Teaching communications skills to medical students using a reflective teaching method and access to online video cases

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Abstract

Introduction

In our family medicine course the students work eight days in a general practice clinic, video-record their consultations, and analyze them in small group sessions at the university. The aim of this study is to find a way to evaluate the course after adding online material.

Material and Methods

On the first and last day of the course all students watch the same test-video of a consultation. After watching the video they fill in a questionnaire, designed to structure the analysis. Outcome is the change in answers from the first questionnaire (A) to the last one (B).

For the on-line teaching we use 16 short video-cases of consultations accompanied by on-line questions. The control group has the usual course.

Results

In seven out of ten items there are significant changes in the answers in the control group. The tendency is the same in the intervention group but not significant. Apart from one item the two groups finished at the same answers.

Conclusion

Teaching consultation skills to medical students using a reflective teaching method is effective. Adding access to video cases has a minor effect.
Discussion

Further studies into how to use e-learning material in teaching communication skills is needed.

Keywords: Communication skills, Family Medicine

Introduction

The effect of different teaching methods in clinical practice has been measured in various ways (1, 2).

When evaluating consultation and communication skills the learner’s performance is evaluated by using rating scales, interviewing, a self-efficacy questionnaire or a survey (3, 4, and 5). As mentioned by Gordon et al. an effective tool for that purpose had to yet to be developed (6). We needed a tool for exploring the effect of different methods in teaching consultations skills.

A review of e-learning methods in health professions shows that the existing literature is heterogeneous and inconclusive, and suggests further studies of outcomes (7, 8).

We want to develop a tool to measure the effect of adding e-learning to our usual course in clinical family medicine. We combined their experiences from clinical work with giving feedback on their video consultations in small group sessions, which earlier has been found to be effective (9, 10, 11, and 12).

The aim of this study is to examine the effect of the course in consultation skills by itself and the effect of adding access to online video cases. The effects are described by DanSCORE.

Method

We used a pre-and a posttest, each consisting of one video and a questionnaire. We used the same test video before and after the course and the students filled in a questionnaire immediately after the showing. All students attending the mandatory course in family medicine during spring 2013 were included (n=191). The course participants are assigned anonymously by the university.

The teaching

In the last semester before graduation, the students individually spend eight days in a general practitioner’s (GP’s) clinic, participating in the activities, conducting consultations with real patients and recording videos of their own consultations.

The eight practice days are scattered over a five week period. The students have small group sessions with their university supervisor (four hours per session) five times during the period. Each time they have been in the practice they participate in the small group teaching. They watch each other’s consultation videos and give and get feedback. The discussion centers on the consultation process, the communication with the patient, and the clinical skills, using a reflective feedback method.

For the final exam, the student shows one of the videos with her/himself in the doctor’s role seeing a real patient. Subsequently the student analyses the communication and the clinical process. The censor and the examiner look for
patient-centered elements in the consultation, and listen to the student’s disclosure of the effect of potentially missing elements. They are also presented questions about primary care and its organization and given a clinical case for discussion.

As the final exam also contains other parts, it is difficult to measure the effect of our teaching by the total score. We therefore use the DanSCORE questionnaire (Danish Structured, Consultation, Observation, Registration, and Evaluation questionnaire) for the students to fill in before and after the course. We explain the consultation in ten steps, based on elements from the original patient-centered consultation as defined by Levenstein (13). Evidence on its effectiveness on patient satisfaction, adherence and economy is available (14, 15, 16, 17, and 18).

We teach students to:

- reach an agreement about the agenda for the consultation;
- ask for the patient’s ideas, feelings, expectations, and the effect of disease symptoms on functions;
- use summarizing in order to obtain common understanding;
- use signposting during the consultation;
- provide a safety net.

The questionnaire

The DanSCORE questionnaire is based on the patient centered consultation. It has 10 items and forty answer categories. The questionnaire has been developed by conversation analysis.

The DanSCORE questionnaire has been used in our project since the development of the pilot study in 2013. After initial adjustments it has now been used by more than 1000 students over three years. It has been found useful for measuring the effect of our teaching.

The test video

The test video shows a consultation between a GP and a simulated patient (SP). The GP was informed that the case would be videoed for teaching. He does not know anything about the patient and the symptoms beforehand. The SP is a stressed person with a headache. He was instructed to act as a real patient.

We then had 31 experienced teachers do conversation analysis, pausing every 30 seconds and discussing the elements. They succeeded to reach agreement.

The testing

After having seen an introduction to the patient-centered consultation before entering the course, the students watched the test video during a lecture the very first day, filled in a questionnaire (A), which was then saved in a sealed envelope with a student ID. Five weeks later, on the very last day of the course, the procedure was repeated, using the same questionnaire (B). The two questionnaires had identical numbers for comparison between the two answers. They were not allowed to talk to each other during the sessions.

The intervention

The first and second group in the semester were controls (N=84) and got the usual program. The third and fourth were intervention groups (N=103). Students in the intervention groups had access to 16 e-learning videos from
consultations in general practice. The videos are accompanied by question concerning elements from the patient-centered consultation and no answers from us. They also had had a three hour communication course in CAMES (Copenhagen Academy for Medical Education and Simulation).

**Results**

191 students were included in the course in 2013. 186 filled in the questionnaire (A) and 146 filled in the questionnaire (B) (76 %). The students that only filled in the questionnaire A before the course did not exhibit different answers in the questionnaire (A) compared to the students that had filled in both (A) and (B). For the analysis we only used data from the students that had filled in both the (A) and the (B) questionnaire (for results see [http://www.gp-and-patient.com/](http://www.gp-and-patient.com/)).

The number of students watching the videos was counted electronically (n =338) (Table 1). We cannot see how many of the 16 videos the individual student used.

Both in the control group and in the intervention group there are changes in the answers from questionnaire A to questionnaire B. Our course made the biggest change for the students that had not yet had the CAMES course. In the control group that had not received any communication teaching this is significant. In the intervention group that had participated in a 3 hours of communication skills training (CAMES) before our course, there is an overall change in the answers from the questionnaire (A) to B, but it is not statistically significant. For statistical analysis Fischer's Exact Test for small numbers is used.

The answers to the B questionnaires were all alike in the two groups except for item 4.6. The answers in the B questionnaire are significantly different in this item. The students in the intervention groups had seen video cases on the learning platform and seem more familiar with the psychosocial work of a GP.

The students in the control group learned on the course to a higher degree the importance of making a contract with the patient about the agenda for the consultation, and noticed that the doctor did not do it (p<0,0323).

When it comes to exploring the patient’s ideas about symptoms, illness and self-treatment the aim is to give the students the skills to answer in accordance with the gold-standard, which they did after the course (P<0.024).

The control group learned during the course to accept that psychosocial problems are a job for the doctor (p<0.00094).

After the course they became aware of the doctor not summarizing the diagnostic interview before the physical examination as a mean to obtain a common understanding (p<0.00016).

Students in the control group significantly change during the course in their evaluation of the doctor’s effort to make the patient understand the diagnosis and plan. They find that the doctor let the patient take up too much space in the consultation (p<0.02484).

Students in the control group were after the course more aware of the fact that the patient does not summarize the diagnosis and plan, but we would have liked them to see that the patient did not summarize at all.

Students in the intervention groups find the doctor’s explanation correct after the course (p<002199). They have seen consultation clips in the online material and have become more familiar with psychosocial symptom presentation.
Discussion

After the course students change their ability to identify important issues in a consultation. Our study shows that it is an effective teaching method to give structured feedback about students’ performance in recorded student-patient interviews. The small group discussion gives opportunity for reflection.

One could argue that the better answers in the B questionnaire after the course were due to the fact, that the students had seen the video twice. From the first day to the last day of the course they watch a lot of consultation videos made by their fellow students, so it makes it difficult for them to remember the test- video among all the others. But as they could be biased here, we looked at the results on the B questionnaire from a group of students (n=60) that had only seen the video once. They were identical to the answers we had from the students that had seen it twice.

We have demonstrated that we have an effective course. We have a questionnaire (DanSCORE) that functions. Access to video cases does not in itself make a big difference. Further studies describe better ways of using e-learning in consultations skills teaching.

Table 1

| Number of students having seen the videocases counted electronically | n=|
|---------------------------------------------------------------|---|
| A patient with stress 1.                                | 56|
| Young mother with pain in her joints 1.                  | 14|
| Headache 2.                                                | 0|
| A good solution?                                           | 23|
| Doctor and patient disagree                               | 24|
| Young mother with pain in her knee                        | 18|
| Headache 1.                                                | 23|
| Forgetting about an important issue? 1.                    | 32|
| A patient with stress 2.                                  | 29|
| What about a sick leave?                                  | 21|
| A dizzy and demanding patient?                            | 0|
| An unacceptable issue?                                    | 19|
| A patient with stress 3.                                  | 24|
| Forgetting about an important issue? 2.                    | 18|
| Young mother with pain in her joints 2.                   | 11|
| A dizzy, worried and demanding patient?                   | 26|
Take Home Messages

- Teaching communication skills to medical students using feedback on video consultations is effective
- Access to instructive video clips on a learning platform only make a minor change
- We have found a new method to measure the effect of teaching communication skills

Notes On Contributors

Professor Merete Jorgensen MD.GP. has been a course instructor in Family Medicine at Copenhagen University for fifteen years. She is studying the effect of access to online video consultation and has developed a way to measure the effect of communication courses by using a test video and a questionnaire (DanSCORE).

Senior researcher Klaus Witt MD.GP. PhD. has been teaching Family Medicine at Copenhagen for more than twenty years and has been involved in research in teaching communication skills for more than fifteen years.

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19. For the questionnaire see http://www.gp-and-patient.com/

Appendices

Declarations

The author has declared that there are no conflicts of interest.

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