



ORIGINAL ARTICLE

Perception of medical students regarding the development of professional skills

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ABSTRACT

Introduction: the development of professional skills constitutes an essential component in the training of medical students, as it favors the integration of knowledge with actions inherent to their future professional performance. Primary Health Care enables the development of these skills through education in practice.

Objective: to assess the perception of medical students regarding the development of professional skills in Primary Health Care.

Methods: a descriptive, cross-sectional study was conducted in university polyclinics of Pinar del Río municipality during the 2024–2025 academic year. The universe consisted of 195 sixth-year medical students, and an intentional sample of 126 students who agreed to participate was selected. A survey was applied, and the information obtained was processed using descriptive statistics.

Results: all students recognized the importance of professional skills for their future performance; however, only 52,3 % reported knowing the skills to be developed in subjects linked to Primary Health Care. A total of 25,1 % considered that tutors systematically planned activities aimed at their training. Although 83,1 % perceived motivation in tutors, only 31,3 % rated their preparation as good to guide this process.

Conclusions: Students acknowledged the importance of professional skills and the opportunities offered by Primary Health Care for their development. Difficulties were identified related to knowledge of these skills, planning of teaching activities, and tutors' pedagogical preparation.

Keywords: Primary Health Care; Medical Education; Students, Medical; Professional Competence.

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INTRODUCTION

The development of professional skills constitutes one of the essential components in the training of medical students, as it allows the integration of knowledge acquired during the degree with the actions they will subsequently perform in different professional practice settings. These skills are developed progressively through the student's interaction with the problems inherent to the profession and acquire special importance when learning occurs in real care settings.⁽¹⁾

The development of Family Medicine and the strengthening of Primary Health Care (PHC) as a teaching setting have increased the presence of students in polyclinics and medical offices. Accordingly, medical degree programs have incorporated a greater number of subjects and hours dedicated to education in practice at this level of care.^(2,3) This linkage favors the student not only knowing the theoretical foundations of the profession but also having the opportunity to apply them to concrete situations related to the health needs of individuals, families, and the community.

PHC offers particular conditions for this learning by integrating individual, family, and community care with health promotion and disease prevention actions. In these settings, communicative, educational, clinical, and risk identification skills can be developed, as well as those related to the comprehensive assessment of individuals and families.^(1,4)

However, the presence of the student in PHC settings does not by itself guarantee an adequate development of these skills. For care experiences to truly become learning opportunities, intentionality in teaching planning, systematic guidance, and active participation of the tutor are required.⁽⁵⁾ From this perspective, it is important to know how the students themselves perceive the formative process, as their experiences allow the identification of strengths and difficulties that may not be evident when the process is analyzed solely from curricular planning.^(6,7)

In the authors' opinion, this assessment is particularly relevant in education in practice, where the relationship between care and teaching activities must maintain a balance that allows addressing the health needs of the population without limiting the learning opportunities of students. Understanding their perception can provide elements to improve the organization of the teaching-learning process and guide actions aimed at strengthening the pedagogical preparation of tutors.^(6,8,9) For these reasons, the present research aimed to assess the perception of medical students regarding the development of professional skills in Primary Health Care.

METHODS

A descriptive and cross-sectional study was conducted in the university polyclinics of Pinar del Río municipality during the 2024-2025 academic year.

The universe consisted of 195 sixth-year medical students who completed their Comprehensive General Medicine (CGM) rotation in these teaching settings. Through intentional sampling, 126 students were selected, considering their willingness to participate in the research as a criterion.

Procedures and techniques

A structured survey (Annex 1) was applied to ascertain the students' perception of the professional skills development process during teaching activities carried out in PHC.

Statistical analysis

The information obtained was processed using descriptive statistical procedures, utilizing absolute and relative frequencies to analyze the responses. The results were organized and interpreted in correspondence with the research objective.

Ethical aspects

The research was approved by the Scientific Research Ethics Committee and the Scientific Council of the Luis Augusto Turcios Lima University Polyclinic. Student participation was voluntary, and the confidentiality of the information obtained was guaranteed, as well as its exclusive use for scientific purposes. The study was conducted in accordance with the ethical principles established for research involving human subjects.

RESULTS

All surveyed students recognized the importance of professional skills development for their future job performance. Likewise, all considered that education-in-practice activities constitute opportunities for the development of these skills.

However, differences were identified regarding the knowledge of the professional skills that must be developed in subjects linked to Primary Health Care, as well as in the planning of teaching activities and the integration of didactic components during the formative process (Table 1).

Table 1. Students' perception of professional skills development in Primary Health Care.

Evaluated aspect	Response			
	Yes		No	
	No.	%	No.	%
Importance of professional skills for job performance	195	100,0	0	0,0
Knowledge of professional skills to be developed in PHC	102	52,3	93	47,7
Systematic planning of activities by the tutor	49	25,1	146	74,9
Integration of didactic components by the tutor	82	42,1	113	57,9
Education-in-practice activities allow the development of professional skills	195	100,0	0	0,0
Evaluation of the professional skills development process	102	52,3	93	47,7

Among the students who stated they knew the professional skills, 52,3 % managed to identify them correctly. Regarding the planning of education-in-practice activities, participants pointed out as main difficulties the care workload, insufficiencies in the planning of the teaching-learning process, and, in certain situations, the lack of correspondence between the contents taught in the subjects and the activities developed in the care settings.

Difficulties related to the integration of didactic components were fundamentally associated with the planning of education-in-practice activities and the pedagogical preparation of the tutor. Regarding the evaluation of the formative process, students pointed out problems linked to its systematicity and fairness.

Regarding elements related to teaching interaction, motivation, and preparation to guide the development of professional skills, the majority of students favorably assessed the teacher-student interaction and recognized motivation in the tutors. However, the assessment of the tutor's pedagogical preparation was less favorable (Table 2).

Table 2. Students' perception of teaching interaction, tutor preparation, and their own training.

Evaluated aspect	Response					
	Good		Fair		Poor	
	No.	%	No.	%	No.	%
Teacher-student interaction	139	71,3	56	28,7	0	0,0
Tutor's motivation for professional skills development	162	83,1	31	15,9	2	1,0
Tutor's preparation to guide the teaching-learning process	61	31,3	117	60,0	17	8,7
Self-assessment of the student's preparation in professional skills	108	55,4	87	44,6	0	0,0

Among the difficulties related to teacher-student interaction, participants pointed out the coincidence of students from different years of the degree in the same medical office and the difficulties in addressing individual differences.

Although 83,1 % of the students considered that the tutors were motivated by the development of professional skills, only 31.3% rated their preparation to guide this process as good. Students pointed out the need to strengthen the didactic preparation of tutors and improve the planning of teaching-care activities in the medical office.

When assessing their own preparation in the professional skills developed in PHC, 55,4 % of the students considered it good and 44,6 % fair. Among the main suggestions were increasing the tutor's attention time to students, improving the organization of the teaching-learning process, and strengthening the preparation of tutors to guide the development of these skills.

DISCUSSION

The development of professional skills constitutes an essential component in the training of medical students, as it allows the integration of knowledge acquired during the degree with the actions necessary to face the problems inherent to the profession. Its development does not occur spontaneously, but as a result of systematic and conscious practice in different teaching settings. In this sense, PHC offers particular conditions to favor this process, due to the direct and continuous contact of students with individuals, families, and the community.^(1,4)

The obtained results show that all students recognize the importance of professional skills development for their future job performance. However, it is significant that only slightly more than half reported knowing the skills that must be developed in subjects linked to PHC and that, among those who claim to know them, not all manage to identify them correctly. In the authors' opinion, this difference shows that recognizing the importance of a skill does not necessarily mean understanding what actions constitute it or how it should be developed during the formative process.

This finding deserves attention, as the student needs to know clearly what is expected of them during each stage of their training. Professional skills correspond to the modes of action established in the professional model, and their mastery is essential to meet the demands of future performance. The skills to be achieved are defined in the programs of the subjects developed in PHC; however, their presence in curricular documents does not by itself guarantee that they are consciously recognized by students during teaching practice.⁽¹⁾

In the authors' opinion, making these skills explicit from the orientation of each activity could favor a more conscious participation of the student in their own learning. It is not only about performing certain actions during education in practice, but also about the student understanding what skill they are developing, what operations constitute it, and what level of mastery is expected to be achieved.

Another result of interest was related to the planning of education-in-practice activities. A limited proportion of students considered that tutors systematically planned activities aimed at the development of professional skills, while the majority indicated that this occurred only occasionally or not at all. Among the possible causes identified were the care workload, difficulties in the planning of the teaching-learning process, and the lack of correspondence, in certain situations, between the contents of the subjects and the activities developed in the care settings.

These results allow us to consider that education in practice, even though it constitutes a privileged setting for learning, requires adequate pedagogical intentionality. The student's participation in care activities does not by itself guarantee the development of a skill. To achieve this, it is necessary to have adequate orientation, execution, and evaluation of the actions performed, so that each care experience can also become a formative experience.^(2,3,6)

The interaction between tutor and student therefore acquires special importance. The tutor must master not only the contents specific to the medical profession but also the pedagogical resources necessary to guide, accompany, and evaluate learning.^(7,8) In this study, although the majority of students considered that tutors were motivated by the development of professional skills, only 31,3 % rated their preparation to guide this process as good, while 60,0 % considered it fair.

The difference between both results is particularly relevant. In the authors' judgment, the tutor's motivation constitutes a favorable condition, but it does not replace their pedagogical preparation. A professional may have care experience and a willingness to teach and, at the same time, present difficulties in organizing teaching activities, addressing individual differences, or systematically evaluating the development of a skill. Therefore, strengthening the pedagogical preparation of tutors could constitute a way to improve the quality of this process.^(9,10,11)

Despite the difficulties identified, all students considered that education-in-practice activities allow the development of professional skills. This result reaffirms the value that the students themselves place on PHC settings for their training. Direct interaction with individuals, families, and the community offers opportunities to apply knowledge, develop professional reasoning, and practice skills that could hardly be consolidated solely through theoretical activities.^(2,6)

However, these opportunities must be accompanied by a systematic evaluative process. In the research, approximately half of the students rated the evaluation of professional skills development as fair and pointed out difficulties related to its systematicity and fairness. From the authors' perspective, evaluation must be part of the learning process itself and not be limited to stating a final result. Timely feedback allows the student to recognize their progress, identify the actions they still need to perfect, and participate more actively in their training.^(10,11)

The teacher-student relationship was favorably assessed by the majority of participants; however, difficulties derived from the coincidence of students from different years in the same medical office and from addressing individual differences were pointed out. These conditions can constitute an opportunity for exchange among students with different levels of experience, but they also represent a challenge for the tutor when there is no adequate organization of teaching activities.^(7,9)

In general, the results allow us to appreciate that students attach importance to the development of professional skills and recognize the opportunities that PHC offers to develop them. The main difficulties seem to be concentrated not in the assessment that students make of these skills, but in the way the process is planned, guided, and evaluated during education in practice. Consequently, it is necessary to strengthen the pedagogical preparation of tutors and favor an organization of the teaching-learning process that makes formative objectives more explicit and provides greater opportunities for the systematic practice and evaluation of skills.^(10,11)

As a limitation of the study, its results fundamentally express the perception of the students, so they allow us to know how they value the process, but they do not determine by themselves the real level of mastery achieved in each professional skill. Future research could complement these findings through direct observation of student performance and the incorporation of assessments from tutors and teaching directors.

CONCLUSION

Students recognize the importance of professional skills and the opportunities that Primary Health Care provides for their development; however, they perceive difficulties related to their identification, the planning of teaching activities, the evaluation of learning, and the pedagogical preparation of tutors. Strengthening these elements can contribute to a more systematic development of the skills necessary for future professional performance.

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Conflict of Interest

The authors declare no conflicts of interest.

Authorship Contribution

JANF: Conceptualization; Methodology; Investigation; Formal analysis; Original draft writing; Writing, review, and editing.

BFG: Conceptualization; Methodology; Supervision; Writing, review, and editing.

IMHR: Investigation; Data curation; Formal analysis; Writing, review, and editing.

ADC: Investigation; Validation; Writing, review, and editing.

Use of Artificial Intelligence

During the preparation of the manuscript, ChatGPT (OpenAI) was used as a support tool for reviewing and improving the wording of some text fragments and for verifying the adequacy of the bibliographic references format to the Vancouver style. The tool was not used to generate the results, data analysis, or study conclusions. The authors fully reviewed and validated the content and assume final responsibility for the manuscript.

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Annex 1. Survey to evaluate the perception of medical students regarding the development of professional skills in PHC.

1. Do you consider professional skills important for job performance? Yes___ No___
2. Do you know the professional skills to be developed in PHC? Yes___ No___
3. Does the tutor systematically plan activities for the development of professional skills? Yes___ No___
4. Does the tutor manage to integrate the didactic components? Yes___ No___
5. Do education-in-practice activities allow the development of professional skills? Yes___ No___
6. Is the evaluation of the professional skills development process carried out? Yes___ No___
7. How do you consider the teacher-student interaction? Good___ Fair___ Poor___
8. How do you evaluate the tutor's motivation for the development of professional skills? Good___ Fair___ Poor___
9. What is your criterion regarding the tutor's preparation to guide the teaching-learning process? Good___ Fair___ Poor___
10. How do you self-assess your preparation in professional skills? Good___ Fair___ Poor___