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Clinical Teaching in Rehabilitation Sciences: Clinical Educators' Perceptions of its Effectiveness and Pedagogical Competencies.

La docencia clínica en ciencias de la rehabilitación: percepciones de educadores clínicos sobre su efectividad y competencias docentes.

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Summary.
Introduction: Clinical teaching and its effectiveness constitute an essential component in the training of rehabilitation professionals, as it integrates practice in real-world contexts with the development of professional and pedagogical competencies. Therefore, the effectiveness and teaching competencies of clinical educators are relevant to consider for the comprehensive development of the student. **Objective:** To analyze the effectiveness of clinical teaching associated with the reported teaching skills and competencies considered relevant by clinical educators in rehabilitation science programs. **Methodology**: A mixed-methods design with a sequential explanatory approach was used. In the first phase, 45 professionals from the fields of kinesiology, occupational therapy, and speech-language pathology participated, completing the adapted Clinical Teaching Effectiveness Questionnaire. In the second phase, a subgroup was selected for semi-structured interviews in focus group format. **Results:** Clinical educators reported high levels of effectiveness in planning learning experiences (93.3%), adapting to learning styles (86.7%), and providing constructive feedback (100%). Weaknesses were identified in student participation in planning (42.2% agreed that their collaboration was not expected), in the support provided to high-achieving students, and in the rigidity of institutional assessment tools. Qualitative findings underscored the importance of pedagogical adaptability, emotional intelligence, and assertive communication. **Conclusion**: Clinical teaching is perceived as effective in its formative dimension, although it requires strengthening the pedagogical preparation of clinical instructors and granting them greater autonomy in assessment processes.

Keywords: Higher education; Clinical teaching; Teaching competencies; Clinical educators; Rehabilitation sciences.

Introducción: La docencia clínica y su efectividad constituye un componente esencial en la formación de profesionales de la rehabilitación, ya que integra la práctica en contextos reales con el desarrollo de competencias profesionales y pedagógicas. Por lo que la efectividad y las competencias docentes de los educadores clínicos es relevante a considerar para el desarrollo integral del estudiante. **Objetivo:** analizar la efectividad de la docencia clínica asociado al reporte de las habilidades y competencias docentes consideradas relevantes por educadores clínicos de carreras de ciencias de la rehabilitación. **Metodología**: diseño mixto con enfoque explicativo secuencial. En la primera fase, participaron 45 profesionales en total, correspondientes a las áreas de kinesiología, terapia ocupacional y fonoaudiología, quienes respondieron el Clinical Teaching Effectiveness Questionnaire adaptado. En la segunda fase, un subgrupo fue seleccionado para entrevistas semiestructuradas en modalidad de grupos focales. **Resultados:** Los docentes clínicos reportaron altos niveles de efectividad en planificación de experiencias de aprendizaje (93,3 %), adaptación a estilos de aprendizaje (86,7 %) y retroalimentación constructiva (100 %). Se identificaron debilidades en la participación de los estudiantes en la planificación (42,2 % de acuerdo con no esperar su colaboración), en la atención a estudiantes con rendimiento excepcional y en la rigidez de instrumentos evaluativos institucionales. Los hallazgos cualitativos subrayaron la importancia de la adaptabilidad pedagógica, la inteligencia emocional y la comunicación asertiva. **Conclusión**: La docencia clínica se percibe efectiva en su dimensión formativa, aunque requiere fortalecer la preparación pedagógica de los docentes clínicos y otorgar mayor autonomía en procesos de evaluación.

Palabras clave: Educación superior; Docencia clínica; Competencias docentes; Educadores clínicos; Ciencias de la rehabilitación.

1. Introduction

The training process for any health sciences student must include theoretical, laboratory, or workshop aspects, clinical simulation activities, and practical experiences in real-world settings. The latter is a fundamental step for consolidating the skills acquired in the classroom (1), which is essential for academic development and knowledge acquisition. Therefore, clinical teaching plays a crucial role in developing these previously mentioned skills, and clinical experiences must also be considered as learning opportunities. Consequently, clinical instructors must also consider developing their own teaching skills in order to effectively provide students with the knowledge, skills, and attitudes necessary to deliver high-quality professional service (2).

It is pertinent to consider the contextual duality between the clinical and teaching roles, as this can create tensions in the possibilities of planned teaching and emphasize the need for pedagogical training in the clinical context (3-7). This situation acquires particular relevance when considering the current context of teacher training for clinical rehabilitation professionals. Given the diversity of professionals, clinical contexts, services, and institutions, it is complex to standardize procedures for each particular context (8). In this sense, it is relevant to highlight their capacity for pedagogical adaptation and the concept of the reflective practitioner, capable of acting efficiently in dynamic and uncertain contexts (4). The teaching methodology is remarkably adaptable and efficient in the clinical setting, which facilitates transparent and explicit actions by the professional in charge (9), allowing the student to identify the professional's metacognitive processes in real time while attending to the users requesting their services.

In the clinical setting, environments are conceptualized as communities of practice, understood as spaces for the collective construction of knowledge through social interaction. This approach allows clinical experience to extend beyond the mere application of content, fostering the development of critical thinking and clinical reasoning (10). From this perspective, it is imperative to consider that clinical educators must possess intrinsic motivation to impart knowledge, creating the conditions necessary to serve as role models for students and thus establish a symbiotic relationship.

In this sense, competencies related to the development of relevant teaching methodologies represent a culmination of this progressive process (7). This pedagogical approach is characterized by the implementation of evidence-based teaching practices and innovative approaches (3). In this sense, clinical education emerges as a particularly relevant area, since in this context students not only recognize their strengths and weaknesses, but also understand the core learning objectives and take responsibility for their own learning (11). Similarly, self-assessment should be guided, as it provides a solid foundation for delivering specific feedback and helps educators identify areas where students might require additional support (12). However, it is essential to consider that clinical instructors must be able to effectively identify and guide their practice as educators in this specific context. To this end, the experience and professional practice of those who carry out clinical teaching must be taken into account (13). From this perspective, a gap can be identified in how activities are planned for students, since it frequently responds to the expectations of the professional rather than those of the students (14).

The evidence gathered highlights the relevance of communication (15) as an essential component in the teaching process for education in the clinical context. This pedagogical approach must be adapted to the individual needs of the student, while also considering the operational conditions necessary to carry out teaching in this context. In contrast to the above, the diversity of clinical centers, the complexity of the services offered, and the operational conditions in terms of time, resources, and number of users are evident. Added to the diversity of students, this aspect can influence how education is carried out in the clinical context (5-6). In the field of higher education, the relevance of situated planning is highlighted, an approach that stands as an essential component in curriculum design. In line with this approach, Nordquist et al. (2018) postulate that the layout and characteristics of the clinical learning environment exert a significant influence on educational processes, outcomes, and effectiveness (10). In this respect, the professional's teacher training is considered essential for the design of environments that promote competency-based clinical education (16).

In light of the above, the main objective of this research is to analyze the effectiveness of clinical teaching associated with the reporting of teaching skills and competencies considered relevant by clinical educators in rehabilitation science programs.

2. Methods

The methodological approach adopted in this research was based on a mixed-methods approach, specifically a Sequential Explanatory Design (17), which allowed for the integration of different approaches. To this end, a selection of healthcare professionals who provide clinical instruction in rehabilitation science programs was carried out. The sample was collected using non-probability convenience sampling, with 45 professionals selected for the first phase. Subsequently, a second phase was implemented with a smaller sample to further explore the findings obtained from the quantitative instruments. The subjects selected for the second phase of the study were chosen randomly using a lottery system to minimize selection bias. However, preserving the heterogeneity of the sample from the first phase was considered a fundamental factor in the study design.

Eligibility criteria

The following selection criteria were established for the general selection of professionals:

1. Subjects without distinction of sex who are rehabilitation professionals, including kinesiology, speech therapy and occupational therapy, actively practicing their profession.

2. Rehabilitation professionals who have had students under their supervision in the last year.

3. Rehabilitation professionals who have remained in their current service for the past year.

Data collection methods and variables

For the data collection process, a mixed modality was used, in order to understand in an extended way the phenomenological aspects of clinical teaching and how teaching competencies are perceived.

- Instruments: Form on the effectiveness of clinical teaching, translated and adapted from the Clinical Teaching Effectiveness Questionnaire (18).

- Semi-structured interviews: To obtain detailed information about the perceptions and experiences of the participants. Initially, focus groups were planned that included questions validated by expert judgment and that were consistent with the object of study (19).

Procedures

As part of the recruitment and selection process, a pre-registration system was implemented for interested individuals. This initiative was promoted through various communication platforms, including professional networks, email, and telephone lines, among others. Public institutions identified as teaching hospitals were asked to collaborate in this process. Initially, an online survey was conducted using Microsoft Forms. The evaluation instrument specified the personal data that had to be provided, as well as the completion of structured questionnaires. Subsequently, numerical data was collected to gather general information about clinical teaching processes, competencies, and the achievement of expected outcomes.

To delve deeper into the results obtained from the structured instruments, semi-structured focus group interviews were conducted using the Microsoft Teams videoconferencing platform. In this section, to mitigate selection bias, a randomization procedure was implemented for the selection of participants in the first phase. This procedure was carried out to preserve the heterogeneity of the participants and their respective professional profiles, thus ensuring the delimitation of the spaces designated for the interviews. The interviews conducted allowed for a more in-depth exploration of the previous findings and the collection of previously unrecorded aspects for a qualitative analysis, with the aim of answering the research questions.

Bioethical aspects

The study in question underwent peer review by the Reference University, as well as external review by the Bioethics Committee of Arturo Prat University. All data collected from participating subjects will be coded and recorded in a dedicated database. In the context of scientific research, it is imperative to safeguard the privacy of the subjects involved. Therefore, the collected data will be used exclusively by the principal investigator, thus guaranteeing the confidentiality of the information.

Data analysis

The data corresponding to the participating subjects were grouped into an SPSS V.25 database to generate a descriptive analysis that would characterize the sample. In this study, an initial descriptive analysis was implemented to synthesize the characteristics of the responses to each questionnaire item. This methodological procedure involved calculating measures of central tendency, such as the arithmetic mean, and measures of dispersion, such as the standard deviation. Regarding the qualitative analysis of the data obtained through the focus groups, a thematic analysis approach was implemented. This involved a data coding process to identify emerging categories related to the participants' perceptions and experiences regarding clinical teaching competencies.

3. Results

Based on the interviews conducted, in the first phase, 45 rehabilitation professionals were interviewed, of whom 69% were kinesiologists, 22% occupational therapists, and 9% speech therapists. Of the total number of professionals, 33% worked in family health centers (CESFAM), 29% in hospitals, while the remaining 40% were distributed among universities, health departments, private clinics, and schools. Following the first phase, 10 professionals were randomly selected from among the participants, maintaining the heterogeneity of professionals and their profiles, to participate in the focus groups; of these, 40 % were kinesiologists, 30% speech therapists, and 30% occupational therapists. It is worth noting that 36% of the professionals have supplemented their training with master's degrees, although the majority have completed diploma programs and courses in a variety of areas of interest, with 82% of postgraduate qualifications focused on disciplinary training. Furthermore, 51% of the professionals have taught in the classroom, primarily in theoretical and laboratory activities. Similarly, most of those interviewed reported having served as clinical instructors for final-year students during their professional internships or final placements.

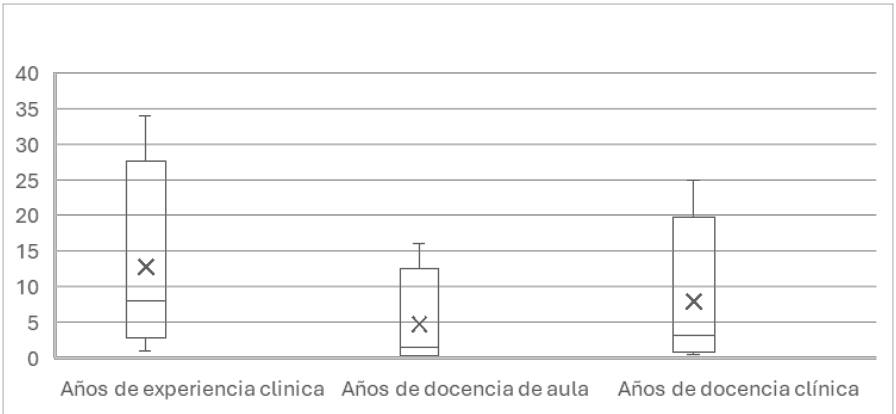

Figure 1. Diversification of participants' years.

Figure 1 reflects the characteristics related to years of clinical experience (mean 8.12±5.51), years of experience as a classroom teacher (mean 3.67±5.96) and years of experience as a clinical teacher (mean 8.31±9.04).

Quantitative data show that the majority of clinical instructors plan learning situations focused on developing competencies (93.3%), organize methodologies according to teaching and learning styles (86.7%), and adapt experiences to individual needs (86.7%). However, there is no consensus on the student's role in goal setting: while 42.2% agree that their collaboration should not be expected, 35.6% disagree, suggesting differing conceptions of student autonomy.

From a qualitative perspective, teachers describe specific practices for carrying out planning. One interviewee states: “I always ask them to plan sessions in writing: what objective they will work on and why. I tell them: ‘Don’t just describe the activity, tell me what you want to achieve’” (VA), which shows an effort to link activities with explicit objectives. Another adds: “First they observe, then they do simple activities, and finally, they lead entire sessions. I gradually give them more responsibility week by week” (CB), which demonstrates a progressive approach to transferring autonomy.

The perception of rigidity in institutional objectives also emerges as an obstacle: "Universities set unrealistic objectives for our context" (AM). This creates tension between academic expectations and clinical realities, and reflects the need for greater curricular flexibility.

When asked about competencies for clinical teaching, pedagogical adaptability and empathy are highlighted as essential. As one teacher summarized: "Knowledge is not enough; one must teach clinical thinking" (VE). This shows that, for teachers, the development of reflective processes tailored to the student's context is more important than adherence to formal plans.

In quantitative terms, the results indicate that faculty foster an environment that promotes clinical (97.8%) and professional (97.8%) development, as well as the practice of professionalism (66.7%). However, less confidence is observed when it comes to supporting high-achieving students; only 35.6% of professionals "strongly agree" with effectively promoting a learning environment for these students. In comparison, 84.4% of respondents "strongly agree" with supporting students who are struggling.

Qualitative accounts enrich this reading by highlighting the diversity of the student body. As one interviewee points out, "I've seen all kinds of students, some who learn very quickly through reading" (AM). Another interviewee emphasizes the role of communication in the effectiveness of the learning environment: "The way we explain things to the student will determine what they actually understand" (VL).

Furthermore, complex emotional situations that go beyond the technical aspects are discussed: "It has happened to us a lot that they arrive with a lot of internal emotional conflicts... We have to be able to deal with those situations" (MJ). This point demonstrates that the learning environment is not neutral, but rather involves emotional and relational aspects that influence the learning experience.

When discussing the competencies needed for clinical teaching, findings such as emotional intelligence and contextual flexibility are highlighted. Thus, the clinical learning environment is conceived as a dynamic space that requires both technical and soft skills to respond to diversity.

Quantitatively, feedback is one of the most established aspects: 100% of teachers report providing timely and constructive feedback. However, 46.7% avoid confrontational situations, reflecting tensions in conflict management. Communication with academic coordinators reaches 77.8%, with some variation in the perception of its effectiveness.

Qualitative testimonies reveal important nuances. For one teacher, feedback involves nurturing the relationship: "Giving feedback without destroying trust is an art. Saying, 'This is wrong, but this is how it will be improved'" (CA). Another acknowledges limitations in the climate of trust: "I always tell them, 'You may have better ideas than mine.' But many don't share them for fear of affecting their grade" (CB).

Institutionalized feedback practices are also identified: "At the end, students evaluate the center and my supervision. This gives me honest feedback" (VE). This shows that some centers promote two-way feedback, although not always systematically or free from hierarchical tensions.

The consultation on the necessary skills for clinical teaching complements this point by highlighting assertive communication as a critical competency. In this sense, feedback is not limited to transmitting information, but rather is configured as a pedagogical and relational practice that requires empathy, active listening, and the ability to maintain the connection in conflictive situations.

The quantitative results indicate that teachers carefully observe students' strengths (97.8%), address problems as they arise (95.6%), and control for assessment biases (95.5%). However, the recording of implemented strategies is limited (60%), and the consideration of contextual factors, while high (86.6%), is not comprehensive.

Qualitatively, the teachers express the rigidity of the institutional instruments. As one interviewee states: “The rubric is very rigid. If a student improves, I adjust the final grade, even if they don’t meet all the criteria” (CF). Another emphasizes that mistakes can be a learning opportunity: “We evaluate processes, not just perfect cases. A well-handled mistake also teaches” (CB).

The external origin of the instruments is also questioned: "We didn't create the assessment instruments. The rubrics come from the university..." (VL). This situation limits the teacher's autonomy to adapt the assessment to the clinical context.

This aspect can be linked to the teaching competencies reported in the in-depth interviews. This reinforces the idea that evaluation requires integrated clinical-pedagogical knowledge, capable of balancing objective criteria with the flexibility demanded by the realities of healthcare services. The lack of systematic record-keeping and the reliance on external instruments constitute the main gaps identified.

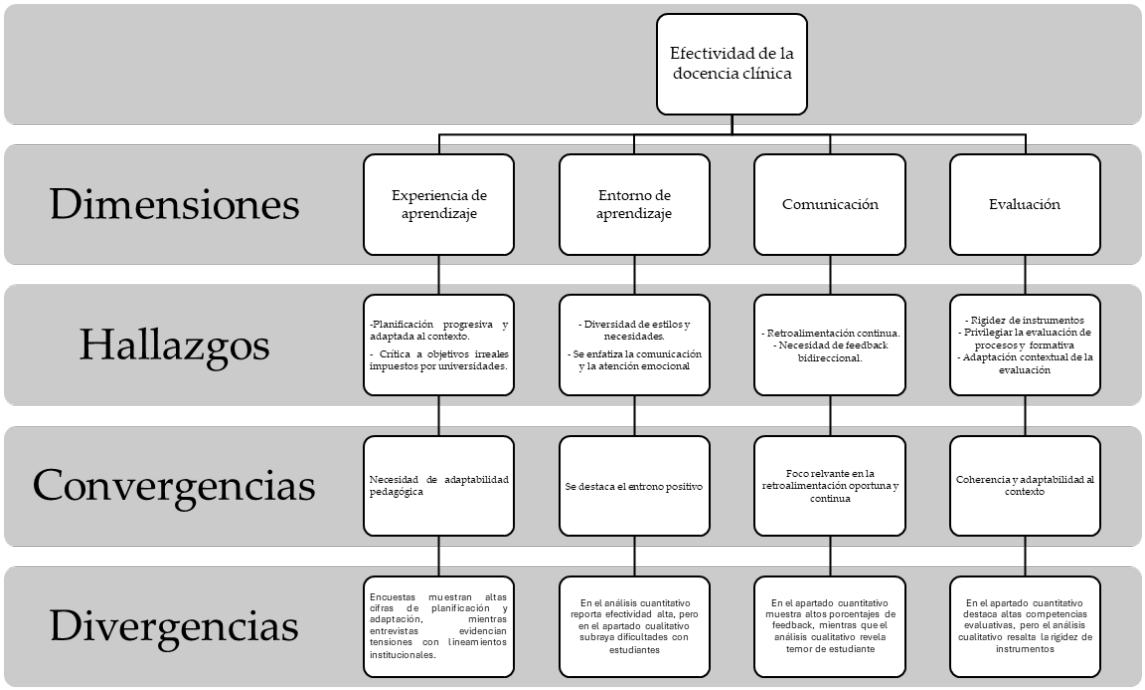

Figure 2. Synthetic analysis of quantitative and qualitative sections.

4. Discussion

The purpose of this research was to analyze the effectiveness of clinical teaching in relation to the evaluation of teaching skills and competencies considered relevant by clinical educators in rehabilitation science programs. The results reveal a high perception of effectiveness among clinical educators, especially regarding the planning and adaptation of experiences tailored to the individual needs of students, which aligns with Murphy's findings on the effectiveness of clinical teaching (20). However, 40% of the educators admit to facing challenges in structuring methodologies that integrate diverse teaching and learning approaches, which implies a limitation in their mastery of diversified pedagogical strategies. In this regard, Murphy (2014) implemented a workshop for physical therapy clinical educators at Columbia University. Among his conclusions, he highlighted the urgent need to identify a model that mitigates the gap between clinical educators and students, as well as its incorporation into teacher training processes. In this line of thought, the adoption of the experiential learning model proposed by Kolb is recommended as an integral part of the training curricula intended for clinical educators (20).

Costello (21), based on the development of experiential learning activities, reinforces the need to promote teaching schemes that foster progressive autonomy, beginning with observation, continuing with guided tasks, and culminating in clinical sessions (21). In line with the above, Sanders (23) argues in a study that clinical simulation activities prior to entering real-world practice allow for the development of experiential learning (22). On this point, several authors agree that universities can promote clinical simulation strategies to facilitate learning processes and the design of experiences, both for students and clinical instructors (23-25).

Regarding objective effectiveness, the findings of this study reveal broad consensus among participants concerning the planning of individualized activities in the three learning domains: cognitive or knowledge (88.8% of respondents), procedural or skills (93.4% of respondents), and attitudinal or being (88.8% of respondents). In this context, it is pertinent to mention the observations of Polyzois et al. (2010), who, in their study conducted at the Dublin Dental School and Hospital, examined the degree of agreement between students and supervisors regarding the quality of clinical teaching. These researchers identified divergent perceptions between the two groups and between different academic levels. Despite this, they concluded that there is limited agreement in the assessment of teaching effectiveness, although both groups generally rated it favorably, pointing out specific areas for improvement (26).

Regarding the promotion of direct practice (100% of interviewees) and the use of teaching tools, such as simulations and clinical cases (88.8% of interviewees), an active pedagogical approach is evident, which is considered a central axis of the situated learning process. In this process, communication and the capacity for self-directed learning are highlighted. While this aspect is mentioned by Murphy et al. (2008), their study also reflects on the perceptions of students and supervisors regarding the learning outcomes achieved. This study reveals significant discrepancies between what teachers report teaching and what students perceive they have learned. It concludes that these divergences reflect a lack of alignment between teaching and learning, highlighting the need for assessment mechanisms that integrate both perspectives (27).

The percentage of clinical instructors who strongly agreed with the clarity of the learning objectives (48.9% of respondents) suggests a need to improve the formulation of instructional expectations for students. In this case, according to Rogers (7), a descriptive study based on surveys administered to students and clinical supervisors analyzed perceptions of teaching skills and the pedagogical training needs of supervisors in practice settings. The findings showed agreement between both groups regarding the need to strengthen competencies related to planning learning experiences, providing feedback, adapting to diverse learning styles, and assessing according to objectives, suggesting that continuing education should focus on these areas (7). Complementing this, Sellberg (28) addresses the experiences of physiotherapy students during supervised clinical placements through a series of interviews conducted with a group of 13 students. The study results highlighted the importance of the supervisor's role, who, by creating a trusting environment, promotes student participation and autonomy. Furthermore, the study emphasizes the importance of the supervisor continuously using learning outcomes as a guide to foster coherence and the achievement of learning objectives. Finally, it concludes that both teachers and students value the importance of establishing a relationship of trust and encouraging the participation of all stakeholders in the process (28).

Regarding the clinical-educational environment considered in this study, it is perceived as a highly conducive space for the development of clinical and professional skills, as 97.8% of those interviewed consider it to be so. Therefore, it is important to consider Nordquist's assertion that the design of clinical learning spaces should respond to the requirements of competency-based

education, promoting environments that integrate pedagogical functionality and clinical practice (10). This is complemented by Bernal's considerations, who, like the present study using a mixed-methods model, concludes that the integrated and collaborative evaluation of clinical learning environments is a viable and effective strategy for promoting sustainable improvements in educational and healthcare quality (29). However, it is important to consider the dual role of the clinical educator in both patient education and care (30).

Despite the workload indicated by the evidence, 66.7% of the surveyed clinical instructors actively promote professionalism and ethical conduct, and believe that a well-planned environment can reduce student stress and anxiety. This aligns with the findings of a study that, using an exploratory-descriptive qualitative design with nursing students, analyzed the factors that facilitate or hinder clinical learning. The findings showed that acceptance and support from clinical staff foster safety and a sense of belonging, while belittling and peer violence hinder learning. The study concluded that an unfavorable clinical environment limits students' effective preparation and requires specific support policies (31).

Communication and empathy skills are highly valued, but the latter tends to be less considered because it is difficult to identify in a student (5), although this aspect can become evident when the supervisor acts as a role model regarding certain behaviors within a clinical setting (32). One hundred percent of the respondents in this study provide timely and constructive feedback, which is fundamental for meaningful learning and improved student performance. Likewise, 75.6% practice active listening, which fosters a climate of respect and collaboration. In this sense, it aligns with the findings of Smith et al. (2025), who highlight the importance of possessing skills related to good communication and feedback. Based on their focus group discussions, participants indicate that pedagogical flexibility is an essential element for managing emotionally charged situations. In this sense, in a mixed design study, which considers the participation of experts in clinical education in physiotherapy, three domains stand out: student-centered educator, evaluator, and professional model (34). This is still a challenge for the context in which the present study is carried out, so universities must play a leading role in providing the necessary support to implement new evaluation strategies, including resources and training for clinical educators.

In this respect, Tavares considers the term "learning conversations," which implies an integration of theoretical content and simulated or real practice, potentially contributing to the teacher-student relationship (35). Classic evidence, such as that reported by Epstein, explored the learning experience of medical students in family medicine practices, where key findings revealed that the most formative learning experiences were brief, problem-focused, collaborative, and fostered self-reflection (36). The literature mentions that effective clinical educators possess intrinsic attributes that facilitate student learning, along with organizational, assessment, and feedback skills (16). In this sense, the evaluation section of the results of the present study reflects a positive outlook regarding systematic observation, objectivity in judgments, and early problem-solving, with over 95% agreement. In this sense, Costello indicates that it is crucial to integrate the student as another worker, since this can have a direct impact on what the training institution expects in terms of the student's learning outcomes in the clinical context (21).

In accordance with the previous point in the quantitative analysis, 86.6% of respondents believe that assessment should take contextual factors into account, as it is the ability to transmit knowledge effectively and adapted to students' learning needs. In this respect, Chang states that a teacher must be able to transmit knowledge and assess it coherently (37), which allows the teacher to evaluate student performance fairly and accurately, also considering formative and summative assessments (38). The available evidence highlights formative assessment as a tool that focuses on providing continuous feedback to guide learning and improve clinical skills (41). Alongside this aspect, self-assessment appears as a metacognitive process that students should develop with the help of clinical

instructors (42). Based on this point, the inclusion of students in self-assessment is also noteworthy, with 93.3% of respondents in this study participating in it. This clearly demonstrates that self-assessment is a method that allows students to reflect on and critically evaluate their performance. Studies have reported, among their recommendations, that this practice can increase student participation in the learning process and improve academic performance (39-40). At this point, we are encouraged to reflect on assessment as a continuous process that should be developed through multiple low-risk evaluations over time to determine student competence. Among the advantages of this approach are reduced stress and a more accurate assessment of performance (43).

One of the relevant findings, based on the results and available evidence, is that clinical instructors express a need for training in this area, as well as in the design of hybrid rubrics that combine universal criteria and contextual adaptations. This situation highlights a lack of objective assessment of unperceived learning needs in continuing medical education programs, as Armson et al. (2020) reflect in their exploratory review (44). This is directly related to Galport's observation that educators are not always aware of their areas for improvement (45). Regarding the previous point, a relevant aspect to consider is that students do not always have the opportunity to provide feedback to their clinical instructors. The results indicate that students often refrain from making judgments about their supervisors for fear of retaliation, underscoring the importance of establishing anonymous and standardized feedback mechanisms. In this sense, as Boerboom et al. suggest... (2011), student evaluations of supervisors can help clinical teachers reflect on their teaching skills and find ways to improve their teaching (46).

It is important to note that there are limitations associated with cultural norms, interpersonal relationships, and the need for explicit consent to give constructive criticism; these factors pose a barrier to honest and useful feedback from students to teachers (47). Finally, the study has limitations regarding the sample size.

5. Conclusions

- Rehabilitation professionals have positive perceptions of the effectiveness of clinical teaching, highlighting strengths in the planning of experiences, the creation of conducive learning environments, and the provision of timely feedback. However, challenges persist, including limited student participation in goal setting, rigid assessment tools, and the difficulty in addressing the diverse needs of students based on their performance in real-world clinical settings.
- The results highlight the need for clinical teachers in rehabilitation science professions to receive pedagogical training, use student-centered methodologies, and be given greater autonomy in the design and application of contextualized assessments, taking into account, in turn, the particularity of these professions, which require generic skills such as effective communication.
- Among the main applications of this research, the focus on strengthening the training of clinical educators in the context of rehabilitation sciences stands out.

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Table 1. Section 1: Learning Experience.

	Item	1		2		3		4		5	
		n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Experience design	Aa1. I plan learning situations directed at the student, oriented towards generic and specific competencies for clinical experience.	-	-	-	-	3	6.7%	18	40%	24	53.3%
	Aa2. I organize teaching and learning methodologies that challenge both my teaching styles as a clinical teacher and the learning styles of the student.	-	-	1	2.2%	5	11.1%	21	46.7%	18	40%
	Aa9. I adapt learning experiences and opportunities to the student's needs.	-	-	1	2.2%	5	11.1%	12	26.7%	27	60%
	Aa10. I do not expect the student to collaborate in the planning of weekly learning goals.	7	15.6%	9	20%	19	42.2%	8	17.8%	2	4.4%
	Aa11. I am effective at individualizing and adapting learning experiences for students with performance difficulties (knowledge, skills, and attitudes).	-	-	1	2.2%	11	24.4%	28	62.2%	5	11.1%
	Aa12. I am effective at individualizing and adapting learning experiences for the high-achieving student (Knowledge, skills and attitudes).	-	-	1	2.2%	11	24.4%	25	55.6%	8	17.8%
Objective Effectiveness	Ab3. I propose individualized learning activities for learning experiences in the domain of knowledge or "knowledge".	-	-	1	2.2%	4	8.9%	20	44.4%	20	44.4%
	Ab4. I propose individualized learning activities for learning experiences in the domain of know-how or "skills".	-	-	-	-	3	6.7%	25	55.6%	17	37.8%
	Ab5. I propose individualized learning activities for learning experiences in the domain of knowing how to be or "attitudes".	-	-	-	-	5	11.1%	20	44.4%	20	44.4%
	Ab6. I develop learning objectives that represent what is expected of the student.	1	2.2%	1	2.2%	9	20%	12	26.7%	22	48.9%
	Ab7. I promote direct practice for the development of a new skill.	-	-	-	-	-	-	16	35.6%	29	64.4%
	Ab8. I use various teaching tools, such as patient simulations, role-playing games, or written clinical cases to improve each student's learning.	-	-	1	2.2%	4	8.9%	11	24.4%	29	64.4%

(n: numerical quantity; %: percentage quantity); Strongly disagree (1); Disagree (2); Moderately agree (3); Agree (4); Strongly agree (5)

Table 2. Section 2: Learning Environment.

	Item	1		2		3		4		5	
		n	%	n	%	n	%	n	%	n	%
Learning environment	Ba13. I intentionally provide a learning environment that promotes the development of the student's clinical skills.	-	-	-	-	1	2.2	21	46.7%	23	51.1%
	Ba14. I intentionally provide a learning environment that promotes the student's professional development.	-	-	-	-	1	2.2%	14	31.1%	30	66.7%
	Ba15. I consciously demonstrate behaviors consistent with the core values of professionalism in my daily practice (responsibility, altruism, compassion/care, excellence, integrity, professional duty and social responsibility).	-	-	-	-	1	2.2%	14	31.1%	30	66.7%
	Ba16. I ask questions of a relevant level to apply knowledge in decision making.	-	-	-	-	1	2.2%	15	33.3%	29	64.4%
	Ba17. I expect the student to provide evidence to support their clinical decision-making.	-	-	-	-	2	4.4%	19	42.2%	24	53.3%
	Ba18. I am effective in creating a learning environment for students with performance difficulties (Knowledge, skills and attitudes).	-	-	2	4.4%	5	11.1%	24	53.3%	14	31.1%
	Ba19. I am effective in creating a learning environment for high-achieving students (Knowledge, skills, attitudes).	-	-	1	2.2%	7	15.6%	21	46.7%	16	35.6%

(n: numerical quantity; %: percentage quantity); Strongly disagree (1); Disagree (2); Moderately agree (3); Agree (4); Strongly agree (5)

Table 3. Section 3: Communication.

	Item	1		2		3		4		5	
		n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Promoting feedback	Ca20. I facilitate communication with the student through active listening.	-	-	-	-	1	2.2%	10	22.2%	34	75.6%
	Ca21. I avoid communication that may be difficult or confrontations with the student.	1	2.2%	6	13.3%	3	6.7%	14	31.1%	21	46.7%
	Ca22. I provide timely feedback during clinical experience to encourage learning and/or modify behavior.	-	-	-	-	-	-	21	46.7%	24	53.3%
	Ca23. I provide constructive feedback during clinical experience to encourage learning and/or modify behavior.	-	-	-	-	-	-	15	33.3%	30	66.7%
	Ca24. I expect students to seek continuous feedback, even if it is not a requirement of the degree/university/institution.	-	-	1	2.2%	3	6.7%	19	42.2%	22	48.9%
	Ca25. I request assistance from the internship coordinator of the career/University/institution, as needed for problem resolution.	-	-	2	4.4%	8	17.8%	19	42.2%	16	35.6%
Inclusive communication	Cb26. I communicate with the academic coordinators of the career/University/Institution, regarding the student's performance (positive and negative).	1	2.2%	2	4.4%	4	8.9%	17	37.8%	21	46.7%
	Cb27. I am effective in communicating with the student with performance difficulties (Knowledge, skills and attitudes).	-	-	1	2.2%	6	13.3%	23	51.1%	15	33.3%
	Cb28. I am effective in communicating with the high-achieving student (Knowledge, skills and attitudes)	-	-	-	-	5	11.1%	21	46.7%	19	42.2%

(n: numerical quantity; %: percentage quantity); Strongly disagree (1); Disagree (2); Moderately agree (3); Agree (4); Strongly agree (5)

Table 4. Section 4: Evaluation.

	Item	1		2		3		4		5	
		n	%	n	%	n	%	n	%	n	%
Student assessment	Da29. I carefully observe the student to determine their individual strengths and areas for development.	-	-	-	-	1	2.2%	16	35.6%	28	62.2%
	Da30. My student assessments are based on first-hand information related to what is recommended by the career/University/Institution.	-	-	-	-	2	4.4%	16	35.6%	27	60%
	Da34. I hereby record the change in the student's behavioral performance.	-	-	-	-	3	6.7%	18	40%	24	53.3%
	Da35. I address problems as they arise with the student.	-	-	1	2.2%	1	2.2%	16	35.6%	27	60%
	Da41. I do not allow my personal biases to affect my evaluation of the student.	-	-	-	-	2	4.4%	15	33.3%	28	62.2%
	Da42. I involve the student in self-assessment as part of the performance analysis.	-	-	-	-	2	4.4%	15	33.3%	26	62.2%
	Da43. I consider all student factors (current performance level, academic curriculum, level of didactic preparation) when analyzing their behavior.	-	-	-	-	6	13.3	15	33.3%	24	53.3%
Domain identification	Dc36. I hereby document the strategies I implemented to remedy the problem.	-	-	8	17.8%	10	22.2%	13	28.9%	14	31.1%
	Dc37. I am effective in evaluating the effects of the implemented solution for the student with performance difficulties (Knowledge, skills and attitudes).	-	-	-	-	11	24.4%	19	42.2%	15	33.3%
	Dc38. I am effective in evaluating the effects of the implemented solution for the high-achieving student (Knowledge, skills, and attitudes).	-	-	1	2.2%	10	22.2%	21	46.7%	13	28.9%
	Dc39. I am effective at modifying the solution to meet the needs of the student with performance difficulties (Knowledge, skills and attitudes).	-	-	-	-	7	15.6%	27	60%	11	24.4%
	DC40. I am effective at modifying the solution to meet the needs of the exceptional student.	-	-	-	-	5	11.1%	26	57.85	14	31.1%
Monitoring of solutions	Dc36. I hereby document the strategies I implemented to remedy the problem.	-	-	8	17.8%	10	22.2%	13	28.9%	14	31.1%
	Dc37. I am effective in evaluating the effects of the implemented solution for the student with performance difficulties (Knowledge, skills and attitudes).	-	-	-	-	11	24.4%	19	42.2%	15	33.3%
	Dc38. I am effective in evaluating the effects of the implemented solution for the high-achieving student (Knowledge, skills, and attitudes).	-	-	1	2.2%	10	22.2%	21	46.7%	13	28.9%
	Dc39. I am effective at modifying the solution to meet the needs of the	-	-	-	-	7	15.6%	27	60%	11	24.4%

	student with performance difficulties (Knowledge, skills and attitudes).									
	DC40. I am effective at modifying the solution to meet the needs of the exceptional student.	-	-	-	-	5	11.1%	26	57.85	14	31.1%

(n: numerical quantity; %: percentage quantity); Strongly disagree (1); Disagree (2); Moderately agree (3); Agree (4); Strongly agree (5)