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The role of simulation practices in acquisition or activation of medical terminology

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Medical terminology is a specific code, also labelled as the language of medical communication. Methods including simulation-based doctor-patient encounters enable students to start using that language already during their undergraduate years, often prior to or parallel to their clinical practices. Yet, one party in the conversation – mainly the patient – is most often unable to use that code. The simulation-based history taking course at the University of Pécs facilitates the students' improvement of awareness in code-switching from a doctor-patient scenario to a doctor-doctor or health personnel scene. Focusing on fundamental elements of the specific language use, students have a chance to revise medical and/or more precisely, clinical terminology by simplifying, defining terms to lay patients – simulated by actors –, as well as present the term-loaded case history to a fellow colleague. Thus, by awareness raising, theoretical knowledge of previous years may be activated. The paper introduces how history taking simulations and case presentations in the English programme empower medical students in the confident use of medical terminology.

Keywords: *awareness raising, case presentation, code-switching, medical terminology, simulation practices*

Introduction

Medical terminology provides professional linguistic tools for successful medical communication, and also for understanding anatomical and clinical studies. Most medical schools offer elective courses in the field of terminology, so not all students are introduced into the medical language to the same extent. The situation is similar concerning case presentation courses; as no mandatory subjects are available, thus case presentation skills are substantially different. At a clinical setting case presentation is an everyday routine, and it takes a few months to develop an appropriate way to master it. Therefore, incorporating terminology and case presentation skills within simulation practices seems to further enhance students' abilities to tackle language-related problems in clinical environments.

During simulated interaction between doctors and patients, students may explore different codes of language use, and improve their awareness in

code-switching. The medical terminology acquired in the first years of their studies might be activated, or learnt step-by-step through simplifying the medical terms to the patient, and the relatives of the patient, or the opposite: briefly summarizing the medically relevant information in a professional, coded, medical language in the form of case presentation.

In order to improve the awareness in code-switching, students need to have developed sociopragmatic and pragmalinguistic skills. *"Sociopragmatic skills relate to the cultural values and expectations underlying and driving interactions in particular cultural contexts, including workplace contexts."* (Holmes – Riddiford, 2011) Pragmalinguistic skills, on the other hand, pertain to a speaker's ability to comprehend and accordingly deploy the linguistic tools accessible in a language to achieve their purposes (Dahm – Yates, 2013).

In medical settings, interestingly, the abilities to fully understand sociopragmatic values of a given workplace and culture, or stick to pragmalinguistic rules of interpersonal communication seem to lag behind the necessary level. Derwing and Waugh (2012) describe a scenario as a sociopragmatic failure, in which immigrant health personnel working in Canada could fail to talk about mental health, because it is thought to be a taboo topic. The same case would also be a pragmalinguistic failure, as immigrant medical specialists could create the impression like being too straightforward or mean, and thus, even rude, if they intend to discuss mental health. Therefore, the

> *"…pragmalinguistic features of specialized medical discourse should be viewed as embedded within the broader cultural context as well as in the unique (sociopragmatic) settings that exist for communication in everyday and workplace contexts within a particular culture. Thus, generally held cultural perspectives will be reflected in the communicative values in a culture, that is, the values to which interactants orient when they speak."* (Derwing – Waugh, 2012)

One way to successfully deploy pragmalinguistic means to achieve efficient doctor-patient interpersonal communication is informal language use. It may efficiently reduce social distance, and at the same time help medical specialists to establish rapport via the use of lay terms together with relational talk. Thus, medical explanation is paraphrased to the level of understanding of the patients, thereby misunderstandings may be minimized and patient compliance can also be improved. Softening strategies can be similarly powerful tools to mitigate power/knowledge inequalities, thus enabling patients to become active, more equal conversational partners in discussions and decision making procedures in a low-pressure medical environment. These tools also reduce the impact of potentially difficult, embarrassing topics, weaken threats to face, and afford reassurance, upon

which doctors can signal their approachability, and build an efficiently working relationship with patients (Dahm – Yates, 2013).

Medical specialists are advised to explain their thoughts in a direct, simple, understandable language, consciously avoiding jargon and reflecting the patient's conversational style and values. Short responses, summaries, and pause may be useful language tools to check for comprehension to avoid misunderstanding, even when nonverbal signs like nodding of the patient are experienced, and they seem to be following every word (Tongue, 2005).

Direct, clear, and short statements are as important, as the tone of voice. Communicating in an open, compassionate, and timely manner may build up trust and a working relationship with the patient. Thus, non-defensive explanations of what has happened in short statements, with frequent stops to check understanding might be useful pragmalinguistic tools. Technical descriptions and medical jargon are to be avoided when speaking to the patients. (Tongue, 2005:655). *"Speaking as a productive language skill is particularly effective for the acquisition of medical terminology."* (Dobreva – Popov, 2013)

The aim of our programme is to prepare medical students to meet the expectations of future colleagues regarding professional interactions in medical settings. These interactions among medical staff require developed case presentation skills with solid medical terminology.

Methods

Our present study applied a survey research method based on students' feedback as a part of the end-of-term course evaluation. Thirteen international students (Norwegian, Canadian, Iranian, Indian, Japanese and Dutch nationalities) attended our course titled *Taking medical history with actors* – simulation practices in the MediSkillsLab, where authentic medical cases are turned into simulation scenarios, and medical students can try to play doctoral roles with actors as their simulated patients (Eklicsné et al, 2016). Besides professional and psychological development, this programme provides a unique opportunity to develop the students' sociopragmatic and pragmalinguistic skills. During the role-plays with simulated patients, students are observed by a clinician and the communication instructor. After the scenario they receive feedback on their performance highlighting their strengths and also the areas that need to be improved. This three-dimensional evaluation (patient, clinician, instructor) enables students to raise their awareness and use code-switching with confidence (Eklics et al., 2019).

Scenarios are based on case reports of real patients treated in internal medical wards, cardiac clinic, surgery units, and psychiatric ward of the

University of Pécs, Clinical Centre. Privacy rights are cautiously taken care of with no original biodata provided. A session is divided into four parts.

Number one provides preliminary information concerning communication task (e.g. The patient's spouse visits the husband while the students take medical history. She interrupts the conversation and apparently disturbs the interaction. How to solve the conflict? Should they or can they ask the wife to wait outside until they finish? Highlighting intercultural differences: in Norway the patient decides, in Hungary… ?) Number two is the role-play itself, so doctor-patient interactions take place. Number three is reporting the case by one student of each group to the clinician present. (e.g. A 67-year-old male patient was admitted to the clinic with severe abdominal pain localized in the peri-umbilical region. The pain was triggered by strenuous exercise 2 days prior to admission…) In that phase students are asked to briefly summarize the medically relevant information using medical jargon and avoid vague everyday phrases, like "the patient said, he does not remember when exactly the pain started". As we are the instructors of the course, it is our responsibility to draw the attention of the students to the deliberate switches in language variety. Number four is providing feedback on the performance by the participants listed above. The advantage of incorporating prompt feedbacks is to confirm successful behavioural and linguistic patterns, and emphasize what to improve next time. Perspectives are always given.

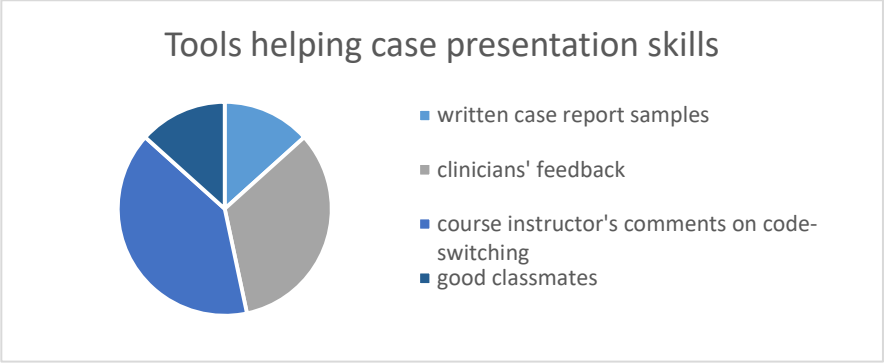
The survey incorporated questions about preliminary oral case presentation courses, the significance of simulation practices in activation or acquisition of terminology, self-evaluated improvement, also the efficacy of various tools applied (written case report samples, clinicians' feedback, course instructor's comment on code-switching, good classmates), furthermore, the role of the different specialists involved in the programme, and finally, innovative ideas of the students.

Results

Our survey revealed assessment and attitude differences in exploring the role of simulation practices in activating medical terminology. Questions about the previous input of oral case presentation courses elicited the following data: only 2 out of 13 students attended previous case presentation classes (15%), so the majority of them had no information about oral case reporting. 100% of the students found the simulation-based history taking course a remarkable way to enhance and activate their medical terminology. There were senior students among the participants, who studied medical and clinical terminology in their first year, so awareness-raising in the use of medical

language was apparently found important. Also 100% of the participants thought the clinicians from different medical fields provided authentic feedback on their case presentations – and it was very reassuring that they explained what expectations the students will face in their clinical practice.

The pie-chart below represents the tools applied during the course, and we were interested in their efficacy based on the students' feedback. Here students could choose more than one answer, as we focused more on the applicability of the tools. The number of those, who believe the course instructor's comments on code-switching and the clinicians' feedback on appropriate reporting can effectively contribute to case presentation skills development was significantly higher than that of those, who relied on written samples or learnt from their peers.



Concerning the final question in which students were asked to share their innovative ideas to improve the course, 100% of the students recommended asking at least three clinicians in the first three sessions of our course to demonstrate how they present cases in their everyday life.

Discussion

Our survey research has had a positive outcome. All participants agreed on the remarkable impact of simulation practices on activating medical terminology. The answers reflect the significance of learning by doing and the high value of content-based tasks.

Based on the results, we can see a significant growth in improving socio-pragmatic and pragmalinguistic skills in the students' oral case presentations. The students experienced professional and personal improvement in term-based language use required by the specialists in clinical settings. They became more confident by the end of the course concerning their language choice. The three-dimensional evaluation system (clinician, simulated patient, communication instructor) made the students

understand which area needs to be improved. We could argue that speaking the language of medicine alone does not equip the students with essential tools to establish efficient doctor-patient interaction. It was rather the deliberate choice of the appropriate linguistic norms in the well-known cultural context that enabled the participants to take full medical history, while activating their underlying medical terminology.

Although our survey research explored the impact of simulation practices on improving medical interpersonal communication, the small sample size contributes to the limitations of the study. Longitudinal surveys in the future could minimize the disadvantages. We intend to immerse students in case presentation activities more gradually; with early access of written case report samples, frequent oral case presentations by the clinicians involved in our programme, and finally more intercultural scenarios, taboo topics in order to develop local and culturally diverse sociopragmatic skills.

Even so, we found it valuable for medical educational purposes, self-awareness raising and improving course design. The authentic participants (real clinicians, simulated patients, medical students) and the authentic environment (simulated ward in the MediSkillsLab) facilitated professional communicational development. Therefore, we daresay, the original purpose was achieved: more confident students started to use socio-pragmatic skills with awareness.

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Appendix

Appendix 1. Feedback on terminology improvement

Circle your answer, or add your own comment.

1. In your first year you had medical terminology class. Now, it is most probably a bit in your passive knowledge. We do believe, a course like 'Taking medical history with actors' and the regular case presentations can contribute to the activation of the background knowledge, and/or acquisition of new skills.

   yes no

2. Throughout the semester how has your terminology knowledge been activated by the case presentations? From 1 to 5 circle the level you think it has improved. 1 is not a bit, 5 is substantially, now you have the skills.

   1 2 3 4
   5

3. What tools helped you to briefly summarize the case of the patient?

   1- written case report samples sent by e-mail
   2- clinicians' feedback on proper medical vocabulary
   3- course instructor's comments on code-switching from a doctor-patient to a doctor-doctor encounter
   4- other……
   ……

4. Do you think working with different clinicians can provide more authentic feedback on case presentations?

   yes no

5. For future purposes do you think it would also be important to provide live case presentation example, meaning demonstrate cases by the clinicians before you are asked to do so?

   yes no

6. Have you attended any courses where oral case presentation techniques could be learnt/practised before?

   yes no

7. How to make our course more efficient to enhance the use of medical terminology? Share your innovative ideas.