Chapues Andrade, G., Aguirre López, M., and Gómez Gómez, M. (2025). Acquisition and application of communication skills of medical interns from three universities in Colombia. *Revista de Investigación Educativa, 43.*
DOI: https://doi.org/10.6018/rie.588171

Acquisition and application of communication skills of medical interns from three universities in Colombia

Acquisition and Application of Communication Skills of Medical Interns from Three Universities in Colombia

Gloria Chapues Andrade*[1] , Melissa Aguirre López**, Margarita Gómez Gómez*** , Melissa Aguirre López**, Margarita Gómez Gómez***.

*Department of Biomedical-Dentistry. Cooperative Universidad de Colombia (Colombia)
** Department of Medicine. Cooperative Universidad de Colombia (Colombia)
***Department of Medical Education. Universidad de Antioquia (Colombia)

Abstract

Medical students need practical communication skills when interacting with patients and other healthcare workers. With this in mind, a qualitative research has been carried out, using a symbolic interactionist approach with grounded theory guidelines. Semi-structured interviews were conducted with final year undergraduate medical students to understand how they acquire and apply communication skills. Three categories have been identified: circumstances for learning communication skills, appropriation of communication skills in medical practice and communication barriers. The acquisition of communication skills occurred transversally and in a non-standardized manner within the hidden curriculum of the three universities, although the University of Antioquia has included a training component in its curriculum. Personal, family, socio-cultural, regional, administrative, and academic aspects were identified as factors that either promoted or limited the interns' training in communication. It is worth highlighting that the pandemic restricted patient contact, affecting non-verbal communication as well as the acquisition of communication skills. This research concludes that communication is fundamental in the doctor-patient relationship to provide quality and humane medical care. Furthermore, the significance of intentional teaching of communication skills to medical students is emphasized.

Keywords: learning; health communication; medical education; qualitative research.

[1] **Correspondence:** Gloria Chapues Andrade, gloria.chapues@udea.edu.co

Resumen

Los estudiantes de medicina requieren habilidades comunicativas en la interacción con pacientes y demás actores de la salud. Se realizó una investigación cualitativa con enfoque desde el interaccionismo simbólico con lineamientos de la teoría fundamentada mediante la entrevista semiestructurada a estudiantes de último año de pregrado de medicina (médicos internos) con el objetivo de comprender cómo ellos adquieren y aplican las habilidades comunicativas. El análisis arrojó tres categorías: circunstancias para el aprendizaje de habilidades comunicativas; apropiación de las habilidades comunicativas en la práctica médica y barreras de la comunicación. Se encontró que la adquisición de las habilidades comunicativas se da transversalmente y de forma no estandarizada en el currículo oculto de las tres universidades, aunque en la universidad de Antioquia sí se evidenció su presencia formal dentro del currículo. Los aspectos personales, familiares, socioculturales, regionales, administrativos y académicos se constituyeron en factores que promovieron o limitaron su formación en comunicación. La pandemia restringió el contacto con el paciente afectando la comunicación no verbal y la adquisición de habilidades comunicativas. La investigación concluyó que la comunicación constituye un eje central en la relación médico-paciente para una atención médica de calidad y humanizada. Se resalta la importancia de la enseñanza intencional en comunicación en el estudiante de medicina.

Palabras clave: aprendizaje; comunicación en salud; educación médica; investigación cualitativa.

Introduction

Communication comprises the conscious action of exchanging information between two or more participants through a shared system of signs and semantic rules and, seen from the systemic relational model applied to the area of health, it is considered a behaviour or act of reciprocal influence in which each subject modifies their behaviour as a reaction to the other (Urtasun et al., 2021), constituting an action inherent to the process of social construction through resources such as verbal, non-verbal, paraverbal, written communication or active listening (Petra-Micu et al., 2012). Communication skills should be understood as the ability to know what to say, to whom, when, how to say it and when to be silent, and implies the use of specific styles in accordance with the characteristics and demands of the participants and the contexts where communication takes place (González et al., 2015). In the health professional, the development of communication skills implies the need to communicate in a proactive, adaptive and resilient way, which requires sociolinguistic and discursive skills for adequate interaction in different contexts and with defined populations (Ramírez and García, 2020), and to facilitate or guarantee efficient performance in their professional practice, since their action, in addition to requiring the management of situations that may include the care of patients according to their age group, cultural and social diversity, emotions and conditions of disability, contexts in terms of the type of care (consultation, promotion and prevention programmes, emergencies, critical care, etc.), management of uncertainty, providing care for patients with disabilities, and the management of uncertainty, giving and receiving care, etc. (Ramírez and García, 2020).), management of uncertainty, giving bad news and information to patients who are also doctors or know about the subject (Kiessling et al., 2010), this professional also interacts

with administrative staff, peers and other professionals. Communication skills are therefore among the aspects to be developed in medical education, as the acquisition of medical-scientific knowledge and practical skills is not enough (Suárez-Cid et al., 2022).

Approach

In medical training, it is imperative that individuals possess proactive, adaptive and resilient communication skills. This implies the development of communication skills, as well as sociolinguistic and discursive strategies, in order to perform efficiently and establish appropriate interactions in various professional contexts (Ramírez and García, 2020). These contexts include health promotion and prevention as well as disease management and rehabilitation. The need to improve the preparation of health professionals in terms of their communication skills has been widely recognised, both during undergraduate and postgraduate studies, as it is essential to validate the integration of communication skills with other clinical skills throughout the entire training programme in medical universities (Suárez-Cid et al., 2022).

For the purpose of comprehensive medical education, training in communication skills must go hand in hand with the development of clinical skills, which makes formal teaching in this competence a priority, both in undergraduate and postgraduate programmes (Urtasun et al., 2021). It has been described that the lack of communication skills limits the possibilities and opportunities for staff to participate, conceive and successfully develop exchanges in socialisation situations and reduces their professional competence (Cevallos, 2016). In Colombia, the need for teaching communication skills for professional practice is also mentioned. López (2020) documented that even doctors with postgraduate degrees recognise difficulties in carrying out their function because they have not received prior training in this area, which compromises the strengthening of the skills of being and doing.

Educational institutions have a social and ethical responsibility to facilitate and stimulate the achievement of skills and abilities required for adequate professional practice (Villegas, 2017). While in Europe, focused consensuses have been created for the training of medical students in communication skills (ANECA, 2005; Bürgi et al., 2008; Fragstein et al., 2008; GMC, 2009; Kiessling et al., 2010), in Colombia this issue is not standardised in medical education curricula. However, the Universidad de los Andes decided to include a communication course at the beginning and end of undergraduate medical studies to improve the communication experience of its students (Trujillo-Maza and Suárez-Acevedo, 2019). For its part, the Universidad Autónoma de Bucaramanga included topics related to the development of communication skills in some undergraduate subjects. However, there are unresolved concerns about the transversality of pedagogical actions and their appropriate evaluation in the curriculum (González et al., 2015).

In Colombia, the Ministry of Health and Social Protection (MINSALUD) (2016, 2017) describes the profiles and competences of health professionals, proposed as a reference for the definition of curricula and guidance at different levels of training, where communication skills are considered one of its pillars, although it recognises that the curricula of medical programmes are not standardised. A review of the curricula of the undergraduate medical programmes at the University of Antioquia (UdeA), the Cooperative University of Colombia (UCC) in Medellín and the University of Nariño

(UDENAR) in Pasto reveals diversity in the teaching of communication skills. Thus, and in agreement with Villegas (2017), despite identifying a trend in medical education towards the inclusion of communication and the development of related skills and abilities, even today this topic continues to be part of the so-called hidden curriculum in many institutions.

For all of the above reasons, the question is posed: how do medical internship students from three universities in Colombia acquire and apply communication skills during their training process, and as a general objective, to understand how final year undergraduate medical students from the universities: Cooperativa de Colombia campus Medellín, Universidad de Nariño and Universidad de Antioquia acquire and apply communication skills with patients, teachers, peers and other agents in the health area. The specific objectives of the research were: 1) to identify how they learnt about communication; 2) to reveal the communication skills acquired, and 3) to recognise how they relate communication to their professional work.

Methodology

Method

This research used an interpretative qualitative design supported by symbolic interactionism, which holds that meanings emerge from the interactions between subjects (Piñeros, 2021). As a method, the guidelines of grounded theory were followed, characterised by its systematicity and flexibility, allowing the construction of theories based on the analysis of the data collected (Palacios, 2021).

Participants

All internship students from the three universities involved were invited to participate, following the ethical principles of the Declaration of Helsinki and other relevant ethical codes and emphasising the importance of privacy and confidentiality of data. Endorsement was obtained from the Bioethics Committee of the Medical Research Institute of the UdeA (Act No. 036 of 22 September 2022), which in turn was recognised by the UCC campus Medellín and UDENAR.

The fieldwork required sending periodic invitations according to the progress of data collection and the database provided by the universities. The medical interns who responded were contacted in person, by telephone or e-mail, and it was verified whether they met the inclusion criteria: to be in the rotating internship; to have completed all previous academic semesters at the same university; and to voluntarily accept participation in the research by signing the informed consent form. Exclusion criteria included being a transfer student from other universities, having another professional degree or not having had continuity in the training process, re-entry or re-entry. Forty medical interns responded to the call, two of whom did not meet the inclusion criteria. Finally, the research included 20 participants from the three universities distributed according to gender and university (Table 1).

Table 1

Study participants

	University			
Participants	**UDENAR**	**UCC**	**UdeA**	**Total**
Gender Female (F)	6	3	2	11
Gender Male (M)	2	3	4	9
Total	8	6	6	20

Strategies

The semi-structured individual interview, the resource that allowed participants to express their perspectives in depth, includes a sequence of questions related to the topic and is characterised by being planned and flexible for the purpose of eliciting descriptions of the interviewee's world and life (Kvale, 2011). The interviews, recorded and transcribed in their entirety, were conducted virtually or face-to-face with each participant, depending on their convenience of time and place, and lasted between 60 and 90 minutes.

Procedure

The data collection was carried out over five months and, in order to guarantee the anonymity of the interviewees, each interview was assigned a code that included: initials of each participating university (UCC, for Universidad Cooperativa de Colombia; UDENAR, for Universidad de Nariño, and UdeA for Universidad de Antioquia); the letters F (female) or M (male), referring to the biological sex of the participant, and an Arabic numeral as a differential nomination from the other participants, without representing the sequential order of the interviews. In the Results section, the letter "p" was added to this coding, corresponding to the number of the page with the interview data. Thus, the identification "UDENAR-F10-p4" represents a female student of the University of Nariño, number 10 in the coding table and her testimony is found on page 4 of the interview transcript document. The research was carried out following the criteria of ethical rigour already described with the selection of participants.

Analysis of the information

The three researchers in this study were the data analysts, two with experience in health care and postgraduate health education, all with teaching experience in medical programmes in the participating universities. This analysis was done according to the guidelines of the constructivist grounded theory proposed by Katy Charmaz, since, as cited in Palacios (2021), it not only rescues the inductive, comparative, open and emergent method of the data, but also emphasises how, in the research process, both the actions of the participants and those of the researcher are socially constructed. It highlights the continuous reflexivity that allowed the data analysts to be aware of the circumstances surrounding the research process.

The analytical process, which ran parallel to the data collection, started with open coding where meaningful phrases were identified and assigned an *in vivo* code; this

allowed, in addition to a first grouping of data and the first analytical memos, to guide the analysis of the following interviews according to the issues identified and without mixing the information between universities.

Once the data had been sorted by these issues, they were read and re-read again, which allowed the issues to be purified, giving way to axial coding (Figure 1). The qualitative data was recorded, organised and edited using the Excel application (Microsoft Office package, version 2019). Once the initial categories were established, analytical memos were written for each emerging issue and for each of the participating universities in order to identify the coherence and cohesion of the proposed categories.

Figure 1. Axial analysis using Excel, from Microsoft 2019.

With interview No. 20 and continuing with the constant comparison of the data, the selective coding and saturation of the information in this research was achieved. The writing and rewriting of the description of the results led to the refinement of the categories and subcategories presented in Table 2, which answer the research question.

Table 2

Emerging categories and subcategories of data analysis

Main categories	Subcategories	
1-Circumstances for learning communication skills	Before entering the medical programme	Family College Society
	During medical training	Curriculum Didactics Extracurricular Medical education in pandemics
2-Appropriation of communication skills in medical practice	Recognised communication skills Conceptions of communication in the medical act	
3-Communication barriers		

Accepting Diaz Bazo's (2019) invitation to make explicit the elements that guarantee quality in qualitative research, it is stated that in the study on which this article is based, the strategies of reflexivity, credibility and triangulation were used. Reflexivity, explicit in the progress and refinement of the emerging categories based on the analysis and comparison of the data obtained in each university; credibility, which is evident in showing how the participants acquire and appropriate the communicative skills in their training process; and triangulation, by comparing the emerging categories in each participating university and recognising points in common and differentiating factors until consolidating the categories and subcategories that were refined by comparing them with the literature to provide support and theoretical saturation of the same. This process also guaranteed the validity and internal reliability of this research which, according to Borjas García (2020), is achieved through the coding process, the structuring of the results and their comparison with the conceptual framework until a coherent and logical research report is achieved.

Results

Circumstances for learning communication skills

1. Before entering university

Participants recognised that family (interaction with parents, accompanying a sick relative), school (cultural and citizenship education activities) and other social settings (trips abroad, participation in youth groups, religious movements, among others) allowed them to relate to others, develop and strengthen their communication skills: "I practice something that I was taught at home and that is that all people, regardless of rank, are treated with respect and listened to" (UdeA-F19-p2). (UdeA-F19-p2)

> *From my high school, they taught us something that was 'public speaking'... so we always had to learn how to perform in public. That was quite important to get rid of shyness and to think that giving our opinion was not a bad thing*. (UDENAR-F10-p4)

> *The Las Golondrinas Foundation is an educational foundation for children with low resources, I went on behalf of my grandmother, I went to talk to the children, I think this taught me how to communicate with others*. (UCC-M7-p7)

2. During medical training and practice

a. Curriculum

The UdeA participants pointed out an early approach to training in communication with the Communication 1 and 2 courses, in which the communicative act was worked on: "With the teacher of Communication II, the emphasis on writing, written communication was exaggerated... it was a requirement, which guided you along the way". (UdeA-M18-p2)

Participants from UDENAR and UCC reported that, in part, learning was associated with an empirical experience produced by the need to communicate with their medical

environment in the absence of specific subjects in the curriculum aimed at teaching communication in a formal way.

> *There is no specific subject in the curriculum aimed at teaching communication skills. And I feel that it is quite lacking... I was asked questions and I didn't know how to express myself, until one starts the internship*. (UCC-F5-p2)

However, participants from the three universities highlighted that subjects, rotations or moments in their training (paediatrics, gynaeco-obstetrics, community and health, psychiatry/mental health, semiology, internal medicine, alternative medicine, bioethics, emergencies, intensive care and electives) were spaces that improved their communication skills as they allowed them to interact with their peers, teachers and the community: "In bioethics, medical ethics and step by step through each rotation in clinics, one develops communication skills, always accompanied with a teacher." (UCC-M6-p2)

> *In gynaecology they told us that we had to take certain types of care with mothers because of their condition... in paediatrics they also stressed communication with both the child and the parents... so, depending on the population to be treated, they gave us recommendations on how to talk to them and establish better communication.* (UDENAR-F4-p2)

The rotating internship was considered by the participants to be crucial in their medical training, as it established the articulation of their work with other people and gave them a greater degree of independence with respect to their medical work.

> *Here, in the internship, I think that is where one loses the fear of telling or explaining something to a patient, to speak with more confidence, I do believe that there is greater empathy or greater contact with the patient*. (UDENAR-F10-p8)

b. Didactics

The interaction of the participants with other people through academic activities proposed by the teachers (topic reviews, presentations, workshops/group work, role play, simulation, seminars and clinical rounds), facilitated the development of communication skills. In addition, interviewees highlighted learning by imitating their teachers or someone with more experience: "I find that most of the doctors I had to rotate with have charisma... the way they treat patients. I look at what I keep and what I don't". (UCC-F8-p4)

> *We all went to greet the patient, the palliativist examined her, the psychologist talked to the companion, to the patient, together with the psychiatrist, the social worker and the internist to check how she was doing... in these moments one learned a lot, to tell the truth*. (UdeA-M17-p13)

The participants mentioned that the learning of written communication was reflected in the completion of medical records. In the first semesters they started with simple exercises; in advanced semesters and in the internship they had more freedom in writing medical records, always supervised and supported by the teachers.

> *Since we started to do the first histories [...] and they took the time to read them and tell us things like, 'this new term goes here', 'it's not', 'that's not objective', etc. So, they were polishing those*

skills in the writing of the clinical history... for me it was very good [...] that was forging us to know how to do the histories, the evolutions. (UDENAR F4p11)

The support shown by teachers and classmates was the support and motivation to overcome their fears in the complex scenarios they had to face in their daily work.

c. Extracurricular

Different extracurricular activities were mentioned as favouring communication skills: at UDENAR they associated it with being a student representative or taking courses such as sign language or foreign language ; at UCC they mentioned the health brigades and interviewing relatives and at UdeA they mentioned the extracurricular spaces of the Faculty of Medicine and sharing with students from different regions of the country.

d. Pandemic medical education by COVID-19

For the participants, the COVID-19 pandemic in the year 2020 was a great challenge, as the transition from the face-to-face to the virtual environment was unexpected and the intention was to continue with the same teaching strategies without recognising the difference in these learning environments. Although for some people it meant the opportunity to share with their families, to deepen their personal and professional identity and to strengthen their verbal and written communication skills (typical of virtual media) for others, on the contrary, it meant academic stagnation, loss of non-verbal communication and social skills due to the lack of physical interaction: "The pandemic was a moment where one could get to know oneself better... I had my family, I never lacked anything at home... I feel that it was useful for me". (UdeA-M15-p13)

The specialist said that it was not even possible to hold the patients' hands... the distancing towards our patients and their families increased due to the fear of contagion, the mask limits the gesture and communication is more limited. (UDENAR-F13-p14)

It is worth noting that for the participants the continuity of their studies in pandemics was difficult, as well as the return to face-to-face learning, as they had to retake many concepts and practices.

Appropriation of communication skills in medical practice

1. Recognised communication skills

The study found that participants used verbal communication with everyone around them, but they were aware of the value of non-verbal communication (gestures, looks, hand movements) and paraverbal communication (manner and tone of voice) in conveying a message.

I do move my hands a lot, because that makes the other person pay more attention to me, the fact of showing off, playing with tones of voice, is something I have learned and using it I have seen that it works for me. (UdeA-M17-p13)

Active listening and reading were important resources used by the inmates to transmit

messages. They also emphasised written communication applied to the filling out of formulas, recommendations to patients and the clinical history, the latter recognised by the participants as a legal document that requires special attention in its drafting. "The clinical history is the only proof that we have in the medical act to record what we do... everything must be well documented" (UdeA-M20-p1). (UdeA-M20-p1)

The participants recognised in the information and communication technologies resources that they learned to use during their training and that facilitate their medical work.

> *In the surgery rotation we used an Excel table with all the patient data.... and now that I am in gynaecology we use a little table in Word where we put all the important patient data for the DANE... I feel that this makes communication with the patients much easier... it is a way for the whole health team to be in constant communication about the patients, even if you have to be absent* (UCC-F5-p5).

2. Conceptions of communication in the medical act

The participants found communication to be a fundamental axis in medicine as it is immersed in the interaction with the patient and his or her family, peers, colleagues and all health agents and to consolidate the medical act, also making it possible to recognise the patient's health-disease process, issue a diagnosis, explain the results of tests and inform about the treatment and recommendations that the patient must comply with. Thus, adequate communication was related to good care and, above all, to good results, reduction of complications or failed treatments.

> *Communication is fundamental not only in medical practice but in all areas of life and in the health sector to communicate with all the actors I meet... good communication facilitates all processes*. (UdeA-M20-p1)

Participants recognised the importance of empathetic, respectful, patient, kind, clear and assertive communication to facilitate the understanding of the message conveyed.

3. Barriers to communication

The participants were aware of the various communication barriers that can occur during the medical act, as challenging situations that served as learning scenarios in the acquisition of tools to cope with similar situations in the future:

- Perception of hierarchies, teachers who instil fear and do not favour the necessary spaces for communication.
- Long working hours and overload in the health system can lead to disinterested communication.
- Doctors and medical specialists with years of experience who communicate in an apathetic, mechanical and distant manner.
- Gender difference, how patients are treated differently if they are male or female.
- Language barriers and communication with deaf-mute patients.

- Cultural and ethnic differences (indigenous communities).
- Lack of preparation for delivering bad news, dealing with patients in street situations or with sexual and gender diversity.

Two examples of the barriers mentioned above are mentioned below, one related to gender difference and the second related to hierarchies.

> *There is still a gap in the roles that women and men are expected to play... my colleagues, almost all of them, are called doctor or young man; I am called girl, my love, girl, girl, you... in any other way, and on rare occasions they referred to me as doctor. It is not so much something of the guild, but I think it is more of a social construction*. (UdeA-F19-p8)

> *The fear of communicating with our teachers and our peers... the fear of making mistakes, of being called a 'fool'... if we grew up with the fear of communicating with our own peers, communicating with our patients is going to be much more difficult*. (UDENAR-F3-p7)

Discussion

Communication is a fundamental tool in the medical act that primarily allows for understanding the patient's health conditions, but it is also present in interactions with other health agents and administrative institutions. The medical interns participating in this research perceive themselves as mediators between specialists and patients, emphasising that this interaction guarantees comprehensive and quality care. Incidentally, Sanz-Valero (2019) defines health communication as "the art and techniques to inform, influence and motivate the public on relevant health issues from the individual, community and institutional perspective" (p. 173).

Communication skills were learned and developed by the participants in different contexts. In this respect, Meneses (2007) refers that a person's interaction and attitude is conditioned by the role played by the family, the training received at school and the training and improvement of teachers.

The successful incorporation of communication skills into the medical act depends on longitudinal (not isolated) training across the curriculum using experiential teaching methods, such as role-play, clinical practice, simulated patients, observation, feedback and group work (Ruiz-Moral, 2021). In this research it emerged that the participants attach importance to what they have learned in communication, although they are aware of the need to offer intentional teaching of communication skills at the same time as clinical training, without this constituting isolated communication courses. For his part, Pereáñez (2016), in his research work with students at the UdeA, concluded that communication as a generic competence was weakened in the curriculum and recommended its gradual teaching in all semesters of the degree programme. According to her study, communication skills are learned transversally during undergraduate studies and their teaching was included, although not intentionally, in basic science, socio-medical and clinical courses.

Only the medicine programme at the UdeA includes two specific courses: Communication I and Communication II, which also coincides with the teaching programme in medical communication at the Universidad de los Andes in two courses (semesters II and IX) supported from the areas of family medicine, paediatrics, psychiatry

and internal medicine (Trujillo-Maza and Suárez Acevedo, 2019). For its part, in Spain there is a 'White Book', which defines the minimum content that a medical undergraduate programme must offer and considers communication as a specific competence to be taught and acquired in order to qualify as a doctor, so that medical schools have incorporated this teaching into their curricula (Ruiz-Moral, 2021).

The study found that communication skills were best learned when teachers provided enjoyable and respectful moments of interaction that generated safe environments for expressing oneself, communicating and even performing in medical practice. This agrees with Salazar-Blanco and Gómez-Gómez (2022), for whom student motivation in clinical practice is key, and they mention that a safe learning environment is one where communication is assertive and empathetic and where teachers recognise students' capacities for learning and knowledge construction.

The interviews revealed learning by "imitation" or "modelling" as the predominant resource in the development of communication skills in the participants as they sought to emulate behaviours, attitudes and communication skills of the teachers that they considered to be empathetic, assertive and humane with the patients. This coincides with Nolla (2019), who associates this learning with the development of communication by making it possible to show and generate professional attitudes, behaviours and values to the students. The teaching team must be aware of how their behaviour influences student learning and, in this sense, use different strategies or approaches that are part of their communicative experience during patient care (Salazar-Blanco and Gómez-Gómez, 2022). In this regard, Ruiz et. al (2017) mention that the teaching of these resources requires expertise and time on the part of the teacher, as well as awareness of the teaching of communication skills as a standardised, planned and transversal process in the undergraduate medical curriculum.

Flores (2019) highlights the role of the various learning spaces within the educational environment and indicates that teaching teams are not the only actors involved in the construction of knowledge. In this research, it emerged that the interns' interactions with different actors, as a result of being immersed in different community and clinical scenarios, and their own real experiences, allowed them to learn communication skills, altruism, compassion, respect, care, integrity and assertive communication as a fundamental part of medical practice, an issue also recognised by Centeno and Paz (2021).

Regarding the issue of the intermediation of technologies in medical training, which emerged in this study, Altés (2013) mentions their usefulness in the preparation of medical records or patient care and education. The participants gave importance to ICTs as a tool that optimises medical practice and communication with other health actors. In addition, participants recognised that, although with limitations, telemedicine can bridge the gap between medicine and the patient. Mesa and Pérez (2020) note, by the way, that by not allowing physical contact and not fully observing body language, it is impossible to express and perceive gestures or attitudes *in situ* that favour psycho-emotional attunement with the patient. For the participants, as for Morcillo-Serra and Aroca-Tanarro (2022), telemedicine is useful for diagnoses, monitoring illnesses or seeking second opinions and communication between colleagues, without this implying that at some point the face-to-face consultation should be dispensed with.

With regard to the electronic medical record, the participants recognised the responsibility that, as a legal medical document, its completion entails. López and Yepes (2023), in a self-critical investigation into the quality of the medical record, state that the healthcare personnel are responsible for harmonising technological advances with its compilation, since, for various reasons, in the reality of medical practice, the original intention of a quality medical record is distorted.

With regard to the impact of the pandemic on the learning process, this study revealed different perceptions. In this regard, Estrada et al. (2022) mention the diversity of opinions of university students on virtual training, due to the multiple variables that influence its implementation. Knowledge must be based on the everyday life to which the students are attached (the clinical setting as a scenario of medical and social reality) so that the didactic mediation of the teaching team and the interaction with the contents influence the communicative interactions and the teaching and learning processes (García et al., 2022). The importance of contact with the other to strengthen and develop communicative skills in patient care was recognised since, as mentioned by Salamanca and Martínez (2020), it is not possible to replace a practical face-to-face class with a videoconference class, even if it is well structured.

Participants, in addition to acquiring different communication skills focused on humanised treatment, were able to adapt their communication style according to the target population they were addressing through skills described in the literature: observing and listening, reinforcing and supporting, asking, answering and giving information, framed in patience and empathy (Petra-Micu, 2012).

In this study, participants highlighted some barriers that affect learning processes and the medical act. Unequal treatment between communicative actors is one of them and is associated with socio-cultural factors and conceptions of authority derived from the role of hierarchy or authority (Ruiz-Moral, 2020; Dois and Bravo, 2019). Empathy plays a fundamental role in avoiding the tendency to judge, evaluate, approve or disapprove of other people's judgements (Lorente and Jiménez, 2009). The restrictions imposed by the health system, another barrier, sometimes prioritises the disease rather than the patient and the quality of care, which leads to a loss of autonomy in professional practice (MINSALUD, 2016). The interns interviewed acknowledged that they faced communication gaps related to culture, ethnicity or gender with the use of non-verbal communication during the medical act and with tools acquired through experiences in similar situations. It is highlighted how knowing or trying to get closer to the culture, language, customs and beliefs of patients can help health workers to communicate easily and without prejudice (Norouzinia, 2015).

Conclusions

The interns interviewed acquire communication skills in a transversal, parallel and implicit way through the different experiential practices or methods that involve contact with the patient and his or her environment, in addition to the accompaniment of the teacher (hidden curriculum).

Although there is no regulation on the inclusion of communication teaching in medical programmes in Colombia, this study identified that participants integrate the knowledge,

communication skills and humanised attitudes acquired in the teaching process into their clinical practice.

Communication is the foundation of quality and humanised medical care in the doctor-patient relationship. For the participants, personal, family, socio-cultural, regional, administrative and academic aspects were factors that promoted or limited their training in communication.

The pandemic restricted patient contact, affecting non-verbal communication and the acquisition of communication skills, highlighting the relevance of practice settings in medical education.

Communication skills (listening, speaking, reading and writing) were recognised by the participants as necessary in medical practice. They reported greater progress in oral skills, as they allow them to express the appropriate discourse during the training period; writing, because of the care required to prepare the clinical history; as for reading, they have become aware of its importance as it is constantly required in their work. For their part, active listening enables them to be receptive to the information provided by the patient and to show interest in the patient's condition and concerns.

Common conceptions of communication and the acquisition and application of communication skills in the medical act were found.

Participants recognised and reflected on the communication barriers that were present in the educational process.

Practice settings, where the hidden curriculum is experienced, enable students to learn and develop communicative skills. Some are mediated by circumstantial experiences for the students and, although they have a positive impact on their learning, this possibly also leads to the opening of a gap of inequality in learning, compared to those students who did not face such an experience, since the opportunity to learn aspects necessary for future situations is not presented in a homogeneous way in all students.

References

Altés, J. (2013). Review: The role of information and communication technologies in medicine today. *Seminarios de la Fundación Española de Reumatología, 14*(2), 31-35. https://doi.org/10.1016/j.semreu.2013.01.005

ANECA (2005). *White Paper on the Degree in Medicine.* National Agency for Quality Assessment and Accreditation (ANECA).

Borjas García, J. E. (2020). Validity and reliability in data collection and analysis under a qualitative approach. *Transcender, accounting and management*, *5*(15), 79-97. https://doi.org/10.36791/tcg.v0i15.90

Bürgi, H., Rindlisbacher B., Bader Ch., Bloch, R., Bosman, F., Gasser, C., Gerke, W., Humair, J. P., Im Hof, V., Kaiser, H., Lefebvre, D., Schläppi, P., Sottas, B., Spinas, G. A., and Stuck, A. E. (2008). *Swiss Catalogue of Learning Objectives for Undergraduate Medical Training: Under a mandate of the Joint Commission of the Swiss Medical Schools* (2nd ed.). Joint Conference of Swiss Medical Faculties (SMIFK). https://www.uni-giessen.de/de/fbz/fb11/studium/lehrer_jlu_intern/infos_materialien/materialen/Swiss_Catalog.pdf/@@download/file/Swiss_Catalog_2008.pdf

Centeno, A. M. and Grebe, M. P. (2021). The hidden curriculum and its influence on teaching in the Health Sciences. *Investigación en educación médica, 10*(38), 89-95. https://doi.org/10.22201/fm.20075057e.2021.38.21350

Cevallos, O. (2016). Communication skills, a training need of the 21st century professional. *Yachana Revista Científica*, *5*(1), 130-137. http://revistas.ulvr.edu.ec/index.php/yachana/article/view/290

Diaz-Bazo, C. (2019). Strategies to ensure the quality of qualitative research. The case of articles published in education journals. *Revista Lusófona de Educação, 44*(44), 29-45. https://doi.org/10.24140/issn.1645-7250.rle44.02

Dois, A. and Bravo, P. (2019). Perceived barriers in the process of learning interpersonal helping skills in nursing. *Research in Medical Education*, 8(30), 68-75. https://doi.org/10.22201/facmed.20075057e.2019.30.1786

Estrada, E. G., Gallegos, N. A., and Puma, M. Á. (2022). University students' perceptions of virtual education during the COVID-19 pandemic. *Revista San Gregorio, (*49), 74-89. https://revista.sangregorio.edu.ec/index.php/REVISTASANGREGORIO/article/view/1967/6-nestor

Flores, A. F. (2019). The hidden curriculum during pre-professional medical practice. *Educación Superior*, 6(2), 47-58. http://www.scielo.org.bo/pdf/escepies/v6n2/v6n2_a08.pdf

García, K., Barrientos, A. E., and Córdoba, C. I. (2022). Communicative interactions in the teaching and learning processes in the Social Studies classroom. *Revista Educación*, 46(1), 400-419. https://doi.org/10.15517/revedu.v46i1.47660

General Medical Council (GMC) (2009). *Tomorrow's Doctors 2009: a draft for consultation. Background and consultation questions.* The General Medical Council. https://gmc.econsultation.net/econsult/uploads/TD%20Final.pdf

González, H. L., Uribe, C. J., & Delgado, H. (2015). Oral communication skills in the doctor-patient relationship in a medical program at a university in Colombia: a look from the curriculum, teachers and students. *Educación Médica, 16*(4), 227-233, https://doi.org/10.1016/j.edumed.2015.10.008

Kiessling, C., Dieterich, A., Fabry, G., Hölzer, H., Langewitz, W., Mühlinghaus, I., Pruskil, S., Scheffer, S., & Schubert, S. (2010). Communication and social competencies in medical education in German- speaking countries: The Basel Consensus Statement. Results of a Delphi Survey. *Patient Education and Counseling*, *81*(2), 259-266. https://doi:10.1016/j.pec.2010.01.017

Kvale, S. (2011). *Interviews in qualitative research*. Ediciones Morata.

López, L. M. (2020). *Significado de la Calidad de la Calidad de la Información en la Historia Clínica: Una mirada desde los médicos internistas* [Master's thesis, Universidad de Antioquia]. https://hdl.handle.net/10495/16020

López, L. M. and Yepes, C. E. (2023). Quality of the medical record: self-criticism from internists. *Revista Facultad Nacional de Salud Pública*, *41*(2), e350725. https://doi.org/10.17533/udea.rfnsp.e350725

Lorente, J. A. and Jiménez, M. E. (2009). Health communication from ethical, care, teaching and management perspectives. *Medisan*, 13(1), 1-14. http://ref.scielo.org/hhb8hz

Meneses, G. (2007). NTIC, interaction and learning at the University. [Doctoral thesis, Universitat Rovira i Virgili]. http://www.tdx.cat/TDX-1207107-161635

Mesa, M., and Pérez, I. (2020). The medical act in the era of telemedicine. *Revista médica de Chile*, 148(6), 852-857. https://dx.doi.org/10.4067/S0034-98872020000600852

Ministry of Health and Social Protection of Colombia (2016). *Profiles and professional competencies in health. Perspective of the professions, a contribution to health care, individuals, families and communities*. Minsalud and National Academy of Medicine. https://www.minsalud.gov.co/sites/rid/Lists/BibliotecaDigital/RIDE/VS/TH/Perfiles-profesionales-salud.pdf

Ministry of Health (2017). *Commission for the Transformation of Medical Education - Final Report*. Ministry of Health.

Morcillo-Serra, C. N., and Aroca-Tanarro, A. (2022). Teleconsultation and videoconsultation: Forever? *Medicina Clínica*, 158(3), 122-124. https://doi.org/10.1016/j.medcli.2021.09.008

Nolla, M. (2019). Learning and clinical practices. *Edución Médica*, 20(2), 100-104. http://dx.doi.org/10.1016/j.edumed.2018.12.019

Norouzinia, R., Aghabarari, M., Shiri, M., Karimi, M., & Samami, E. (2015). Communication Barriers Perceived by Nurses and Patients. *Global journal of Health Science*, *8*(6), 65-74. https://doi.org/10.5539/gjhs.v8n6p65

Palacios, O. A. (2021). Grounded theory: origin, assumptions and perspectives. *Intersticios Sociales, 22*, 47-70. https://doi.org/10.55555/IS.22.332

Pereáñez, J. A. (2016) Analysis of Formation in Communicative Competences for the Medical Act in Universidad de Antioquia Medicine School Undergraduate Program. *Journal of Biosciences and Medicines*, *4*(12), 76-88. https://doi.org/10.4236/jbm.2016.412012

Petra-Micu, I. M. (2012). Teaching communication in medicine. *Research in Medical Education, 1*(4), 218-224. https://doi.org/10.22201/fm.20075057e.2012.04.00009

Piñeros, J. C. (2021). Symbolic interactionism: research opportunities in the classroom. *International Journal of Pedagogy and Educational Innovation*, *1*(1), 211-228. https://doi.org/10.51660/ripie.v1i1.33

Ramírez, M. C., and García, S. L. (2020). Communication skills for health promotion and prevention actions. A proposal of indicators. *Investigación en Educación Médica*, *9*(33), 43-51. https://doi.org/10.22201/facmed.20075057e.2020.33.18170

Ruiz-Moral, R. (2020). Cultural and psychological barriers in the clinical and educational relationship in Spanish medical students and residents (II). *Educación Médica*, *21*(1), 49-54. https://doi.org/10.1016/j.edumed.2019.02.005

Ruiz-Moral, R. (2021). Teaching Clinical Communication for the new challenges in medicine. *Educación Médica*, *22*(4), 185-186. https://doi.org/10.1016/j.edumed.2021.06.008

Ruiz-Moral, R., Caballero Martínez, F., García de Leonardo, C., Monge, D., Cañas, F., and Castaño, P. (2017). Teaching and learning clinical communication skills in the Faculty of Medicine. The experience of the Francisco de Vitoria (Madrid). *Educación Médica*, *18*(4), 289-297. https://doi.org/10.1016/j.edumed.2017.03.026

Salamanca, N. D., and Martínez, E. (2020). Medical students' perceptions of virtual vs. face-to-face education in the context of the pandemic. Bogotá (Colombia). *Revista Electrónica EDUCyT, 11*(extra), 1561-1571. https://die.udistrital.edu.co/revistas/index.php/educyt/article/view/154

Salazar-Blanco, O. F., & Gómez-Gómez, M. M. (2022). Physician-faculty interpersonal communication in the formative practices of a medical undergraduate. *Salud UIS*, *55*, 1-9. https://doi.org/10.18273/saluduis.55.e:23009

Sanz-Valero, J. (2019). Communication for occupational health. *Occupational Medicine and Safety*, 65(256), 173-176. http://hdl.handle.net/20.500.12105/12904

Suárez-Cid, L., Gross Tur, R., and Cubela González, J. (2022). Characterization of communication skills in medical students. *Edumecentro*, *Revista Educación Médica del Centro*, *14*, e2268. http://ref.scielo.org/8437ks

Trujillo Maza, M. E., and Suárez Acevedo, D. E. (2019). *Communication skills in contemporary medical education*. *A pedagogical experience*. Editorial Universidad de los Andes.

Urtasun, M., Janer Tittarelli, M. A., Díaz Pumará, C., and Davenport, M. C. (2021). Physicians' communication skills. Experience in the Department of Medicine of a pediatric hospital. *Revista de la Facultad de Ciencias Médicas de Córdoba*, *78*(3), 270-275. https://doi.org/10.31053/1853.0605.v78.n3.29306

Villegas, C. E. (2017). Communication in the medical curriculum. *Medicina UPB*, *36*(1), 59-70. https://doi.org/https://dx.doi.org/10.18566/medupb.v36n1.a08

Von Fragstein, M., Silverman, J., Cushing, A., Quilligan, S., Salisbury, H., and Wiskin, C. (2008), UK consensus statement on the content of communication curricula in undergraduate medical education. *Medical Education*, *42*(11), 1100-1107. https://doi.org/10.1111/j.1365-2923.2008.03137.x

Date received: 14 October, 2023.
Review date: 9 November, 2023.
Date of acceptance: 9 April, 2024.