0.000$), and *therapeutic information giving* (24.78 vs.

15.10 %; $F(1,61)=116.191$, $p=0.000$), while students facing the palliative scenario ($N=30$) showed more *agreement or understanding* (9.18 vs. 8.18 %; $F(1,61)=11.099$, $p=0.001$) and provided more *orientation* and *instructions* (2.02 vs. 1.97 %; $F(1,61)=4.996$, $p=0.029$).

The simulated patient playing the palliative scenario—compared to the simulated patient with the curative scenario—showed significantly more often *concern or worry* (9.44 vs. 3.10 %; $F(1,61)=63.505$, $p=0.000$) or *disapproval* (7.17 vs. 1.45 %; $F(1,61)=54.004$, $p=0.000$) and provided significantly more *psychosocial information* (37.10 vs. 23.49 %; $F(1,61)=32.036$, $p=0.000$).

Analysis According to Gender

Comparing male ($N=25$) and female students ($N=38$), one observes that in the palliative scenario female students ($N=16$)—in contrast to male students (N=14)—produced significantly more *reassurance* utterances (2.26 vs. 1.27 %; $F(1,28)=4.376$, $p=0.046$) and *medical and therapeutic counselling* utterances (2.87 vs. 1.33 %, $F(1,28)=9.918$, $p=0.004$). In the curative scenario, male students ($N=11$) asked significantly more *open questions* related to *psychosocial aspects and the experience of the patient* (1.81 vs. 0.94 %; $F(1,31)=5.904$, $p=0.021$) and female students ($N=22$) provided more *information on therapeutic issues* (24.90 vs. 24.66 %; $F(1,31)=5.317$, $p=0.028$).

Discussion

Overall, students expressed a high level of satisfaction with this introduction to breaking bad news. One of the main results of this exploratory study is that there was a striking difference between students who were actively involved; compared to observers, only students conducting an interview felt they could reach training objectives. In addition, students who conducted an interview in GT and students benefiting from IT expressed almost the same very high level of satisfaction with regard to half of all items of the questionnaire, while those participating as observers indicated lower levels of satisfaction. In conclusion, the students appreciate the opportunity to conduct an interview with a simulated patient and consider it necessary to ameliorate skills in breaking bad news. This result was also confirmed by the written remarks clearly favouring an active role and appreciating individualised feedback by the faculty. However, our study did not constitute a demonstration that active learners have better skills in breaking bad news.

With regard to students' communication skills, analysis of the interviews revealed that speaking time between students and simulated patients was rather balanced and that in comparison students produced mainly task-focused utterances and simulated patients more emotion-focused utterances. However, the most predominant categories indicated that emotional aspects of disease were addressed by the students and simulated patients communicated psychosocial information. Students rather provided than gathered information and when they gathered information, they asked predominantly closed-ended questions, which may lead to a lesser involvement of the patient: this result illustrates that there is room for improvement. Moreover, important variability within RIAS categories among students, especially for task-oriented categories such as checking for understanding or lifestyle/psychosocial counselling, were observed; these skills can be more easily taught than emotion-oriented tasks, which demand a psychological capacity for containing. The observed variability will allow to focus on specific skills and is a strong argument for individualised training, tailored to the student's needs.

With respect to the two scenarios of breaking bad news, students seem to adjust adequately by focusing the interview more on medical and therapeutic aspects and attentive responses (showing their agreement or understanding) in the curative situation and by structuring the interview more (providing orientation and instructions) in the palliative situation. The students' adjustment to the specific scenario is mirrored by the simulated patients who expressed more concern and provided more psychosocial information in the palliative scenario. Finally, a gender effect revealed that female students seem to conduct more patient-centred interviews, since they provided more treatment information in the curative scenario and more reassurance in the palliative situation, while male students concentrated more on psychosocial issues and experience of patients in the curative scenario. Again, this result favours an individualised training, taking into account gender, which appears as an important variable in communication with (simulated) patients at the pregraduate level.

As stated in a 2009 consensus paper on communication skills in oncology [1], interactivity is the key for skills acquisition with regard to communication. While common sense and pedagogic experience already indicate, interactivity is most important in order to change communication behaviour, the point of view of participants has to be taken into account, otherwise one has to expect resistance against the proposed teaching methods. Therefore, the fact that students welcome (1) the exposure to a complex, and for some of them threatening encounter with a simulated patient, (2) to be filmed during the interview, and (3) to visualise their results with a faculty member specialised in psychiatry, is an important result for future conceptualisation and implementation of CST on the pregraduate level.

There are two main limitations that have to be acknowledged. First, although the RIAS allows a very detailed analysis of interactions (which is an asset of this coding system), it is descriptive rather than evaluative and considers

quite general communication skills. Specific skills trained in this study may not have been identified and/or the coding categories of the RIAS may not completely correspond to the tasks required from the students. However, comparing RIAS scores obtained here with scores obtained through studies at the postgraduate level will allow to identify areas where pregraduate students need more training.

Second, nonverbal communication behaviour is not analysed with the RIAS. Studies have shown that certain nonverbal behaviours may indicate a patient-centred communication style and be related to positive patient outcomes [25]. The coding of students' nonverbal behaviour will be included in a further research project.

In conclusion, the students clearly perceive the need for training in breaking bad news and favour an active training and one-to-one supervision.

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

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