Barriers for teaching communication skills in Spanish Medical Schools: a qualitative study with academic leaders

CURRENT STATUS: ACCEPTED

Roger Ruiz-Moral
Universidad Francisco de Vitoria (UFV)

r.ruiz.prof@ufv.es Corresponding Author
ORCiD: https://orcid.org/0000-0002-6881-9878

Cristina García de Leonardo
Universidad Francisco de Vitoria

Alvaro Cerro Pérez
Universidad Francisco de Vitoria

Fernando Caballero Martínez
Universidad Francisco de Vitoria

Diana Monge Martín
Universidad Francisco de Vitoria

DOI:
10.21203/rs.2.13905/v2

SUBJECT AREAS
Internal Medicine  Educational Philosophy and Theory

KEYWORDS
communication skills, medical students, educational barriers, medical education, qualitative study, teaching methods, undergraduate studies, medical school.
Abstract
Background: In recent years, Spanish medical schools (MSs) have been incorporating training in communication skills (CS), although how this is being carried out has not yet been evaluated.

Objective: to identify the barriers to the introduction and development of CS teaching in Spanish MSs.

Methods: Eighty three percent of Spanish MSs (34) were invited to participate in a previous study that explored factual aspects of teaching CS in these schools. The responsible for the teaching this domain were contacted at each school and asked to respond to an open-ended question. Two researchers independently conducted a thematic analysis of the responses. Results: We received responses from 30 MSs, (85.7% of those contacted and 73% of all MSs in Spain). Five main thematic areas were identified, each with different sub-areas: negative attitudes of teachers and academic leaders, type of organisation, structure and presence in the CS curriculum, negative attitudes of students, lack of trained teachers and problems linked to teaching methods and necessary educational logistics.

Conclusions: The barriers and problems identified indicate there are areas for improvement in the teaching CS in most Spanish MSs. These problem areas must be addressed in order for students to learn these skills more effectively. There is a vicious circle in the dynamic relationship and interdependence of these problems: negative attitudes of teachers and academic leaders tend to marginalise the incorporation of these skills within the curriculum. Limited investment in educational methodologies and evaluative structures along with scarce promotion and training for teachers tend to foster negative attitudes among both students and faculty. This represents a major challenge and will require a significant cultural shift as well as decisive institutional support at the local and national level. This support is essential for the successful introduction of new educational models in line with the latest trends in teaching and clinical practice.

Background
Research carried out over the last few decades has shown that good clinical communication (CC) has a positive influence on many clinical outcomes and aspects relating to the patient and doctor, including physiological results, changes in health behaviour, the clinical relationship, healthcare procedures and the economic impact of healthcare [1-3]. There is also scientific evidence that clinical
communication skills can be learned by students, doctors and other healthcare professionals [4,5]. As a result, communication skills (CS) training has for some time been incorporated into undergraduate medical studies in a number of different countries where published guidelines set out the most appropriate and efficient strategies for developing CS within course curricula [6-9]. These guidelines are based on the available scientific evidence and recommendations indicate that teaching: 1) must be longitudinal sustained throughout the curriculum in order to improve content retention [10,11] given that these skills tend to decrease over time and over the course of clinical training; 2) must include “experiential” teaching methods (role-playing, practice with simulated patients, observation, feedback, and small group discussions), which have been demonstrated to be effective in changing or acquiring new behaviour [12,13]; 3) must be integrated within the general medical curriculum and practical activities of medical specialties [14,15]; 4) must focus on the quality of training, both in simulation scenarios where all students have the opportunity to practice these skills and receive feedback, and in medical clerkships where there are opportunities for informal and opportunistic learning. In order to be effective, explicit learning and training objectives must be established allowing teachers to conduct directed observations and provide relevant feedback. In Spain, the National Agency for Quality Assessment and Accreditation (ANECA) referred to CS in its white book as a specific competence to be taught in MSs [16]. Furthermore, two years later, an Order by the Ministry of Education and Science, establishing the requirements for certifying an official university degree in Medicine, defined CS as one of seven competencies medical students must acquire in order to obtain a medical degree [17]. Both documents provide a generic, declarative perspective on the subject, leaving accredited schools free to organise their CS curricula, teaching methods and assessments.

In 2017, a study was conducted by our group with the participation of 83% (34) of Spanish MSs to explore the current circumstances of CS teaching in Spanish MSs [18]. The study concluded that while almost all MSs had formally incorporated some content relating to CC in their curricula, the evidence suggested that, in the vast majority of cases, CS teaching did not follow many of the main recommendations of the aforementioned bodies. As a result, while debate continues about many
aspects of CC training, efforts to incorporate it into undergraduate studies may not be effective for Spanish medical students to acquire these CS. Thus, the study showed that a very significant percentage of these MSs (64.7%) only offer CS training during preclinical years, and that it is taught separately from other clinical skills and alongside the more theoretical subjects of humanities, ethics, history and, above all, psychology. It was also noted that there were no structured CS training programmes at any stage of the curriculum, that is, programmes with clear learning objectives and formative and summative assessment strategies. In 29.5% of the MSs, this "training" is considered a part of medical clerkships with no clear learning objectives. The predominant teaching method was a traditional class format or seminars in smaller groups where the use of role play or SP (simulated patients: a scarcely used resource) was carried out in a predominantly demonstrative manner. Thus, the majority of students did not get the opportunity to practise individually and receive structured and constructive feedback on their performance. The study also revealed that although the majority of teachers are clinicians, they lack specific training in this subject while a significant number of teachers had no clinical experience or were had no specialities outside of standard clinical practice, especially in psychology. Finally, CS were generally assessed using the traditional method of a written exam with very little structured assessment of student performance in simulated or actual settings.

As a result, and further to the study, we proposed a new exploration of current realities of CS training in Spanish MSs, inviting the same academic leaders that participated in the previous study to offer their opinions on the problems and barriers to incorporating and implementing CS training in their own MS. The aim of this second survey was to analyse the current situation of the training subject to the previous study, identifying the main problems faced by schools as well as the priority areas for future action to make training more effective.

Materials And Methods
This is a qualitative study that aims to explore the principal problems and barriers to the development of CC training in Spanish medical schools, in based on the opinions of the professors responsible for teaching this domain in the curriculum.

In the preliminary study, 41 medical schools (MSs) were invited to participate, drawn from the official
list of Spanish medical schools according to the Ministry of Health in 2017 [19]. Some 34 medical schools or 83% of those contacted replied (28 public and 6 private schools), providing information on their curriculum (credits, subject/s and year/s in which it is taught, methodology, etc), characteristics of the faculty and the teaching and assessment methods used in the CC training [18]. Two researchers (CGL and ACP) contacted the schools three times over a period of three months (from October to December 2018) and collected the data. Contact with the MSs was mainly by email and by telephone for those who did not previously respond. Most of the MSs had a well-positioned contact person (responsible for this domain in the curriculum), while in others the Dean provided information directly, without recording the position of the staff member directly in charge. Following this, the 34 MSs that participated in the first stage of the survey were again contacted and invited to participate in the qualitative study (excluding the 7 MSs that did not initially respond). Participants were asked to respond to the following open single question: “What have been (or are) the main barriers to including (in the past) and improving (in the future) student training in Doctor-Patient Communication as part of the undergraduate degree offered by your school?”.

Analysis: All results were codified thematically and independently by two researchers, RR and AC. The results were sorted into thematic categories and subcategories, with a high degree of agreement between categories. There was a discrepancy in the allocation of subcategories but this was resolved through discussion in order to illustrate varying opinions, perspectives and agreements. The most relevant themes emerging from the results are presented below, including the number of times they appeared with statements that best illustrate the opinions of the staff.

Results
Out of the 34 MSs which participated in the previous study and were contacted, we received responses from 30 (85.7% of those contacted and 73% of all MSs in Spain; 5 private schools). Five main thematic categories were identified, each with different subcategories. Table 1 provides a list of the barriers identified:
Table 1: Barriers to teaching/learning communicative skills in Spanish medical schools

| Negative attitudes of teachers and academic leaders (as a result of opinions such as...) (23 comments) | Lack of practical use  
Not being scientific material  
They are innate skills  
They cannot be taught  
Its introduction threatens both their subjects and their academic status |
| Marginal presence in the curriculum: organisation and structure (30 comments) | Incorporated as a theoretical subject in an ad-hoc style  
During preclinical periods  
In a fragmented way (in different subjects)  
Part of a subject with other non-clinical content (humanities, ethics, history of medicine, psychology)  
No transversal structure with coherent teaching aims |
| Negative student attitudes (as a result of opinions such as...) (11 comments) | They do not understand its use  
Reductionist and scientific epistemological interpretation  
It is not important because it is not assessed  
It is not useful in the MIR (medical intern) exam  
It is not important because it is of a marginal or secondary nature in the curriculum  
It is innate, subjective and cannot be learnt |
| Limited and ill-trained teaching staff (13 comments) | There are no teachers with an appropriate academic status  
The clinicians use a weak or negative model  
They have no training in CS or teaching methods |
| Teaching and assessment methods needed (21 comments) | They do not use experience-based teaching methods  
Experience-based methods are expensive  
It needs more time  
It needs continuity and the commitment of teaching staff  
It needs a relatively sophisticated infrastructure  
It needs complex assessment systems that are necessarily well known |

**Negative attitudes of the university professors and academic leaders**

These comments illustrate that the principal barrier is the negative attitudes of academic leaders and university professors who teach traditional subjects and their influence on the way the CS curriculum is incorporated and structured.

Those responsible for curricula felt that CS are not very useful:

"the inclusion of CC as an interdisciplinary subject or skill was outlandish and unnecessary taking time away from real teaching" (U-5)

"teachers of unrelated subjects or content believe it to be "superfluous", "not very serious", "lacking content", etc" (U-11)

Those responsible for the curricula felt that there is no scientific (biomedical) evidence to support teaching CS:
"Many teachers and board members... believe that the important thing in medicine is basic research and medical knowledge in order to get a good result in the MIR exam, so subjects like this distract students from what is important". (U-21)

"It's believed to be a "soft science" by the academic and professional community, who are more interested in technology" (U-22)

Those responsible for the curricula felt that CS threaten their own teaching status:

"There are a lot of people in the university, or "the establishment", especially in the pre-clinics, who don't see the relevance of these skills in medicine. There are also clinicians rooted in a medical education model that dates back to the middle of the 19th Century" (U-28)

"because of ignorance and lack of understanding and consideration by academic leaders, most of whom are heads of department and/or full-time lecturers, they don't value it and see it as an "easy subject" that takes away teaching time from what is really important for them" (U-17)

Those responsible for the curricula felt that CS are learned by modelling:

"The undergraduate degree administrators don't forcefully or confidently support training in these skills... as they consider it to be something that you learn through imitation" (U-10)

**Type of organisation, structure and presence in the CC curriculum**

These are the most frequent and repeated comments by key respondents, noting that these skills would primarily be included as a legal obligation and therefore implemented without an adequate teaching plan:

Incorporated in an *ad-hoc*, theoretical way during preclinical periods:

"It's covered in an ad-hoc way as part of another subject, preclinical psychology as well, where it's taught in a theoretical manner with no practical training alongside other clinical skills that are developed during clinical periods" (U-16)

Incorporated where it is easiest: together with other secondary subjects

"... it (CC) is cramped in, given no time of its own, with legal medicine, bioethics, ...and at different points in time which makes it difficult to organise. It seems as though there is no other way to incorporate these skills, and so they are cramped in where there are a few credits leftover" (U-17)
Incorporated in a fragmented way with no coherent framework that includes objectives:

"...as it's not a "respected" skill by academic leaders, it's only covered in an ad-hoc and very limited way as part of smaller subjects, often optional, within different clinical and practical subjects, but with no specific objectives (as though the student would be able acquire them "by magic")...it's a genuinely "orphaned skill" (U-26)

Need to be incorporated into curriculums in a structured and transversal way from a supra-departmental level:

"An institutional or structural barrier is that curricula do not incorporate the subject in an obvious way. In general, they recognise the need for it but do not explain how it will be carried out and where the necessary credits will come from" (U-23)

**Negative student attitudes**

They identify student attitudes to clinical communication as a major barrier. The respondents link these attitudes to a number of different causes.

Negative attitudes towards CS because of a lack of understanding as to why they are useful:

"It's basically covered in second year psychology when the majority of students are, in my opinion, not mature enough to understand the importance of this topic in their future clinical roles" (U-13)

"The main barrier is that the subject is covered in second year medicine, at the same time as the Golgi apparatus, cranial nerves and the Starling Law, so for the students its use is relative, given that it will be at least another two years before they work with patients and can see why it's important to their work as doctors" (U-28)

Negative attitudes towards CS due to biomedical epistemological interpretations:

"Many students believe that the education consists of gaining a lot of medical knowledge" (U-17)

"Students tend to want to "objectivise" all the assessment schemes (when tackling exam revision, trying to boost results and competing for grades). This makes an overall assessment of communicative skills difficult and entails going through meticulous and debatable evaluations" (U-11)

Negative attitudes towards CS due to it not being assessed:

"Although student attitudes have changed in the last few years,... due to not being (CC) a continuous
feature of a stable assessment scheme... they don't have enough motivation to study it" (U-23)

Negative attitudes towards CS due to it not being useful in the MIR exam:

"Medical students continue to have a pre-academic profile for the MIR exam which prioritises the absorption of knowledge... so it has a passive role in clerkships, with no or little feedback or reflection on their communication...they are demotivated" (U-24)

Negative attitudes towards CS because of how it is included and taught in curricula:

"By including it as something secondary within other subjects, generally pre-clinics, using inadequate teaching method, if any, and with no thought as to how it is assessed, students see it as something that is not very important or related to their own personality" (U-26)

**Lack or absence of trained teachers**

There were comments that made reference to the lack or absence of trained teachers, not only when it comes to adequately teaching the content (offering feedback, etc.) but also in terms of adequately planning it in the curriculum:

"There aren't enough trained associate teachers involved in this subject area to be able to establish proper parameters for communication skills, teaching objectives and teaching methods" (U-4)

"There aren't enough trained teachers to teach it properly. It is left "in the hands" of the teaching clinicians in charge of clerkships. The psychologists don't generally have trained teachers that know the clinic" (U-5)

**Problems linked to teaching methods and the necessary educational logistics for it to be taught**

These comments consider the teaching method designed specifically for teaching CC to pose a significant barrier to its assessment.

Technical/infrastructure requirements:

"The type of teaching necessary: active learning environments, with simulated patients, video recordings, self-evaluation..." (U-9)

"It requires a specific infrastructure for it to be carried out, spaces for simulation, video recording and reproduction systems..." (U-14)
Insufficient time:
"The main barrier we face in communication workshops is, without a doubt, a lack of time,...for students to individually put into practice what they have learned, give subsequent feedback on how to improve any error made in the practice interview with a pretend patient" (U-19)

Structured feedback:
"Every student would have to be given personalised feedback while interacting with pretend or real patients" (U-23)

Continuity and commitment of teaching staff:
"It's not thought that this type of learning needs to be continually incorporated throughout the degree. It's thought that by merely studying subjects such as psychology, oncology, palliative care or psychiatry, students will learn communication skills...in reality, on clerkships, which is when students are faced with communication problems, they really are alone. In general, there is no feedback given by teaching clinicians" (U-26)

High cost:
"This subject would have to receive more investment than others: SP, Gesell chamber..." (U-30)

Problems deriving from the type of assessment that communicative skills require:
"Assessment makes it (CC) a major burden. Exams here are worthless, they should be assessed on what they do, how they really communicate and not what they know" (U-11)

"The students have to take an objective test (simulated exam with a standard patient) for the skills they've acquired to be assessed...and this is difficult to carry out and expensive" (U-19)

Discussion
In this qualitative study, those responsible for CS in their MS offer their personal opinions on the most significant problems or barriers to incorporating and developing these skills. These key informants agree on the principal problems: the negative attitudes of teachers and academic leaders who regard these skills as marginal, little investment in educational methodologies and evaluative structures, and limited training and promotion on the part of faculty, in addition to the negative attitude of students regarding these skills. This has resulted in a teaching approach based on traditional teaching
methodologies (lectures and workshops) and assessment strategies (written exams) as well as poor curricular integration, a theoretical approach often detached from clinical practice and taught by non-clinical professors. Although surveys show that educational input generally improves communication skills among trainees [13], teaching methods classified as ‘experiential’ [20], including role-play, simulated patients, supervised practical training, self-assessment and peer feedback are more effective [4,12,21,22]. Experiential learning is a structured cyclical learning process through awareness, practice, reflection and feedback (individually or as a group) delivered in a structured way by experienced professionals [20,23,24]. A focus on learning tasks and skills improves student acquisition of useful communication strategies for use with patients [4,12,21,22]. In recent decades these educational strategies have being incorporated with varying scope and depth in the curricula of many medical schools around the world. However, most schools have encountered barriers and problems similar to those identified by our key informants [25-29].

The general opinions offered and similarity of statements by key informants offer a perspective on the educational context where the biomedical paradigm is hegemonic, revealing the effect these barriers and dynamics have on the educational environment. In Figure 1 we present these barriers in context, giving us a better understanding of their dynamics and the opportunity to explore possible strategies to improve and progress towards a more efficient approach to teaching CS.

To varying degrees, many of the barriers have been identified in recent years. The belief that communication is innate, lacking academic credibility, subjective and unscientific, are notions that have been identified elsewhere [30, 31] and are found not only among academic leaders and teachers of other subjects but also in many students [32]. This interpretation reveals the influence of the biomedical paradigm on academic medicine in Spain that determines what is appropriate and what is inappropriate to research, teach and, of course, practice. Several studies show the extent to which the introduction of humanities and social sciences in medical curricula is hindered by such hegemonic thinking [33-36]. This study highlights how, according to key respondents, this ideological hegemony is a determining factor in the incorporation of CS in MS curricula in Spain. Figure 1 shows the dynamics that link the different barriers as a vicious circle within the framework of this ideological
influence. In effect, when taken as a whole, these barriers form a coherent and revelatory picture of the problem: in an educational environment dominated by biomedicine, the negative attitudes of teachers and academic leaders towards this subject are primarily due, according to respondents, to their belief that CS are "not scientific" and are innate skills. Other factors are also at work, including the position of universities within the political power structure of Spain. Thus, the legal requirement for the introduction of CS into medical school curricula, as per the ministerial order of 2008, would appear to be temporary, peripheral or otherwise secondary, included within other pre-clinical subjects and without an integrated and coherent teaching plan. Furthermore, when CS are taught as a pre-clinical subject or in a theoretical way by teachers who are not clinicians, the tacit message to students is that clinicians know the fundamentals of medical practice while others specialise in less scientific, psychosocial topics [37]. It also implies CS are an objective in themselves rather than a tool for better patient care [38]. All of this dismisses the fact that CS enhance the clinical encounter, facilitating the sharing of clinical information, negotiation and decision making between doctor and patient.

Additionally, the absence of sophisticated (experiential) teaching methods and appropriate assessment strategies also represents a barrier as learning appears to have little impact on students. This is evident both in the lack of trained and in the difficulty and disinterest in investing the required resources. The absence of practical training based on observation and feedback is not, however, something exclusive to the Spanish education system [39-41], nor is having an "informal" CS training plan "without structure, sufficient time or defined objectives" [42]. Even well-structured programs can have negative student perception if adequate teaching methods are not used [43]. It has been observed that students who receive less experiential CS training are less likely to consider communication a skill to be learned and used to improve clinical results [44]. The use of experiential training methods is recommended (role play, simulations, feedback, etc) for both teachers and students [45]. However, students may view these experiential sessions negatively if they are not conducted in a safe, trusting and prejudice-free environment [32,45].

The study shows that teacher training is the key and that a lack of qualified or experienced teachers
is a major barrier. In fact, clinicians interested in CS complain they receive little training and are reluctant to teach and assess skills they themselves have not fully mastered [29]. Furthermore, this lack of teacher training also limits the skills which can be taught [46]. Teaching CS in clinical practice requires teachers who believe in it and can demonstrate it [47]. This is particularly important since CS training will remain deficient if supervisors do not believe these skills to be essential for a clinician and/or that they cannot be taught [47]. Additionally, clinical supervisors tend to teach CS using role modelling in a very irregular and rarely explicit manner [48]. When clinical supervisors address communication problems with residents and students they generally intervene as corrector, clinician or trainer rather than as a teacher [29]. Many hope that by simply watching and listening, young doctors will recognise, accept and imitate desirable behaviour [49]. The risks of entrusting CS training to role modelling during internships has been observed by clinical supervisors who have noted that models often lack the required skills [50]. Respondents also note the absence of teachers in influential posts to champion CS training and push for changes to the curriculum.

With regards to the weighting accorded to CS in the Spanish system and the way in which clinical communication is assessed, this has proven to be counterproductive. In general, Spanish MSs do not always assess CS in a specific way or do so by using a written exam with multiple choice questions, a list of skills to be completed by the supervisor at the end of the internship or by using unsuitable checklists. These assessment methods give students the impression that these skills are unimportant or secondary and are not usually well received [51, 52].

Finally, students and young doctors are described as having negative attitudes towards CS and fail to learn them. While some believe that communication is something innate and subjective that cannot be taught [30, 31], personal factors also play a role. Students with the most positive attitude towards CS are generally women, whose parents are not doctors or who believe that their CS need improving [53]. Student attitudes also vary according to their level of experience. Younger doctors with less experience tend to be more stressed and less open to communication problems than those with more experience because they are still concerned about providing accurate diagnoses and providing quick and effective care [29]. Poor knowledge of biomedicine, clinical reasoning or a lack of skill in using
technical procedures (electronic medical registers) [50,54] can also hinder communication. However, while these factors no doubt contribute to the failure to see the benefits of CS in medicine, they may also confirm negative attitudes towards these skills while also reaffirming reductionist conceptions of medicine and clinical communication, creating a vicious circle difficult to break (figure 1).

However, despite everything, and particularly the negative attitudes of professors and academic leaders towards communication skills training, studies show that young doctors and students value CS when they are taught experientially using a student-centred approach and when clinical supervisors take a more active role in observing them and offering feedback [55,56]. These have also come to expect training in clinical communication skills in MSs and residence programmes [57-59]. Student representatives in Spain have made these requests explicit [60].

Conclusions
Those responsible for introducing and developing CS in Spanish MSs identify a set of barriers that would make it difficult for students to effectively learn these skills, representing a set of interrelated problems that largely explain the way in which CS are being introduced and the real priority for them to be taught in many of the Spanish medical schools. Effectively incorporating CS teaching into MS curricula is a challenge which will require a significant culture change and support from all local and national academic and institutional levels as a prerequisite for introducing new educational models that are more in line with new teaching and clinical practice trends.

Abbreviations
CS: Communication Skills
CC: Clinical Communication
MS: Medical School
SP: Standardized Patients
U: University
RRM: Roger Ruiz Moral
ACP: Alvaro Cerro Pérez

Declarations
Acknowledgements:
We would like to thank those responsible for teaching Doctor-Patient Communication in the participating Medical Schools:

Guillermo Lahera Forteza (Alcalá de Henares); Eva Yolanda Pulido Requero (Alfonso X El Sabio); Josep Mª Bosch Fontcuberta (Autónoma de Barcelona); Esteban González López (Autónoma de Madrid); Francesc Borrel Carrió (Barcelona); Maria Isabel Porras Gallo (Castilla La Mancha: Ciudad Real campus); Juan Pedro Serrano Selva (Castilla La Mancha: Albacete campus); Manuel Jose Párraga Ramirez (Católica San Antonio de Murcia); German Cerdá Olmedo (Católica de Valencia); Juan Francisco Lisón Párraga (CEU Cardenal Herrera de Madrid); Mª Isabel Ramos Fuentes (Extremadura); Sophia Denizon (Francisco de Vitoria); Joan San (Girona); José María Martínez-Ortega (Granada); Marta Elorduy Hernández-Vaquero (Internacional de Cataluña); Mauro García-Toro (Islas Baleares); Rafael Ballester Arnal (Jaume I de Castellón); Emilio J. Sanz Alvarez (La Laguna); Josefa María Ramal López (Las Palmas de Gran Canaria); Jorge Soler González (Lleida); Francisco Ruiz Ruiz (Málaga); Sofia Lopez Roig (Miguel Hernandez de Elche); Joaquín García-Estañ López (Murcia); Marina Martínez García (Navarra); Salvador Tranche (Oviedo); Jose Antonio Pereira Rodriguez (Pompeu Fabra); Teresa Fernández Agulló (Rey Juan Carlos); Antoni Castro Salomó (Rovira i Virgili); José Luis Pérez Castrillón (Valladolid) and Rosa Magallón (Zaragoza).

Ethics approval and consent to participate

Ethics approval: UFV Health Sciences Faculty review board (IRB), considered this study congruent to ethical and legal established requirements, and gave its approval.

Consent to participate: Informed consent to participate in the study was obtained from all the survey respondents.

Consent for publication

Not applicable: This manuscript does not contain any personal data of any kind

Availability of data and material

All transcriptions of survey responses and their qualitative analysis for the purposes of this study are available from the corresponding author upon request.
**Competing interests**

The authors declare that they have no competing interests

**Funding**

This study has not required specific funding

**Authors' contributions**

RRM and FCM, conceived the project and participated in its design and coordination for the all Project. RRM and DMM implemented the question. CGL, DMM and ACP contacted with deans, academic leaders and CC teachers in all the universities. RRM and ACP independently conducted the thematic analysis and codifications of the survey responses. Both authors and DMM were involved in the triangulation process. All authors developed and discussed the interpretation of data and the drafting of the manuscript. All authors reviewing it critically for important intellectual content.

All authors approved this final version of the manuscript and give their consent for publication.

**References**

1. Mead N, Bower P. Patient-centered consultations and outcomes in primary care: a review of the literature. Patient Educ Couns, 2002;48:51-61.

2. Di Blasi Z, Harkness E, Ernst E, Georgiu A, Kleijnen J. Influence of context effects on health outcomes: A systematic review. Lancet 2001; 357: 757–762.

3. Kelley JM, Kraft-Todd G, Schapira L, Kossowsky J, Riess H. The Influence of the Patient-Clinician Relationship on Healthcare Outcomes: A Systematic Review and MetaAnalysis of Randomized Controlled Trials. Plos One 2014;9:e94207

4. Yedidia MJ, Gillespie CC, Kachur E, Schwartz MD, Ockene J, Chepaitis AE, Snyder CW, Lazare A, Lipkin M, Jr.: Effect of communications training on medical student performance. JAMA. 2003;290(9):1157-65.
5. Rao JK, Anderson LA, Inui TS, Frankel RM. Communication interventions make a difference in conversations between physicians and patients: a systematic review of the evidence. Med Care. 2007;45(4):340-9.

6. Bachmann C, Abramovitch H, Barbu CG, Cavaco AM, Elorza RD, Haak R, Loureiro E, Ratajska A, Silverman J, Winterburn S, et al. A European consensus on learning objectives for a core communication curriculum in health care professions. Patient Educ Couns. 2013;93(1):18-26.

7. Kiessling C, Dieterich A, Fabry G, Holzer H, Langewitz W, Muhlinghaus I, Pruskil S, Scheffer S, Schubert S, Committee C, et al. Communication and social competencies in medical education in German-speaking countries: the Basel consensus statement. Results of a Delphi survey. Patient Educ Couns. 2010;81(2):259-66.

8. von Fragstein M, Silverman J, Cushing A, Quilligan S, Salisbury H, Wiskin C, Education UKCfCSTiUM. UK consensus statement on the content of communication curricula in undergraduate medical education. Med Educ. 2008;42(11):1100-7.

9. García de Leonardo C, Ruiz-Moral R, Caballero F, Cavaco A, Moore P, Dupuy LP, et al. Participants in the Consensus Panel. A Latin American, Portuguese and Spanish consensus on a core communication curriculum for undergraduate medical education. BMC Med Educ. 2016 Mar 28;16:99

10. van Dalen J, Kerkhofs E, van Knippenberg-Van Den Berg BW, van Den Hout HA, Scherbier AJ, van der Vleuten CP. Longitudinal and concentrated communication skills programmes: two dutch medical schools compared. Adv Health Sci Educ Theory Pract. 2002;7(1):29-40. 1

11. Neumann M, Edelhauser F, Tauschel D, Fischer MR, Wirtz M, Woopen C, Haramati A, Scheffer C. Empathy decline and its reasons: a systematic review of studies with medical students and residents. Acad Med. 2011; 86(8):996-1009.
12. Berkhof M, van Rijssen HJ, Schellart AJ, Anema JR, van der Beek AJ. Effective training strategies for teaching communication skills to physicians: an overview of systematic reviews. Patient Educ Couns. 2011;84(2):152–62.

13. Aspegren K. Teaching and learning communication skills in medicine: a review with quality grading of articles. Med Teacher 1999;21:563–70

14. van Weel-Baumgarten E, Bolhuis S, Rosenbaum M, Silverman J. Bridging the gap: how is integrating communication skills with medical content throughout the curriculum valued by students? Patient Educ Couns. 2013; 90(2):177–83

15. Ruiz Moral R, Caballero Martínez F, García de Leonardo C, Monge D, Cañas F y Castaño P. Enseñar y aprender habilidades de comunicación clínica en la Facultad de Medicina. La experiencia de la Francisco de Vitoria (Madrid). Edu Med 2017;18(4):289-97

16. National Agency for Quality Assessment and Accreditation. White book of the Bachelor Degree in Medicine (2005). Accessed April 2019: http://www.aneca.es/var/media/150312/libroblanco_medicina_def.pdf

17. Order ECI/332/2008, of 13 February, by which the requirements are established for the verification of official university degrees that enable them to work in the Medical profession. ECI/332/2008 BOE n.º 40, Friday 15 February 2008. pp. 8351-5

18. Ruiz Moral R, García de Leonardo C, Cerro A, Caballero Martínez F, Monge Martín D. Enseñanza de la comunicación clínica en las facultades de medicina españolas. Educ Med (submitted, 2019)

19. http://todofp.es/que-como-y-donde-estudiar/que-estudiar/nuevos-titulos.html

20. Ericsson, K A. Deliberate Practice and the Acquisition and Maintenance of Expert Performance in Medicine and Related Domains. Academic Medicine 2004; 79: S70-S81
21. S.G. Henry, E.S. Holmboe, R.M. Frankel. Evidence-based competencies for improving communication skills in graduate medical education: A review with suggestions for implementation Med Teach, 35 (2013), pp. 395-403

22. S. Smith, J.L. Hanson, L.R. Tewksbury, C. Christy, N.J. Talib, M.A. Harris. Teaching patient communication skills to medical students: A review of randomized controlled trials Eval Health Prof, 30 (2007), pp. 3-21

23. Spencer J. Learning and teaching in the clinical environment. BMJ. 2003;326:591-4.

24. Yardley S, Teunissen PW, Dornan T. Experiential learning: AMEE Guide No. 63. Med Teach. 2012;34(2):e102-15

25. Kaufman DM, Laidlaw TA, Macleod H. Communication skills in medical school exposure, confidence, and performance. Acad Med. 2000;75:S90-2.

26. Languille DB, Kaufman DM, Laidlaw TA, Sargeant J, Macleod H. Faculty attitudes toward medical communication and their perceptions of students’ communication skills training at Dalhousie University. Med Educ. 2001;35:548-54

27. Nilsen S, Baerheim A. 2005. Feedback on video recorded consultations in medical teaching: why students loathe and love it - a focus-group based qualitative study. BMC Med Educ 2005;5:28

28. Anvik T, Grimstad H, Baerheim A, Bernt Fasmer O, Gude T, Hjortdahl P, et al. Medical students’ cognitive and affective attitudes towards learning and using communication skills – a nationwide cross-sectional study. Med Teach 2008; 30: 272-279

29. Junod Perron N, Sommer J, Hudelson P, Demaurex F, Luthy C, Louis-Simonet M, et al. Clinical supervisors’ perceived needs for teaching communication skills in clinical practice. Medical Teacher. 2009(31):e316-22

30. Nogueira-Martins MC, Nogueira-Martins LA, Turato ER. Medical students’ perceptions
of their learning about the doctor-patient relationship: a qualitative study. Med Educ. 2006;40(4):322-8

31. Rees CE, Sheard CE, McPherson AC. A qualitative study to explore undergraduate medical students’ attitudes towards communication skills learning. Med Teach. 2002;24(3):289-93.

32. Ruiz Moral R, Garcia de Leonardo C, Caballero Martínez F, Monge Martín D. Medical students’ perceptions towards learning communication skills: a qualitative study following the 2-year training programme. Int J Med Educ. 2019;10:90-97.

33. Bloom SW. Structure and ideology in medical education: an analysis of resistance to change. J Health Soc Behav, 1988;29:294-306

34. Christakis N. A. The similarity and frequency of proposals to reform US medical education. Journal. of the American Medical Association. 1995;274(9):706-711

35. Whitehead C. Scientist or science-stuffed? Discourses in North America medical education. Med Edu. 2013;47:26-32.

36. Ruiz Moral R. La incorporación de las humanidades y ciencias socio-conductuales en la educación médica: ¿cuál es el problema y qué se debe hacer? Folia Humanística. 2019;11:65-81.

37. Silverman J. Teaching clinical communication: a mainstream activity or just a minority sport? Patient Educ Couns. 2009;76(3):361-7

38. Junod Perron N, Sommer J, Louis-Simonet M, Nendaz M. Teaching Communications skills: beyond wishful thinking. Swiss Medical Weekly. 2015;145:w14064

39. Howley LD, Wilson WG. Direct observation of students during clerkship rotations: a multiyear descriptive study. Acad Med. 2004;79(3):276-80

40. Chisholm CD, Whenmouth LF, Daly EA, Cordell WH, Giles BK, Brizendine EJ. An evaluation of emergency medicine resident interaction time with faculty in different
teaching venues. Acad Emerg Med. 2004;11(2):149-55.

41. Kassebaum DG, Eaglen RH. Shortcomings in the evaluation of students’ clinical skills and behaviors in medical school. Acad Med. 1999;74(7):842-9.

42. Fromme HB, Karani R, Downing SM. Direct observation in medical education: a review of the literature and evidence for validity. Mt Sinai J Med. 2009;76(4):365-71.

43. Rees C, Sheard C. Evaluating first-year medical students’ attitudes to learning communication skills before and after a communication skills course. Med Teach. 2003;25(3):302-7.

44. Willis SC, Jones A, O’Neill PA. Can undergraduate education have an effect on the ways in which pre-registration house officers conceptualise communication? Med Educ. 2003;37(7):603-8.

45. Kurtz S, Silverman J, Draper J. Teaching and learning communication skills in medicine. 2nd edition edition. Oxford: Radcliff Publishing Ltd; 2005

46. Novack DH, Volk G, Drossman DA, Lipkin M, Jr. Medical interviewing and interpersonal skills teaching in US medical schools. Progress, problems, and promise. JAMA. 1993;269(16):2101-5

47. Cote L, Leclere H. How clinical teachers perceive the doctor-patient relationship and themselves as role models. Acad Med. 2000;75(11):1117-24.

48. Egnew TR, Wilson HJ. Role modeling the doctor-patient relationship in the clinical curriculum. Fam Med. 2011;43(2):99-105

49. Weissmann PF, Branch WT, Gracey CF, Haidet P, Frankel RM. Role modeling humanistic behavior: learning bedside manner from the experts. Acad Med. 2006;81(7):661-7.

50. Essers G, Van Weel-Baumgarten E, Bolhuis S. Mixed messages in learning communication skills? Students comparing role model behaviour in clerkships with
formal training. Med Teach. 2012;34(10):e659-65.

51. Salmon P, Young B. Creativity in clinical communication: from communication skills to skilled communication. Med Educ. 2011;45(3):217-26

52. van den Eertwegh V, van Dalen J, van Dulmen S, van der Vleuten C, Scherbier A. Residents’ perceived barriers to communication skills learning: Comparing two medical working contexts in postgraduate training. Patient Educ Couns. 2014;95(1):91-7

53. Rees C, Sheard C. The relationship between medical students' attitudes towards communication skills learning and their demographic and education-related characteristics. Med Educ. 2002;36(11):1017-27.

54. Van Nuland M, Thijs G, Van Royen P, Van den Noortgate W, Goedhuys J. Vocational trainees' views and experiences regarding the learning and teaching of communication skills in general practice. Patient Educ Couns. 2009;78(1):65-71.

55. Malhotra A, Gregory I, Darvill E, Goble E, Pryce-Roberts A, Lundberg K, et al. Mind the gap: Learners’ perspectives on what they learn in communication compared to how they and others behave in the real world. Patient Educ Couns. 2009;76(3):385-90.

56. Rosenbaum ME, Axel R. Curricular disconnects in learning communication skills: what and how students learn about communication during clinical clerkships. Patient Educ Couns. 2012;91(1):85-90

57. Hutul OA, Carpenter RO, Tarpley JL, Lomis KD. Missed opportunities: a descriptive assessment of teaching and attitudes regarding communication skills in a surgical residency. Curr Surg. 2006;63(6):401-9

58. Williams KN, Ramani S, Fraser B, Orlander JD. Improving bedside teaching: findings from a focus group study of learners. Acad Med. 2008, 83(3):257-64.

59. Tariq M, Motiwala A, Ali SU, Riaz M, Awan S, Akhter J. The learners’ perspective on
internal medicine ward rounds: a cross-sectional study. BMC Med Educ. 2010;10:53.

60. Callizo Silvestre A, Carrasco Picazo JP. El Grado en Medicina. Una visión por parte de los alumnos. Edu Med. 2015;16:00-103.

Figures

Figure 1

The dynamics of Communication Skills (CS) Training in Spanish Medical Schools