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Original article

Communication skills in medical students – An exploratory study before and after clerkships

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ABSTRACT

Introduction: Effective communication is the cornerstone of a fruitful patient–physician relationship. Teaching clinical communication has become a pivotal goal in medical education. However, approaches measuring the maintenance of learned skills are needed since a decline in some communication skills during medical school has been reported.
Objective: Explore medical students' communication skills in a simulated clinical encounter before and after clerkships.
Methods: Two-hundred-fifty-five undergraduate students attending the second year of medical course, at the Faculty of Medicine of University of Porto, completed a 1.5-h per week course over 4 months on basic communication skills. The students' final evaluation consisted in an interview with a simulated patient, assessed by a teacher using a standardized framework. Three years later, while attending clerkships, 68 students from the same population completed a re-evaluation interview following the same procedure.
Results: Medical students maintained a communication skill mean level similar to that of the original post-training evaluation, but significant differences in specific communication abilities were detected in this group of students. Empathic attitudes and ability to collect information improved whereas interview structure and non-verbal behavior showed a decline during clerkships expressing a balance between the competencies that improved, those that declined, and those that remained unchanged.
Conclusion: Present findings emphasize the importance of patient contact, context and clinical role models on the maintenance of learned skills, underscoring the importance of an integrated approach of clinical communication teaching throughout medical school.

Introduction

Effective communication is the cornerstone of patient-centered medicine and empathic behavior, leading to a fruitful patient–physician relationship. It contributes to a positive therapeutic effect and better patient outcomes and satisfaction, thus increasing the overall quality of health care systems.[1–4] Proficient physician communication is identically associated with professional satisfaction, accomplishment, and confidence.[5,6]

Teaching the why and how of clinical communication has then become a pivotal goal in medical education, gradually included in undergraduate curricula as a means to enhance the ability to collect relevant information, build strong therapeutic relationships, and foster patient care.[5,7,8]

Experience shows that medical students are attentive, motivated and avidly develop clinical communication skills (CCS) in concert with other medical skills.[9–11] Problem-oriented CCS are reported to be easier to teach and learn than empathy or respect, as these require a strong influence of innate emotional and cultural sources.[12] Even so, empathy can be taught and improved.[13,14]

The most suitable and effective time during the medical course to learn CCS is still a matter of debate, with some authors stating that a longitudinal design covering several years could be the more effective.[39–41] Students also believe that it is important to learn communication strategies throughout the medical course by integrating them into clinical practice.[42]

Abbreviations: CCS, clinical communication skills; SEGUESet the Stage, Elicit information, Give information, Understand the patient's perspective, End the encounter, checklist; T1, first evaluation in 2008; T2, second evaluation in 2012.

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Currently, training programs applied during medical courses have been shown to improve students' knowledge,[43–45] attitudes,[46,47] confidence,[48,49] empathy,[50–52] patient-centeredness,[48,49] and interview structure[12,44,53,54] and also promote patient satisfaction.[48,55,56]

Gender has been described to influence CCS acquisition in medical students. Female students were found to be more patient-centered,[48,57] to have more positive attitudes toward CCS training,[8,11,12,58] to be more empathic[59–66] and to be more prone to develop interpersonal relationships.[61,67] Male students were described to have less positive attitudes toward CCS learning,[9,11] to be more confident[68,69] and to frequently adopt attitudes of dominance and independence.[70]

Assessment of students' communication skills

The objective assessment of a student's ability to communicate with patients has also gathered emergent attention.[31] Methods to assess the level of "knows" (remembering the skill) and/or "knows how" (applying the skill) of communication can be divided into: video presentations with oral, essay, or multiple-choice exam questions[71] and peer and/or self-assessment of communication skills[45,72,73]; checklists filled by observers of students' performances during real or simulated patient encounters; surveys of real or simulated patient experience in clinical interactions. Clinical encounters with simulated patients trained to follow standardized scenarios are presently widely used.[74] These interviews provide an objective assessment with high validity and reliability, permitting to evaluate how students objectively "do"[31] and to obtain the patient's perspective of how efficiently they perform. The same tools have failed to gather a strong consensus regarding empathy.[75–77] The cognitive and behavioral dimensions of empathy were found to be more easily validated (e.g., listening carefully and acting accordingly) during a simulated interview than the emotional dimension (e.g., address and respond to emotions).[78]

Communication skills through clerkships

Periodic assessment of retention and application of CCS is of utmost importance to confirm the effectiveness in communicating with patients and the persistence of learned abilities. A decline of CCS during clerkships in undergraduate medical students has been reported, namely in empathy,[72,79,80] patient-centered attitudes,[57] process-oriented skills,[81,82] and attitudes toward the doctor–patient relationship.[83,84] Regarding empathy, however, it has recently been argued that the suggested decline among medical students is "greatly exaggerated" because of methodological shortcomings.[85] Adding to this dispute, various cross-sectional studies[61,63,65,86–88] and two longitudinal studies[62,66] on self-reported empathy also showed an increase or no significant variation in empathy during the medical course. CCS learned in the first years of undergraduate medical education can, in fact, be challenged during clinical practice when students are confronted with time constraints, demanding contexts, role models with different communication styles, and real patients.[20,89–91] Other factors reported to influence skill retention are: students' attitudes toward communication skills training and value of clinical communication skills; experience within the clinical setting; specialty preferences; and demographic variables, such as gender and cultural background.[48,96–98] Interacting with real patients is also thought to reinforce the students ability to communicate accurately.[99] The decline in specific communication abilities can be associated with the lack of articulation of pre-clinical and clinical curricula and the learning context in clinical practice: higher demand of medical training; cultural or organizational influences; marked variability among tutors regarding communication skills; and the gap between academic and clinical role models.[72,91,100–103] Role-modeling by clinical teachers has been pointed to by students as the most powerful influence on empathy development.[104,105] Negative attitudes from clinical faculty and residents,[103] an intimidating educational environment, perception of brittleness, overly demanding educational assignments and patient negativity were reasons proposed to contribute to the decline in empathy during the medical course.[106]

Our aim was to study how medical students communicate before and after clerkships in a simulated clinical encounter. As secondary aims we intended to: (i) explore students perspective on communication skills relevance and changes during medical school and (ii) identify specific needs in order to refine communication skills teaching.

Methods

The present study follows an observational longitudinal design.

The medical course at the Faculty of Medicine of the University of Porto runs a six-year undergraduate program divided into pre-clinical years (years 1–3) and clinical clerkships (years 4–6). During the first three years, students have a small clinical experience and a few opportunities to interact with patients. Inversely, during clerkships, they interact with patients within a clinical environment, largely hospital-based, under clinician supervision. Communication skills and the doctor–patient relationship are studied in the second year, including the acquisition of a theoretical background and practical training. Training is based on experiential techniques (role-playing, and videotaped simulated clinical situations) used to establish experience and reflect on communication abilities. The final evaluation consists of a clinical encounter with a trained actor as a simulated patient, which is assessed by teachers using an adapted version of the checklist of medical communication tasks: Set the Stage, Elicit information, Give information, Understand the patient's perspective, End the encounter (SEGUE).[75]

Participants

A convenience sample of 68 students from a pool of 255 students was recruited for the present study, based on a sample size calculation assuming a standard deviation of 4 and a mean difference of 2 between T1 and T2[111] (alpha level of 0.05 and a power of 80%). The participants were invited to participate using a snowball approach (phone call, in-person or email contact). Sixty-nine students were contacted and 68 accepted to participate. The inclusion criterion was willingness to participate. No exclusion criteria were applied.

Instruments

The SEGUE framework[75] was translated and adapted to meet the assessment needs of the teaching program and to discriminate students performance. This adapted version contains 20 items divided into 4 content areas (Set the stage; Elicit information; Understand the patient's perspective; and End the encounter). Items are rated as: 2 for excellent performance; 1 for average performance; 0 for absent performance; −1 for inadequate performance; and −2 directedness or disrespectful tone. This scoring corresponds to the pedagogical outcomes of the course and results from a consensus of communication skills teachers established and in use since 2007. The final score is achieved by the sum of all items. The maximum score is 28 and the minimum is −11. A detailed description of the scale is presented in Table 1.

An original questionnaire was built in order to characterize students demographic (age, gender) and academic profile and to define

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