

Quality of Training and Interpersonal Environment in Medical Internships: A Descriptive-Correlational Study

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Abstract

The medical internship is the **crucial transition** from theory to practice, and this study aimed **to evaluate its quality** from the perspective of **420 graduates**, using a descriptive-correlational design that applied the Medical Internship Quality Scale (ECIM-37). The results revealed a **generally positive perception of quality** (mean of 4/5), with the **Learning Outcomes** (4.4) and **Satisfaction** (4.3) dimensions being the highest, confirming that the program is effective in consolidating competencies. However, the **Human Relations** dimension received the lowest rating (3.6), and alarmingly, **34%** of the interns reported having been **victims of harassment or mistreatment**, and **50%** had witnessed it. Furthermore, the perceived quality was significantly influenced by the type of **hospital setting**. In conclusion, although internships are successful in developing skills, **urgent intervention** in the interpersonal environment and supervision is required to eradicate bullying in hospital settings, ensuring a safe and respectful learning environment.

Keywords: Quality of Training, Medical Internships, harassment and mistreatment.

1. Introduction: The medical internship marks the **crucial transition from theory to clinical practice**, serving as a cornerstone in the training of future physicians. During this stage, students immerse themselves in the direct care of patients, participating in diagnoses and treatments under the supervision of experienced physicians. This **experiential learning** model (D. Kolb 1984, Ying-Dong, et al., 2023) allows them to learn in real time, receive direct feedback, and adapt to the complex realities of medicine, which often demand teamwork and decision-making under pressure. The quality of this phase is vital, as it directly impacts the physician's professional readiness for independent practice (WHO, 2005).

The internship is a **comprehensive learning experience**. Students apply clinical knowledge in a real-world setting, participating in procedures, surgeries, and direct patient care. This immersion fosters constant reflection on their actions through case discussions and evaluations, strengthening their self-assessment and continuous learning. Professional supervision ensures immediate feedback, tailored to each situation, which enhances the development of crucial social and emotional skills for medicine, such as **empathy and communication**, while honing the critical thinking skills necessary for real-world environments.

However, a deficient internship carries **serious consequences**, ranging from the training of inadequately prepared professionals to compromised patient care. The quality of this stage is multifaceted, influenced by the **intern's prior educational background**, their **emotional well-being**, and the **program's structure**. Although research highlights the high clinical competence of many internship graduates, it also reveals that they face **considerable levels of stress and emotional challenges** during their training. In essence, while the internship is valued by most students, significant challenges remain that must be addressed.

There are **diverse perspectives on how to address this issue**, including those of educational institutions, the physicians responsible for training, and, crucially, the students themselves during their internships.

Evaluating the quality of medical internships from the **interns' perspective** is essential to understanding the impact of this stage on their professional development and their preparation for clinical practice. This analysis allows for the identification of both strengths and areas for improvement in key aspects of the program, such as the **learning context, supervision, training content, and interpersonal relationships**, with the aim of continuously optimizing the educational experience. Furthermore, interns' satisfaction with their learning environment not only influences their performance but also their well-being and motivation—crucial factors in developing competent and compassionate physicians.

This research focuses on evaluating the **quality of medical internships from the perspective of the interns themselves**, with the aim of identifying strengths and areas for improvement in their training. The quality of a medical internship refers to the extent to which a program succeeds in producing **competent and well-prepared professionals**. It involves a comprehensive evaluation of all aspects of the training process: from physical and academic conditions to clinical experience and personal development.

The undergraduate internship constitutes an **essential form of service learning**, where students apply theoretical knowledge to the actual care of patients under supervision, developing crucial clinical skills, assuming progressive responsibilities, and experiencing diverse areas of medicine through rotations. Thus, the internship not only consolidates their learning in a practical environment but also allows them to provide a **valuable service to the community**. In this regard, assessing the quality of medical internships is a crucial aspect of healthcare professional training (García-Montalvo et al., 2020). By evaluating and improving the quality of internship programs, we contribute to training more competent doctors and ensuring excellent medical care.

Therefore, it is essential to understand how interns perceive their training experience. In this study, we will explore various dimensions of internship quality, including: the **learning context, interpersonal relationships, training content and methodology, supervision and support, learning outcomes** (clinical and soft skills), and **overall satisfaction**.

In this regard, **the research aims to:**

- (1) **Evaluate the quality of the medical internship** from the interns' perspective, considering the dimensions of learning context, interpersonal relationships, training content and methodology, supervision and support, learning outcomes (clinical, attitudinal, and soft skills), and overall satisfaction.
- (2) **Analyze the influence of sociodemographic and academic variables** (sex, type of hospital site, grade point average, reason for choosing the site) on the perceived quality of the internship.

And it aims to answer the following **hypotheses**:

- H_G: The perceived **quality of the medical internship** is significantly influenced **by the conditions** of the learning context, the quality of interpersonal relationships, the content and methodology of training, the supervision and support received, the learning outcomes (clinical and ethical), the development of soft skills, and the overall level of satisfaction.
- H₁: There is a positive relationship between a favorable learning context (facilities, resources, organizational climate, work-learning balance) and the intern's overall level of satisfaction.
- H₂: A better perception of interpersonal relationships (respect, prevention of harassment, reporting channels) is associated with higher levels of well-being and satisfaction among interns.
- H₃: Students who report an enriching experience in terms of content and methodology (rotations, teaching, courses, organization) have a more positive perception of the quality of the internship.
- H₄: Effective clinical supervision and institutional support are positively associated with learning outcomes (perceptions of acquired competencies and professional preparedness).
- H₅: Students who report greater achievement in learning outcomes also demonstrate greater satisfaction with their training.
- H₆: The development of clinical competencies and soft skills (empathy, active listening, effective communication, shared decision-making, emotional management) is positively related to the perceived quality of the internship.

The **quality of a medical internship** is defined by its ability to provide comprehensive training that encompasses both theoretical knowledge and practical skills. This includes the development of professional competencies (diagnosis, treatment, prevention, communication, teamwork, and decision-making) and the promotion of lifelong learning through academic activities and research. Furthermore, it must create a safe and stimulating environment that prepares physicians to adapt to the constant changes and challenges in the healthcare field.

Dimensions of Medical Internship Quality: Considering the multidimensional nature of this concept, the key dimensions included in this research, considered as a system, are:

- The *learning context*, which encompasses both the physical environment and the work environment. This includes the facilities, equipment, and resources available for training, as well as the work climate, interpersonal relationships, and organizational culture that foster an environment conducive to learning.
- *Human relations*: This dimension evaluates the quality and safety of the interpersonal environment during the internship. It focuses on the student's perception of collaboration and mutual support with residents, specialists, and peers. It also explores the culture of respect and the prevention of harassment, as well as the existence of effective channels for reporting mistreatment or incidents.
- *Content and Methodology*: This dimension focuses on the quality of medical training, encompassing the academic program (theoretical and practical content, and teaching resources), the organization of clinical rotations for a comprehensive experience, and the formative and summative assessment processes used to measure performance and guide learning.
- *Supervision and Support*: This dimension evaluates the quality and frequency of guidance provided by tutors and specialists. It also considers institutional support, including mentoring, academic advising, and administrative resources, to ensure that interns receive the necessary support to develop their professional competencies in a safe and effective environment.

- *Learning Outcomes*: This dimension focuses on the acquisition of essential theoretical knowledge and clinical skills, as well as the development of additional competencies such as research, teaching, and management. It also considers the development of ethical attitudes and values, with the goal of training well-rounded physicians prepared for the challenges of current practice.
- *Satisfaction*: This dimension evaluates interns' perceptions in two main aspects: overall satisfaction with the program (organization, resources, and content) and the quality of interpersonal relationships with tutors and colleagues. Both factors are crucial for measuring the program's effectiveness and guiding future improvements.

The quality of medical internships has been the subject of extensive research, approached from multiple perspectives to understand its complexity. The literature review identified several key dimensions that directly influence the interns' training experience, which are detailed below:

Context and Learning Environment

The learning environment is a critical factor in medical training. Interns value environments with a clear organizational structure, opportunities for hands-on learning, and good integration into clinical teams (Fan et al., 2020). Conversely, a hostile, overloaded, or indifferent environment increases stress and limits learning (García, 2021). According to Vives and Hamui (2023), medical education must adapt to social needs, effectively merging the educational and workspaces.

Studies such as that by Hamui-Sutton et al. (2023) at UNAM confirm that competitive and tense environments are associated with restrictive learning. They observed that first-year residents perceived the environments as more aggressive, a perception that decreased over time. Furthermore, factors such as sexual orientation can influence the perception of discrimination. The literature suggests that improving the training process requires continuous evaluation with quality indicators, integration of the educational environment, and inclusion of the students' voice (Dornan et al. 2007; García, 2021; Peralta, 2023; Rodríguez Álvarez, 2021)

Human Relations and Supervision

The quality of human relations and supervision are fundamental for the acquisition of competencies and the satisfaction of interns. Detailed feedback and faculty support are essential for professional development (Fan et al. 2020; Kirkov et al. 2022). A study in Saudi medical schools (Al Kuwaiti & Subbarayalu, 2020) found that intern satisfaction is significantly influenced by relationships with superiors and the quality of supervision.

However, exposure to mistreatment, disregard for schedules, and performing tasks without adequate supervision are persistent problems. A study by Fuentes Unzueta et al. (2015) at the National Polytechnic Institute of Mexico revealed that 25% of interns were subjected to harassment, 35% to mistreatment, and 15% to sexual harassment. These findings demonstrate the critical need to improve the interpersonal environment and ensure safe and respectful settings. Effective supervision and emotional support are crucial to mitigating burnout and improving the quality of life for interns (Lin et al., 2019; Zhao et al., 2021). Sobowale et al. (2014), as well as Ruvalcaba Pedroza, H. et al., (2021), Bormuth S. et al., (2021) and Feng, T. & Natarayan S. (2024), highlight that emotional well-being and a supportive environment are fundamental in the learning environment for medical students. Their research, which addresses depression, suicidal ideation, burnout, abuse, and stress, underscores how these factors directly impact the mental health of future physicians.

Content and Learning Outcomes

Internship programs should offer comprehensive training. Those that combine clinical competencies with communication and interpersonal skills have been shown to achieve better results in intern performance and satisfaction (Chen et al., 2025; Xu et al., 2019). However, some studies suggest that training is not always homogeneous; Peralta (2023) and Taype Rondán (2016) point out that factors such as excessive workload, lack of supervision, and resource scarcity result in uneven training, and Valdez-Nava et al. (2014), in studying students' expectations regarding clinical training, identified ambivalent feelings such as nervousness, worry, and enthusiasm.

In this regard, the school must assume a more active role in the planning and evaluation of the internship, establishing standards for hospital sites and promoting structured feedback, in line with Competency-Based Medical Education (CBME) (Frank et al. 2010; Harden, 2007; Ríos Cortázar, 2023). A study by Cancino Marentes et al. (2011) in Mexico showed that, although the learning of clinical skills increases, interns perceive a low willingness of tutors to teach.

Regarding learning outcomes, a study by Abarca de Hoyos et al. (2021) in family medicine demonstrated a significant improvement in interns' competencies. However, in childbirth care, Ávila Juárez et al. (2020) found that interns' skills were generally insufficient, although those who rotated through Gynecology and Obstetrics showed a significantly higher level. This highlights the importance of specialized rotations and clinical simulation for the development of specific competencies. For their part, Cobos-Aguilar et al. (2019), who evaluated the clinical aptitude of interns at different hospital sites in Nuevo León, provided objective data on the acquisition of skills and competencies.

Satisfaction and Associated Factors

Intern satisfaction is closely linked to a safe environment, recognition of their role, and constructive feedback (Fan et al., 2020; Kirkov et al., 2022; Zhao et al., 2021). O'Shea Cuevas Gabriel J. et al. (2020) found that most students reported being satisfied or very satisfied with their medical internship. However, a study at SBMU in Iran (Heidarnia & Yasin, 2013) revealed that interns were not satisfied in any of the dimensions evaluated.

Regarding demographic factors, the literature shows mixed results. Naidoo, Wyk, and Adhikari (2018) found that variables such as urban/rural origin and year of internship influence the perception of quality. Other studies, such as that by Lin et al. (2019), suggest that workload and burnout have a more significant impact on interns' quality of life than traditional demographic factors. Miranda-Ackerman et al. (2019) reported a higher prevalence of burnout in the second semester of the internship, with higher scores for

exhaustion and depersonalization for those in public hospitals. The quality of mentorship and the institutional environment are also considered more decisive factors than gender or age in intern satisfaction (Fauji & Ruspitasari, 2025; Riveros et al., 2023). In this review, the literature in Spanish and other languages agrees that the quality of internships depends on the interaction of structural, pedagogical, and human factors. It emphasizes the need to strengthen supervision, communication, continuous evaluation, and mutual respect to guarantee excellent training that prepares future physicians for the challenges of current practice.

2. Method

This study, with a non-experimental, cross-sectional, and descriptive-correlational design, aimed to evaluate the quality of medical internships from the perspective of the students who completed them. The study, with a 99% confidence level, included 420 medical internship graduates from the 2024-02 to 2025-01 academic cycles. The participants were 146 men and 274 women. Regarding hospital settings, 149 interns completed their internships in private hospitals and 280 in public hospitals.

Data collection was carried out using the Medical Internship Quality Scale (ECIM-37), an instrument specifically designed for this study (See Appendix 1). This instrument consists of 37 items that explore six dimensions using a five-point Likert scale, in addition to collecting sociodemographic and academic information from the participants. The previous pilot test demonstrated a high internal consistency of the instrument, evidenced by an overall Cronbach's Alpha of 0.94, and acceptable values for its dimensions: Learning Context (0.84), Human Relations (0.73), Content and Methodology (0.76), Clinical Supervision and Support (0.61), Learning Outcomes (0.94) and Satisfaction (0.80).

Microsoft Excel was used for the descriptive analysis of perceptions (frequencies, percentages, means, and standard deviations). Statgraphics 18-X64 software was used for inferential statistics (correlations, ANOVA tests, and regression) to examine the relationships between quality dimensions and variables such as academic performance, type of hospital setting, and intern satisfaction. Additionally, a content analysis was performed on the responses to the open-ended question regarding aspects of the internship that could be improved.

3 . Results

In order to answer the research objectives and hypotheses, the following results are presented:

a) Regarding the objectives:

(1) To Evaluate the Quality of the Medical Internship: Table 1 presents a detailed breakdown of the Quality of the Medical Internship from the perspective of the interns, showing the means (PROM) and standard deviations (SD) for each of the 37 questions grouped into six key dimensions: **Learning Context, Human Relations, Content and Methodology, Clinical Supervision and Support, Learning Outcomes, and Satisfaction.** The overall rating for the quality of the internship was **4.0 with a standard deviation of 0.59**, suggesting a mostly positive and consistent perception among the students.

Key Findings by Dimension:

- Learning Outcomes received the highest average score (4.4), indicating that interns generally feel well-prepared and have acquired the necessary skills for medical practice. Questions such as "I have acquired the necessary skills to conduct a complete medical history and an appropriate and relevant physical examination" (4.5) and "I have strengthened my ability to establish a relationship of trust and respect with patients" (4.6) showed high ratings.
- Satisfaction also showed a high average score (4.3), reflecting overall positive satisfaction with the program.
- Learning Context received an average score of 3.9, with questions about facilities and access to resources showing strong ratings (4.1 and 3.8, respectively).
- Content and Methodology averaged 3.8, highlighting that clinical rotations provided a comprehensive overview (4.3).
- Clinical Supervision and Support had a mean score of 3.7, with tutor feedback being highly rated (3.9).
- Human Relations was the dimension with the lowest mean score (3.6), suggesting areas for improvement. Specifically, the questions about having been a victim of harassment or mistreatment (3.5) and having witnessed harassment or mistreatment (3.0), along with the perception of safe reporting channels (3.3), indicate significant challenges in this area. The higher standard deviations for these questions (1.49, 1.51, and 1.44, respectively) also suggest greater variability in the experiences reported by interns.

While interns positively value their learning and overall satisfaction, **Table 1** highlights the need to improve the Human Relations environment to ensure a safer and harassment-free environment during medical internships.

Table 1	PROM	Ds
QUALITY OF MEDICAL INTERNSHIP	4.0	0.59
A) LEARNING CONTEXT	3.9	0.86
1. The physical facilities (hospitals, clinics) where I completed my internship were suitable for my training..	4.1	1.00
2. Access to the resources needed to provide healthcare services was adequate (medical equipment, medications, instruments).	3.8	1.21
3. The work environment was conducive to learning and professional development.	3.9	1.10

4. The workload during the internship was balanced, allowing me to acquire the necessary skills.	3.8	1.16
5. The values, beliefs, norms, and practices observed at my hospital were conducive to my learning (organizational climate).	4.0	1.09
B) HUMAN RELATIONES	3.6	0.94
6. The atmosphere in the hospital fostered respect and prevention of harassment among medical staff, including interns.	3.7	1.25
7. I have felt safe and supported by my fellow inmates in the face of possible situations of mistreatment or injustice.	4.2	1.07
8.- I was a victim of harassment or mistreatment (verbal, psychological or physical) by fellow interns or superiors (resident doctors, specialists, nursing staff, or others) during my internship.	3.5	1.49
9.- I have witnessed situations of harassment or mistreatment (verbal, psychological or physical) towards other interns or colleagues by superiors (resident doctors, specialists, nursing staff or others) during the internship.	3.0	1.51
10.- If I had suffered or witnessed harassment/abuse, I felt that there were safe and effective channels to report the situation.	3.3	1.44
C) CONTENT AND METHODOLOGY	3.8	0.78
11. The study programs and teaching resources provided to me were suitable for my training.	3.8	1.21
12. I participated in research or teaching activities during my internship that increased my clinical skills.	3.4	1.40
13. Rotating through clinical services allowed me to acquire a comprehensive view of medical practice.	4.3	0.89
14. I had access to refresher courses or workshops that complemented my training.	3.9	1.21
15. The shifts I completed during my internship complemented my medical training and my future professional practice.	4.1	1.00
16. The working day is balanced with the learning acquired.	3.5	1.30
17. I believe that the duration of professional practice in hospital areas of the internship should decrease and alternate with rotations in non-hospital areas (e.g., family medicine, public health).	3.3	1.42
D) CLINICAL SUPERVISION AND SUPPORT	3.7	0.85
18. The advice and support during the internship provided by the UAG internship coordination was timely and relevant.	3.3	1.35
19. The support provided by the Teaching Department of the host hospital was adequate.	3.6	1.34
20. I received constructive feedback from my tutors on my performance.	3.9	1.17
21. I submitted a theoretical assessment of my knowledge at the end of each rotation or at the end of the internship.	4.2	1.13
E) LEARNING OUTCOMES	4.4	0.55
22. The evaluation of my performance received from the institution and my tutors in the different services reflects the skills acquired in each rotation.	4.0	1.06
23. I feel prepared to face the responsibilities assigned to me in social service.	4.1	0.87
24. I have acquired the necessary skills to conduct a complete medical history and a proper and relevant physical examination.	4.5	0.71
25. I feel confident in making clinical decisions, providing treatment, and performing basic procedures.	4.1	0.82
26. I recognize and can apply the principles of health promotion and disease prevention.	4.3	0.71
27. I consider myself capable of making decisions based on moral and ethical principles.	4.5	0.65
28. I am prepared to practice general medicine satisfactorily or to be able to continue in a postgraduate program.	4.4	0.69
29. During my internship, I have developed my ability to actively listen to patients and understand their concerns beyond the pathology.	4.6	0.61
30. I feel more empathetic to the emotions and experiences of patients and their families.	4.5	0.71
31. I have learned to communicate complex medical information to patients in a clear, understandable, and sensitive manner.	4.5	0.64
32. The internship has provided me with opportunities to develop a collaborative approach to decision-making with patients, taking into account their values and preferences.	4.5	0.69

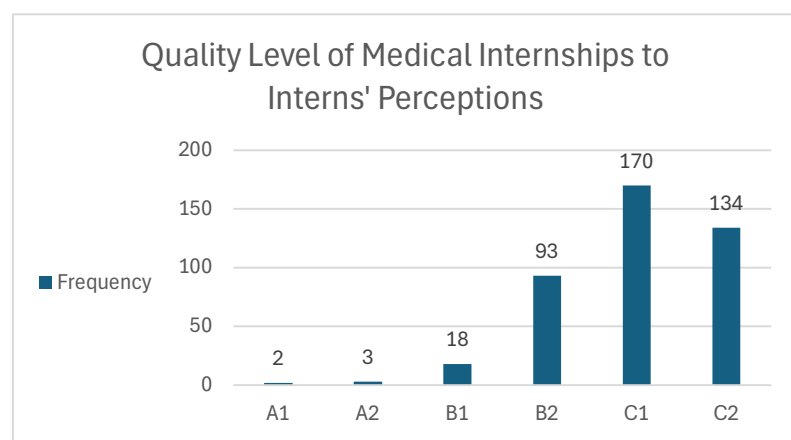
33. I have strengthened my ability to establish a relationship of trust and respect with patients.	4.6	0.61
34. I feel more competent to handle emotionally difficult situations with patients and their families in a professional and compassionate manner.	4.5	0.68
F) SATISFACTION		4.3 0.74
35. My relationship with the resident physicians and specialists was positive and collaborative.	4.4	0.82
36. The internship contributed significantly to my professional growth.	4.5	0.73
37. I am generally satisfied with the internship program.	4.1	1.04

Source: Own elaboration

Figure 1 shows a high rating of the medical internship quality among the 420 interns surveyed, with a significant concentration at the higher perception levels. The results show that the majority are grouped in categories **C1 (170 students)** and **C2 (134 students)**, followed by a considerable number in **B2 (93 students)**. In contrast, the lower quality categories, such as **B1 (18 students)**, **A1 (2 students)**, and **A2 (3 students)**, have minimal representation.

This distribution pattern suggests that the internship training experience is perceived as predominantly positive or high, which aligns with the characteristics of a "Model of Excellence" that includes a favorable learning environment, respectful relationships, high-level training, constant supervision, and solid results in the acquisition of competencies. Most interns report an experience that, in general, meets these standards, despite the areas for improvement identified (See Appendices 2 and 8).

Figure 1



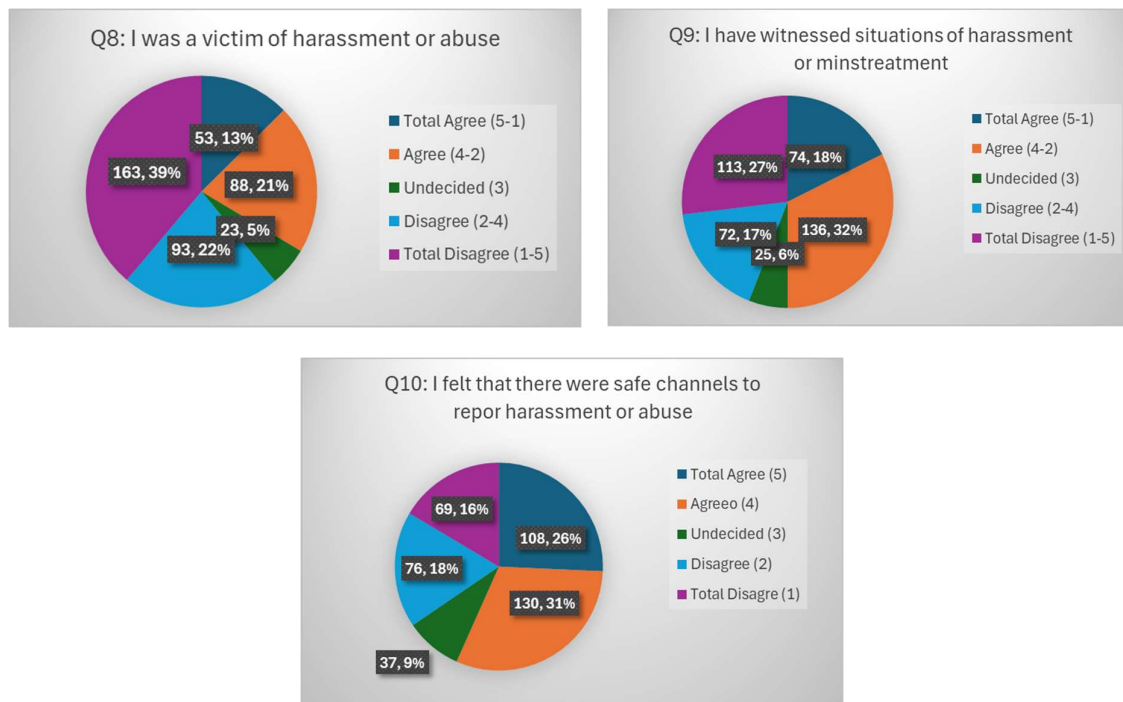
Source: Own elaboration

Figure 2: Presents the responses to the questions related to Harassment and Abuse (Physical, Psychological, and Social). The first image shows the responses of 420 inmates to question 8, "I was a victim of harassment or abuse," broken down by frequency and percentage. A total of 34% of the inmates (141 in total) reported having been victims of harassment or abuse, with 13% "Strongly Agree" and 21% "Agree." In contrast, the majority, 61% (256 in total), indicated that they had not been victims, distributed as 22% "Disagree" and 39% "Strongly Disagree." A small percentage of 5% (23 inmates) were undecided.

The second image presents the responses to question 9, "I have witnessed situations of harassment or mistreatment," detailing the frequency and percentage of each option. A considerable 50% of the inmates (210 in total) stated that they had witnessed harassment or mistreatment, with 18% "Strongly Agree" and 32% "Agree." In contrast, 44% (185 inmates) indicated that they had not witnessed it, distributed as 17% "Disagree" and 27% "Strongly Disagree." A small percentage of 6% (25 inmates) declared themselves undecided.

The image below presents the inmates' responses to question 10: "If you have suffered or witnessed harassment/abuse, I felt that there were safe and effective channels to report the situation," broken down by frequency and percentage. A total of 57% of the inmates (238 in total) perceived that there were safe and effective channels to report situations of harassment or abuse, with 26% "Strongly Agree" and 31% "Agree." On the other hand, 34% (145 inmates) felt that such channels did not exist, with 18% "Disagree" and 16% "Strongly Disagree." Nine percent of the respondents (37 inmates) were undecided.

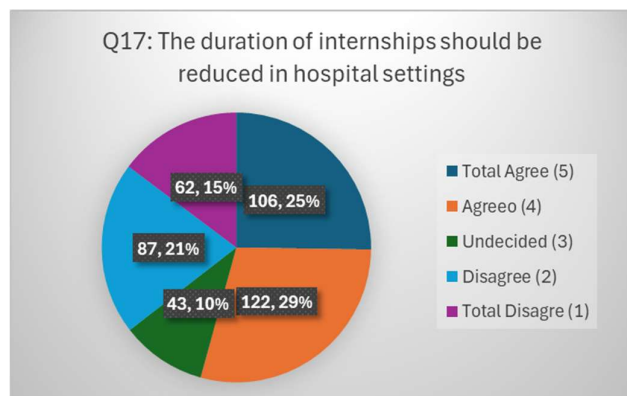
Figure 2



Source: Own elaboration

Figure 3 shows the interns' opinions on the duration of their hospital-based professional practice and its alternation with non-hospital rotations. 54% of the interns (228 in total) agree with reducing the duration of the hospital-based practice and alternating it with rotations in non-hospital settings, with 25% "Strongly Agree" and 29% "Agree." On the other hand, 36% (149 interns) disagree with this proposal, with 21% "Disagreeing" and 15% "Strongly Disagreeing." The remaining 10% (43 interns) were undecided.

Figure 3



Source: Own elaboration

- (2) **To identify the factors influencing the quality of the medical internship**, a two-stage statistical analysis was performed. Initially, a multifactorial ANOVA was calculated to determine whether sex, hospital site type, and student grade point average (GPA) had a statistically significant relationship with internship quality. Then, a one-way ANOVA was used to delve deeper and detect specific differences within subgroups of these variables.

Table 2 of the multifactorial ANOVA details the individual contribution of each variable to the total variability, using Type III sum of squares to isolate their effects. The p-values determine the statistical significance of each factor. A p-value less than 0.05 indicates a statistically significant effect with 95% confidence. In this analysis, **hospital site type (p-value = 0.0321)** and **GPA (p-value = 0.0000)** were significantly related to the **quality of the medical internship**.

Table 2**Multifactorial ANOVA for Quality of Medical Internship - Type III Sum of Squares**

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-value
MAIN EFFECTS					
A: SEX	0.836905	1	0.836905	2.62	0.1065
B: T-HOSPITAL	1.47931	1	1.47931	4.63	0.0321
C: PROM	11.3555	3	3.78518	11.84	0.0000
RESIDUAL	132.378	414	0.319753		
TOTAL (CORRECTED)	145.58	419			

All F-ratios are based on the mean square of the residual error.

Source: Own elaboration

Table 3 shows that the p-value from the one-way ANOVA confirms that the variable "Type of hospital site" has a significant relationship with the quality of the medical internship. When comparing the subgroups of the variable in the multiple range tests, significant differences were identified between public and private hospitals.

Table 3
ANOVA for Quality of Medical Internship by Hospital Type

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-value
Between groups	1.40876	1	1.40876	4.08	0.0439
Intra groups	144.171	418	0.344907		
Total (Corr.)	145.58	419			

Multiple Range Tests. Method: 95.0 percent LSD

T-HOSPITAL	Cases	Average	Homogeneous Grups
Public	280	3.97857	X
Private	140	4.10143	X
Contrast	Sig.	Difference	+/- Boundaries
Private - Public	*	0.122857	0.119493

* indicates a significant difference.

Source: Own elaboration

Table 4, which presents a one-way ANOVA, confirms with a p-value of 0.0000 a significant relationship between grade point average and the quality of the medical internship. Multiple range tests revealed significant differences between the subgroups of averages: 7.5–8.4 and 8.5–9.4, as well as between 7.5–8.4 and 9.5–10.0.

Table 4
Simple ANOVA for Medical Internship Quality by Grade Point Average

Source	Sum of Squares	Df	Mean Square	Reason-F	P-Value
Between groups	11.0221	3	3.67403	11.36	0.0000
Intra groups	134.558	416	0.323456		
Total (Corr.)	145.58	419			

Multi-range testing

Method: 95.0 percentage LSD

PROM	Cases	Average	Homogeneous groups
From 7.5 to 8.4	86	3.72093	X
From 8.5 to 9.5	299	4.07692	X
From 9.5 to 10.0	34	4.24706	X
From 6.0 to 7.4	1	4.8	XX

Contraste	Sig.	Difference	+/- Limits
From 6.0 to 7.4 - From 7.5 to 8.4		1.07907	1.12443
From 6.0 to 7.4 - From 8.5 to 9.4		0.723077	1.11982
From 6.0 to 7.4 - From 9.5 to 10.0		0.552941	1.13427
From 7.5 to 8.4 - From 8.5 to 9.4	*	-0.355993	0.136794
From 7.5 to 8.4 - From 9.5 to 10.0	*	-0.526129	0.226477
From 8.5 to 9.5 - From 9.5 to 10.0		-0.170136	0.202334

* indicates a significant difference.

Source: Own elaboration.

Table 5 shows a statistically significant difference in the experience of harassment or mistreatment by sex between men and women (P-value = 0.0235). This means that, with 95% confidence, the observed difference is not due to chance. The mean indicates that men reported a higher incidence of harassment or mistreatment than women in this specific question.

Table 5
Simple ANOVA for question 8: I was a victim of harassment or abuse because of SEX

Source	Sum of Squares	Df	Mean Square	Razón-F	Valor-P
Between groups	11.2854	1	11.2854	5.17	0.0235
Intra groups	913.179	418	2.18464		
Total (Corr.)	924.464	419			

Multiple Range Tests for RH-VICTIM-8 by SEX

Method: 95.0 percentage LSD			
SEX	Cases	Average	Homogeneous
Woman	274	3.41606	X
Man	146	3.76027	X
Contraste	Sig.	Difference	+/- Limits
Man - Woman	*	0.344216	0.297695

* indicates a significant difference.

Source: Own elaboration.

(3) Regarding the qualitative analysis of the suggestions: Based on the analysis and classification of the suggestions provided by the interns, the following results can be drawn regarding areas for improvement in the program: (See Appendix 3)

- The pressing need to improve Human Relations and Supervision: Mistreatment, harassment, and disrespect from superiors (attending physicians and residents) and teaching staff are recurring and serious problems. Interns demand a culture of respect, equitable treatment, and the elimination of hierarchies that foster mistreatment. There is an urgent need to implement clear protocols for reporting harassment and workplace violence, as well as conducting psychological evaluations of staff and applying corrective measures. Furthermore, the lack of guidance, support, and effective supervision from both clinical tutors and teaching supervisors is a widespread complaint that directly impacts the quality of training.
- A significant problem is the disorganization and lack of timely communication from the school and the teaching departments in the hospitals. The suggestions repeatedly point to the need for:
 - *More efficient planning:* Providing information further in advance regarding procedures, payments, and placement selection, especially for interns from outside the state.
 - *Placement allocation:* Opening more placements in Jalisco and in nearby locations, as well as ensuring that the selected sites meet minimum quality and safety standards.
 - *Institutional support:* There is a strong perception that the school "abandons" its students during their internships. Increased follow-up and effective support channels are requested.
- *Overwork and poor physical conditions:* The working and living conditions of the inmates represent a critical point of dissatisfaction. Working hours are excessively long (exceeding 24 or 36 hours) and the workload, which often includes administrative or errand-run tasks, is disproportionate. This generates fatigue, decreases productivity, hinders studying for exams, and, in extreme cases, jeopardizes the safety of patients and the inmates themselves. The suggestions emphasize the need to reduce working hours, prohibit punishments involving guard duty, and improve the conditions of the rest and dining areas.
- *The lack of a structured and high-quality academic program:* Although the "Learning Outcomes" dimension received high marks in the study, the suggestions reveal deficiencies in "Content and Methodology." Interns request a strengthening of the academic and practical components through:
 - More classes and clinical sessions: Taught by trained staff (residents and attending physicians), rather than by interns themselves.
 - Greater focus on practice: Offering more workshops, didactic courses, and opportunities to perform clinical procedures.
 - More comprehensive rotations: Ensuring that promised rotations are fulfilled and expanding options in services of interest, such as elective rotations.

As can be seen, the suggestions point to an internship that, although perceived as a good experience for learning skills, needs a profound restructuring in its administrative management, a real commitment to improving working conditions and a cultural change to eradicate mistreatment, in order to ensure the well-being and comprehensive training of future doctors.

b) Regarding the hypotheses:

(1) For the General Hypothesis (HG): Pearson correlations between the different dimensions that make up the construct: Quality of Medical Internship, based on a sample of 420 data pairs. These coefficients, which range from -1 to +1, indicate the strength and direction of the linear relationship between each pair of dimensions.

In each cell of the table, in addition to the correlation coefficient, a p-value is included. This value determines the statistical significance of the correlation: a very low p-value (specifically, 0.0000 for all correlations shown) indicates that all observed linear relationships are highly statistically significant.

This suggests that all dimensions of the medical internship (CONTEXT, RELATIONSHIPS, CONTENT, SUPERVISION, LEARNING, and SATISFACTION) are strongly interrelated, and in turn, each has a positive and significant relationship with the overall perception of QUALITY-MEDICAL-INTERNSHIP. For example, "Satisfaction" and "Content" show the highest correlations with overall "Quality-Medical Internship" (0.8411 and 0.8393, respectively), while "Relationships" and "Learning" have slightly lower, but still strong, correlations (0.7157 and 0.7998, respectively).

Furthermore, Table 6 shows the results of fitting a multiple linear regression model to describe the relationship between Quality-Medical Internship and six independent variables, in this case, the dimensions that comprise the construct. The equation of the fitted model is:

$$\text{C-INT-MED} = 0.0124871 + 0.13607 \cdot \text{C-AP-PROM} + 0.132393 \cdot \text{RH-PROM} + 0.191668 \cdot \text{C-MET-PROM} + 0.108842 \cdot \text{SUP-PROM} + 0.349721 \cdot \text{R-AP-PROM} + 0.0786083 \cdot \text{SAT-PROM}.$$

Since the P-value in the ANOVA table is less than 0.05, there is a statistically significant relationship between the variables with a confidence level of 95.0%.

The R-squared statistic indicates that the fitted model explains 99.7232% of the variability in the Medical Internship Quality construct. The adjusted R-squared statistic, which is more appropriate for comparing models with different numbers of independent variables, is 99.7191%. The standard error of the estimate shows that the standard deviation of the residuals is 0.031238. This value can be used to construct limits for new observations by selecting the Reports option from the text menu. The mean absolute error (MAE) of 0.0261645 is the average value of the residuals. The Durbin-Watson (DW) statistic examines the residuals to determine if there is any significant correlation based on the order in which they appear in the data file. Since the p-value is greater than 0.05, there is no indication of serial autocorrelation in the residuals at a 95.0% confidence level.

To determine if the model can be simplified, note that the highest p-value for the independent variables is 0.0000, which corresponds to C-AP-AVROM. Consequently, it is not necessary to remove any variables from the model.

Table 6
Multiple Linear Regression: Quality of Medical Internship vs. its 6 Dimensions

Variance Analysis					
Source	Sum of Squares	Df	Mean Square	F-Ratio	P-value
Model	145.177	6	24.1961	24795.91	0.0000
Residual	0.40301	413	0.000975812		
Total (Corr.)	145.58	419			
R-squared	99.7232 percent				
R-squared (adjusted for df)	99.7191 percent				
Standard error of the study	0.031238				
Mean absolute error	0.0261645				
Durbin-Watson Statistician	2.23556 (P=0.9922)				
Autocorrelation of lag residuals 1	= -0.118707				

Source: Own elaboration

- (2) **For hypothesis 1**, simple regression (Table 7) demonstrated a statistically significant relationship between Satisfaction and Learning Context ($p < 0.05$). The equation of the fitted model, $\text{SATISFACTION} = 2.14943 + 0.561222 \times \text{CONTEXT}$, explains 41.85% of the variability in satisfaction ($R\text{-squared} = 0.418499$), with a correlation coefficient of 0.646915 indicating a moderately strong relationship. The standard error of the estimate was 0.566564. The Durbin-Watson value ($p > 0.05$) confirmed the absence of serial autocorrelation in the residuals, thus validating the reliability of the model.

Table 7
Simple Regression: Satisfaction vs. Learning Context

Variance Analysis					
Source	Sum of Squares	Df	Mean Square	F-Ratio	P-value
Model	96.5648	1	96.5648	300.83	0.0000
Residual	134.176	418	0.320995		
Total (Corr.)	230.741	419			
Correlation Coefficient	0.646915				
R-squared	41.8499 percent				
R-squared (adjusted for df) =	41.7108 percent				
st standard error	0.566564				
Mean absolute error	0.406722				
Durbin-Watson Statistics	1.94456 (P=0.2853)				
Autocorrelation of lag residuals 1	0.0266546				

Source: Own elaboration

- (3) **For hypothesis 2**, linear regression revealed a positive and statistically significant relationship between satisfaction and human relations ($p < 0.05$). The fitted model, $\text{SATISFACTION} = 2.75609 + 0.446282 \times \text{RELATIONSHIPS}$, explains 32.15% of the variability in satisfaction ($R\text{-squared} = 0.3215$), with a correlation coefficient of 0.56701 indicating a moderately strong relationship. The standard error of the estimate is 0.611997, and the Durbin-Watson value ($p > 0.05$) confirms the absence of serial autocorrelation in the residuals, thus validating the predictive model (see Table 8).

Table 8
Simple Regression: SATISFACTION vs. Human RELATIONSHIPS

Variance Analysis					
Source	Sum of Squares	Df	Mean Square	F-Ratio	P-value
Model	74.1832	1	74.1832	198.06	0.0000
Residual	156.558	418	0.37454		

Total (Corr.)	230.741	419
Correlation Coefficient	0.56701	
R-squared	32.15 percent	
R-squared (adjusted for df)	31.9877 percent	
Standard error of the study	0.611997	
Mean absolute error	0.442774	
Durbin-Watson Statistics	1.88064 (P= 0.1109)	
Autocorrelation of lag residuals 1	0.0559736	

Fuente: Elaboración propia

- (4) For hypothesis 3, linear regression (Table 9) demonstrated a statistically significant relationship between the Quality of the Medical Internship (QUALITY-INT-MED) and the Content of the training ($p < 0.05$). The equation of the fitted model, $\text{QUALITY-INT-MED} = 1.64359 + 0.632981 \times \text{CONTENT}$, explains 70.45% of the variability in the quality of the internship ($R\text{-Square} = 0.704465$), indicating a strong relationship with a correlation coefficient of 0.839324. The standard error of the estimate is 0.320824. However, the Durbin-Watson statistic ($p < 0.05$) suggests possible serial autocorrelation in the residuals, so it is recommended to plot the residuals versus the row number to identify patterns.

Table 9
Simple Regression – QUALITY of MEDICAL INTERNSHIP vs. CONTENT AND METHODOLOGY

Variance Analysis					
Source	Sum of Squares	Df	Mean Square	F-Ratio	P-value
Model	102.556	1	102.556	996.39	0.0000
Residual	43.0239	418	0.102928		
Total (Corr.)	145.58	419			
Correlation Coefficient	0.839324				
R-squared	70.4465 percent				
R-squared (adjusted for df)	70.3758 percent				
Standard error of the study	0.320824				
Mean absolute error	0.245995				
Durbin-Watson Statistics	1.77544 (P= 0.0106)				
Autocorrelation of lag residuals 1	0.111763				

Source: Own elaboration

- (5) For hypothesis 4, linear regression (Table 10) indicated a statistically significant relationship between Learning and Supervision ($p < 0.05$). The fitted model, $\text{LEARNING} = 3.09536 + 0.343205 \times \text{SUPERVISION}$, explains 28.05% of the variability in learning ($R\text{-squared} = 0.280499$), with a correlation coefficient of 0.529622, suggesting a moderately strong relationship. The standard error of the estimate was 0.467529. However, the Durbin-Watson value ($p < 0.05$) revealed possible serial autocorrelation in the residuals; therefore, plotting the residuals is recommended to identify any patterns.

Table 10
Simple Regression – Learning Outcomes vs. Clinical Supervision and Support

Variance Analysis					
Source	Suma de Cuadrados	Df	Mean Square	F-Ratio	P-value
Model	35.62	1	35.62	162.96	0.0000
Residual	91.368	418	0.218584		
Total (Corr.)	126.988	419			
Correlation Coefficient	0.529622				
R-squared	28.0499 percent				
R-squared (adjusted for df)	27.8778 percent				
Standard error of the study	0.467529				
Mean absolute error	0.354849				
Durbin-Watson Statistics	1.78417 (P= 0.0134)				
Autocorrelation of lag residuals 1	0.106952				

Source: Own elaboration

- (6) For hypothesis 5, linear regression (Table 11) demonstrated a statistically significant relationship between Satisfaction and Learning ($p < 0.05$). The equation of the fitted model, $\text{SATISFACTION} = 0.103963 + 0.96578 \times \text{LEARNING}$, explains 51.33% of the variability in satisfaction ($R\text{-squared} = 0.513328$), indicating a strong relationship with a correlation coefficient of 0.716469. The standard error of the estimate was 0.518313. The Durbin-Watson value ($p > 0.05$) confirmed the absence of serial autocorrelation in the residuals, validating the reliability of the model.

Table 11
Simple Regression - SATISFACTION vs. LEARNING Outcomes

Variance Analysis					
Source	Sum of Squares	Df	Mean Square	F-Ratio	P-value
Model	118.446	1	118.446	440.89	0.0000
Residual	112.295	418	0.268649		
Total (Corr.)	230.741	419			
Correlation Coefficient	0.716469				
R-squared	51.3328 percent				
R-squared (adjusted for df)	51.2163 percent				
Standard error of the study	0.518313				
Mean absolute error	0.355304				
Durbin-Watson Statistics	1.98336 (P= 0.4324)				
Autocorrelation of lag residuals 1	0.00241055				

Source: Own elaboration

- (7) For hypothesis 6, simple regression (Table 12) demonstrated a statistically significant relationship between Medical Internship Quality and Learning Outcomes ($p < 0.05$). The fitted model, $\text{QUALITY-MED-INT} = 0.261867 + 0.856376 \times \text{LEARNING}$, explains 63.97% of the variability in internship quality ($R\text{-squared} = 0.639721$), indicating a strong relationship with a correlation coefficient of 0.799826. The standard error of the estimate was 0.354227. The Durbin-Watson value ($p > 0.05$) confirmed the absence of serial autocorrelation in the residuals, thus validating the reliability of the model.

Table 12
Simple Regression – QUALITY of MEDICAL INTERNSHIP vs. LEARNING Outcomes
Variance Analysis

Source	Sum of Squares	Df	Mean Square	F-Ratio	P-value
Model	93.1306	1	93.1306	742.21	0.0000
Residual	52.4494	418	0.125477		
Total (Corr.)	145.58	419			
Correlation Coefficient	0.799826				
R-squared	63.9721 percent				
R-squared (adjusted for df)	63.8859 percent				
Standard error of the study	0.354227				
Mean absolute error	0.272907				
Durbin-Watson Statistics	1.92978 ($P=0.2362$)				
Autocorrelation of lag residuals 1	0.0308743				

Source: Own elaboration

4. Discussion, Similarities and Discrepancies

Discussion:

The discussion of the study results in relation to the reviewed literature reveals a complex and multifaceted panorama regarding the quality of medical internships, where findings that reaffirm existing knowledge are intertwined with others that suggest new dynamics and areas of specific attention.

Similarities: The study consistently validates the main postulates of the literature, confirming that the **quality of internships is a multidimensional concept** based on the **learning context, effective supervision, and human relations**. The interns' high valuation of the facilities and resources aligns with the importance the literature places on a favorable physical and working environment (Fan et al., 2020). Crucially, the study confirms the persistent and alarming problem of mistreatment in training settings, with an incidence comparable to that reported by Fuentes Unzueta, Manrique Nava, and Domínguez Márquez (2015), demonstrating that, despite decades of research, this remains a systemic challenge. Furthermore, the research corroborates the importance of supervision, demonstrating that adequate guidance is associated with a high perception of competency acquisition, a result consistent with studies such as that by Abarca de Hoyos et al. (2021). Finally, the correlation between satisfaction and a positive learning environment, as well as the difference in the perception of quality between public and private venues, reinforce the findings of Miranda-Ackerman et al. (2019) and other authors.

Discrepancies: The discrepancies identified in the study are particularly valuable, as they highlight specific nuances and areas for improvement within the program. One notable finding is that, although inmates report a high incidence of mistreatment, a majority perceive the existence of **reporting channels**. This apparent contradiction suggests a gap between the formal support infrastructure and its actual effectiveness in eradicating the problem. On the other hand, while the literature emphasizes the low level of faculty commitment to teaching (Cancino Marentes, Fernández Argüelles, and Arbesú Michelena, 2011), the accompanying study suggests that the low valuation of research and teaching activities may be more closely linked to the **program's structure** than to excessive workload, an important consideration for curriculum design. Furthermore, the study highlights a significant divergence in the perception of institutional support, showing that direct clinical supervision is highly valued, but support from the head of teaching and university coordination receives a lower perception—a topic that has been little explored in the literature. Finally, a finding that challenges documented trends is that **men report a higher incidence of harassment or mistreatment than women**, a finding that warrants further analysis and could reveal specific gender dynamics in this context.

5. Conclusions:

The results of this study offer a comprehensive view of the quality of the medical internship, highlighting both its strengths and areas for improvement.

- (1) **Overall positive perception with emphasis on learning and satisfaction:** The overall quality of the medical internship is perceived as **mostly positive and consistent**, with an average rating of 4.0 (on a scale of 1 to 5) and a standard deviation of 0.59. **The Learning Outcomes (mean of 4.4) and Satisfaction (mean of 4.3)** dimensions received the highest ratings. This suggests that interns feel the program provides them with the necessary clinical skills, adequately prepares them for social service, and significantly contributes to their professional development, resulting in an overall rewarding experience. The high concentration of interns at levels C1 (Very Good) and C2 (Excellent) in the perceived quality distribution (170 and 134 interns, respectively) reinforces this conclusion.
- (2) **Areas needing improvement, primarily in interpersonal relationships:** While the dimensions of Learning Context (3.9), Content and Methodology (3.8), and Clinical Supervision and Support (3.7) also received positive ratings, the interpersonal relationships dimension (mean of 3.6) was consistently the lowest and most variable (SD: 0.94). This finding is crucial, as 34% of

interns reported being victims of harassment or mistreatment, and an alarming 50% witnessed such situations. Although 57% perceive the existence of safe channels for reporting, the high incidence of harassment underscores a critical need for intervention in the interpersonal relationships environment to ensure a safe and respectful atmosphere.

- (3) **Factors influencing perceived quality:** Multivariate analysis revealed that the **type of hospital site and the student's grade point average (GPA)** are factors that significantly influence the perception of internship quality ($p < 0.05$). Private hospital sites were associated with a significantly higher perceived quality than public ones. Similarly, interns with higher GPAs tended to perceive higher quality in the internship, with significant differences between GPA ranges (e.g., 7.5–8.4 vs. 8.5–9.4 and 7.5–8.4 vs. 9.5–10.0). Interestingly, men reported a higher incidence of harassment or mistreatment than women.
- (4) **Interrelation between quality dimensions:** All dimensions of the internship (Context, Human Relations, Content and Methodology, Clinical Supervision and Support, Learning Outcomes, and Satisfaction) are **highly interrelated and contribute positively to the overall perception of the Quality of the Medical Internship** (all Pearson correlations were statistically significant with $p=0.0000$). **Satisfaction and Content** showed the strongest correlations with overall quality (0.84 and 0.83, respectively), while **Human Relations** (0.72) and **Supervision** (0.79) showed strong, but slightly lower, correlations.
- (5) **Specific influence of dimensions on satisfaction and learning:** Linear regression models confirmed the significant influence of several dimensions:
 - **Satisfaction** is significantly influenced by the **Learning Context** (explaining 41.85% of its variability) and **Human Relations** (explaining 32.15% of its variability).
 - **Learning Outcomes** are significantly and positively related to **Supervision** (explaining 28.05% of their variability).
 - **Satisfaction** also has a significant and strong relationship with **Learning Outcomes** (explaining 51.33% of their variability).
 - The **Quality of the Medical Internship** is significantly explained by the **Training Content** (explaining 70.45% of its variability) and **Learning Outcomes** (explaining 63.97% of its variability).

6. Suggestions for Improvement:

To optimize the quality of the medical internship, a comprehensive strategy based on four main pillars is proposed:

- (1) *Human Relations and Effective Supervision:* It is essential to strengthen respect and academic integrity through performance evaluation systems that consider the roles of all participants and more rigorous supervision protocols, guaranteeing support and preventing harassment or mistreatment (See Appendix 2). To strengthen academic integrity and foster an environment of respect and professionalism, it is suggested that Appendices 3 and 4 be considered.
- (2) *Specific Interventions:* Given that the perception of quality varies among sites and student profiles, differentiated support programs should be implemented for public and private hospitals, as well as strategies adapted to the academic needs of each group, promoting equitable training.
- (3) *Strengthening existing achievements:* In addition to addressing weaknesses, it is important to preserve and enhance successful practices and learning outcomes valued by interns, in order to maintain the program's satisfaction and prestige.
- (4) *Continuous feedback and evaluation:* It is recommended to establish a system of ongoing monitoring to detect and correct problems in real time. It is also suggested that the internship be periodically evaluated using the Medical Internship Quality Scale (ECIM-37). See Appendix 1.

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Annex 1
Medical Internship Quality Scale (ECIM-37)

Student data:

1. Sex: Male () Female ()
2. Hospital where the internship was completed: Public () Privated ()
 Headquarters name: _____
3. Career average: 6-7.4 () 7.5-8.4 () 8.5 a 9.4 () 9.5 a 10 ()
4. Select the main reason for choosing the hospital location:
 Clinical practice () Recommendation () Preparation for the National Examination for Medical Residency Applicants NEMRA ()
 Otro: _____

Instructions:

To help you improve your education, please evaluate the quality of your medical internship. To do this, please rate your experience on a scale of 1 to 5, where 1 = Strongly Disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, and 5 = Strongly Agree.

A. Learning context:	1	2	3	4	5
1. The physical facilities (hospitals, clinics) where I did my internship were adequate for my training.					
2. Access to resources to provide health services was adequate (medical equipment, medicines, instruments, etc.).					
3. The work environment was conducive to learning and professional development.					
4. The workload during the internship was balanced, allowing me to acquire the necessary skills.					
5. The values, beliefs, norms, and practices observed at my hospital were conducive to my learning (organizational climate).					
B. Human relations:					
6. The atmosphere in the hospital fostered respect and the prevention of harassment among medical staff, including interns.					
7. I felt safe and supported by my fellow inmates in the face of possible situations of mistreatment or injustice.					
8. I was a victim of harassment or mistreatment (verbal, psychological or physical) by fellow interns or superiors (resident doctors, specialists, nursing staff, or others) during my internship.					
9. I have witnessed situations of harassment or mistreatment (verbal, psychological or physical) towards other interns or colleagues by superiors (resident doctors, specialists, nursing staff or others) during the internship.					
10. If I had suffered or witnessed harassment/abuse, I felt that there were safe and effective channels to report the situation.					
C. Content and Methodology of Medical Training:					
11. The study programs and teaching resources provided to me were suitable for my training.					
12. I participated in research or teaching activities during my internship that increased my clinical skills.					
13. Rotating through clinical services allowed me to gain a comprehensive view of medical practice.					
14. I had access to refresher courses or workshops that complemented my training.					
15. The shifts I completed during my internship complemented my medical training and my future professional practice.					
16. The working day is balanced with the learning acquired.					
17. I believe that the duration of professional practice in hospital areas of the internship should be reduced and alternated with rotations in non-hospital areas (e.g., family medicine, public health).					
D. Clinical Supervision and Support:					
18. The advice and support provided during the internship by the UAG internship coordination team was timely and relevant.					
19. The support provided by the Teaching Department of the host hospital was adequate.					
20. I received constructive feedback from my tutors on my performance.					
21. I submitted a theoretical assessment of my knowledge at the end of each rotation or at the end of the internship.					
E. Learning outcomes:					
22. The evaluation of my performance received from the institution and my tutors in the different services reflects the skills acquired in each rotation.					
23. I feel prepared to face the responsibilities assigned to me in social service.					
24. I have acquired the necessary skills to perform a complete medical history and an appropriate and relevant physical examination.					
25. I feel confident in making clinical decisions, providing treatment, and performing basic procedures.					
26. I recognize and can apply the principles of health promotion and disease prevention.					
27. I consider myself capable of making decisions based on moral and ethical principles.					
28. I am prepared to practice general medicine satisfactorily or be able to continue in a postgraduate program.					
Soft skills					
29. During my internship, I developed my ability to actively listen to patients and understand their concerns beyond the pathology.					
30. I feel more empathetic to the emotions and experiences of patients and their families.					
31. I have learned to communicate complex medical information to patients in a clear, understandable, and sensitive manner.					
32. The internship has provided me with opportunities to develop a collaborative approach to decision-making with patients, taking into account their values and preferences.					
33. I have strengthened my ability to establish a relationship of trust and respect with patients.					
34. I feel more competent to handle emotionally difficult situations with patients and their families in a professional and humane manner.					
F. Satisfaction:					
35. My relationship with interns, resident physicians, and specialists was positive and collaborative.					
36. The internship contributed significantly to my professional growth.					
37. I am generally satisfied with the boarding program.					
What aspects of the internship program do you think should be improved during the internship?					

Note: The scale is reversed in questions 8 and 9.
Source: Author's own elaboration

Annex 2
Medical Internship Supervision Instrument

Addressed to: University Academic Coordinators.

Objective: To supervise and guarantee the quality of the medical internship training process in hospital settings.

1. General Data

- Name of the academic coordinator: _____
- Date of visit: _____
- Hospital site: _____
- Name of the person responsible for teaching at the site: _____

2. Checklist for monitoring

Instructions: Mark with a (✓) if the criterion is met and with a (✗) if it is not met. Add comments where necessary.

Dimensions and Item to be evaluated	✓ / ✗	Observations
A. Environment Conditions:		
1. Hospital facilities are suitable for training.		
2. There is sufficient access to clinical supplies and medical tools.		
3. Biosafety regulations are respected.		
B. Supervision and teaching:		
4. There are clinical tutors assigned per service.		
5. Periodic feedback is provided to interns.		
6. Tutors fulfill teaching schedules and functions.		
7. There are regularly scheduled academic sessions.		
C. Academic activity and clinical practice:		
8. The inmate participates in case discussions.		
9. The hospital facilitates complete rotations through all established services.		
10. The inmate gives presentations or participates in research.		
D. Human relations and work environment:		
11. The hospital environment promotes respect and the prevention of any form of harassment or mistreatment (verbal, psychological, physical) among all staff, including interns.		
12. Inmates perceive a supportive and safe environment from fellow inmates and superiors.		
13. Safe and effective channels exist and are known for reporting situations of harassment or abuse, and it is observed that these reports are followed up on.		
14. Effective communication and collaborative work are promoted among interns, residents, and specialists.		
E. Learning outcomes and competencies:		
15. The intern's performance evaluation (by the institution and tutors) appears to adequately reflect the clinical competencies and skills acquired in each rotation.		
16. The program helps interns acquire the basic skills to perform a complete medical history, relevant physical examination, and initial clinical decision-making.		
17. It is observed that inmates develop skills for health promotion and disease prevention.		
18. The program fosters in interns the ability to make decisions based on moral and ethical principles.		
19. The internship appears to be preparing students for social service and/or for successful continuation in a graduate program.		
20. Interns demonstrate the development of communication skills (active listening, empathy, clear communication) with patients and families.		
21. Interns are perceived to strengthen their ability to establish a relationship of trust and respect with patients.		
D. Evaluation and monitoring:		
22. Theoretical/practical evaluation instruments are applied regularly to measure the intern's progress.		
23. Mechanisms exist for channeling inmate complaints.		
24. Inmate performance is recorded in periodic reports:		
E. Inmate Well-being:		
25. A respectful and supportive work environment is fostered for inmates.		
3. General Rating		
• Are the academic objectives of the boarding school being met at this location? ☐ Yes ☐ Partially ☐ No • Which areas require immediate improvement? _____ • What good practices are observed at the headquarters? _____		
Recommendations:		
4. Signature of the Academic Coordinator		
Signature: _____ Date: _____		

Source: Own elaboration.

Annex 3
Guide to Pedagogical Practices and Academic Integrity for the Medical Internship

As future physicians and members of this internship program's learning community, we are proud to be part of a tradition rooted in **Truth and Goodness**. During this crucial period of your training, the practice of virtues such as **collaboration, respect, professional responsibility, and integrity** are even more fundamental to your individual success, the well-being of your patients, and the collective prestige of our profession.

This document sets forth the principles that will guide your conduct and interactions during your medical internship, creating a positive, equitable, and safe clinical learning environment for all.

Fundamental Principles of the Medical Internship

1. *Professional and Human Respect*: We are committed to treating patients, families, colleagues, nursing staff, faculty, and the entire healthcare team with courtesy, consideration, and profound respect, valuing the diversity of their roles, opinions, and experiences. We recognize the inherent dignity of every person.
2. *Clinical and Academic Integrity*: We will act with the utmost honesty, transparency, and ethics in all our clinical, academic, and administrative activities. This implies avoiding any form of fraud, plagiarism, deception, or manipulation, both in medical documentation and in evaluations.
3. *Proactive and Responsible Participation*: We will strive to actively participate in all internship activities, contributing our ideas, questions, and reflections in a constructive manner. We will take assigned responsibilities seriously and proactively seek learning opportunities.
4. *Ethical Interprofessional Collaboration*: When working as part of the healthcare team, we will collaborate fairly and equitably, ensuring that each member contributes meaningfully to patient care and respecting the ideas and roles of other professionals. We will foster a team-oriented work environment.
5. *Individual and Professional Responsibility*: We will take responsibility for our own learning, the quality of care we provide under supervision, the completion of assigned tasks, and adherence to deadlines. We will seek help and guidance when needed, recognizing our limitations.

Commitments in the Medical Internship Program

1. *Regarding professional and human respect*:
 - We will listen attentively to patients, family members, and colleagues, without interrupting or making derogatory judgments.
 - We will express our opinions and concerns respectfully and constructively, even when we disagree with a clinical decision or management plan.
 - We will be considerate of patients' feelings and emotional needs, as well as the workload and well-being of our colleagues and healthcare staff.
 - We will avoid any form of discrimination, harassment, ridicule, or mistreatment of any person in the clinical or academic setting. We will promote a safe and supportive environment.
 - We will maintain the confidentiality of patient information, respecting their privacy at all times.
2. *Regarding clinical and academic integrity*:
 - We will perform all clinical tasks and academic assessments honestly and diligently, unless explicitly instructed to collaborate.
 - We will not copy or allow others to copy our work, whether in reports, presentations, or assessments.
 - We will truthfully and accurately document clinical information in patient records, avoiding any falsification or alteration.
 - We will properly cite all sources of information used in academic work, presentations, or publications.
 - We will not use unauthorized materials during assessments or procedures.
 - We will inform our supervisors or the program coordinator if we observe any conduct that violates these principles of integrity, ensuring an ethical environment.
3. *Regarding proactive and responsible participation*:
 - We will attend internship rotations and activities on time and prepared, having reviewed relevant information about patients or topics to be covered.
 - We will pay attention during rounds, explanations, and clinical discussions, asking relevant questions to clarify doubts and deepen our understanding.
 - We will actively participate in the care of supervised patients, in case discussions, and in any learning opportunities that arise.
 - We will share our ideas and perspectives constructively, contributing to the critical analysis of cases.
4. *Regarding Ethical Interprofessional Collaboration*:
 - We will work as a team with medical, nursing, and other healthcare professionals, distributing tasks equitably when applicable.
 - We will respect the ideas and contributions of all members of the healthcare team, recognizing the importance of each role in the patient's comprehensive care.
 - We will communicate clearly and effectively with all team members, both verbally and in writing.
 - We will ensure that our actions and decisions are made by consensus when necessary and reflect a commitment to the best possible patient care.
5. *Regarding Individual and Professional Responsibility*:
 - We will review the program materials, clinical guidelines, and assigned tasks, completing them on time and to the highest possible standard.

- *We will proactively seek help and feedback from our supervisors, tutors, and colleagues if we have difficulties or questions about procedures, diagnoses, or management.*
- *We will be proactive in our learning, seeking additional opportunities to practice skills, read about cases, or participate in training activities.*
- *We will reflect on our own progress, identifying areas for improvement and striving for the continuous development of our professional and personal skills.*

By entering and participating in this medical internship program, I accept and agree to abide by the principles and commitments set forth in this document. I understand that my conduct directly contributes to the learning environment, the quality of patient care, and the institution's reputation. I will strive to maintain the highest standards of respect, professionalism, and integrity in all my actions.

Violation of these principles may result in consequences determined by the internship coordinator and the hospital and university academic authorities, in accordance with institutional policies. These consequences may include verbal or written reprimands, repeating rotations, grade reductions, temporary or permanent suspension from the program, and notification to the appropriate academic authorities.

Student's Name and Signature

Source: Own elaboration

Annex 4
Guide to Pedagogical Practices and Academic Integrity for
Heads of Teaching in Medical Internships

Dear Head of Teaching:

You are fundamental pillars in the training of the next generation of physicians. Your role goes beyond the transmission of knowledge; you are **mentors, role models, and guardians of the highest ethical and professional standards**. The medical internship program is a critical period where future professionals consolidate their skills, but also where their character and commitment to **Truth, Goodness, and the integrity** of medicine are forged.

This document establishes the principles and commitments that will guide your conduct and your interactions with the medical interns, ensuring a clinical and academic learning environment that fosters growth, respect, and excellence. We recognize your invaluable work and thank you for your commitment to quality education.

Fundamental Principles for the Head of Teaching:

1. *Exemplary Role Model and Mentorship:* We are committed to being a constant example of professionalism, medical ethics, compassion, and the pursuit of knowledge. We will act as mentors, guiding and supporting the holistic development of interns.
2. *Fostering a Safe and Respectful Learning Environment:* We will create and maintain an environment where interns feel safe to learn, ask questions, and participate without fear of humiliation, harassment, or discrimination. We will promote mutual respect among all members of the healthcare team.
3. *Competent and Constructive Supervision:* We will provide appropriate and timely supervision, ensuring patient safety and the progressive development of interns' clinical skills. We will offer clear, specific, and growth-oriented feedback.
4. *Promotion of Academic and Clinical Integrity:* We will maintain the highest standards of honesty, transparency, and rigor in all teaching and assessment activities. We will foster integrity in clinical documentation and research.
5. *Commitment to Holistic Training:* We will go beyond the purely technical, cultivating in interns critical thinking, empathy, communication skills, teamwork, and a deep understanding of the physician's ethical and social responsibility.

Commitments in the Training of Medical Interns

1. *Regarding being a role model and exemplary mentor:*
 - We will act professionally at all times, both clinically and in interpersonal interactions, demonstrating punctuality, commitment, and a positive attitude.
 - We will demonstrate compassion and respect toward patients and their families, teaching by example the importance of human-centered medicine.
 - We will demonstrate a continuous pursuit of knowledge, staying up-to-date and sharing our learning with the interns.
 - We will establish clear expectations regarding the performance, conduct, and participation of the interns from the beginning of each rotation.
2. *Regarding the promotion of a safe and respectful learning environment:*
 - We will foster an environment where questions are welcome, and mistakes are seen as opportunities for learning, not humiliation.
 - We will intervene actively and immediately in any instance of harassment, discrimination, ridicule, or mistreatment of interns or any member of the healthcare team.
 - We will promote a culture of respect among all levels and professions within the clinical setting, modeling teamwork and effective communication.
 - We will be available to listen to interns' concerns and offer support when needed.
3. *Regarding Competent and Constructive Supervision:*
 - We will provide direct and gradual supervision, ensuring that interns perform procedures and make decisions appropriate to their level of competence and always under proper guidance.
 - We will offer regular, constructive, and specific feedback, both formal and informal, highlighting strengths and areas for improvement, always with a focus on growth.
 - We will assign tasks and responsibilities appropriate to the interns' level of training, ensuring they contribute significantly to patient care without being overburdened.
 - We will fairly and transparently evaluate interns' performance based on clear and objective criteria, providing justification for the ratings.
4. *Regarding the Promotion of Academic and Clinical Integrity:*
 - We will reinforce the importance of accurate and truthful clinical documentation, modeling impeccable practices in the preparation of medical records.
 - We will instill intellectual honesty in research and in the presentation of clinical cases, always citing sources and giving due credit.
 - We will not tolerate or participate in acts of fraud or deception, either in the academic or clinical setting.
 - We will be accessible and proactive in discussing ethical and clinical dilemmas with interns, promoting their development of moral reasoning.
5. *Regarding the Commitment to Comprehensive Training:*
 - We will encourage critical reflection on clinical cases, urging interns to move beyond memorization and integrate knowledge.
 - We will foster the development of empathy and effective communication skills with patients, families, and the healthcare team.
 - We will promote self-care and well-being among interns, acknowledging the challenges of internships and supporting them in maintaining a healthy balance.
 - We will expose interns to diverse areas of medical practice, including, when possible, rotations in primary care or community health, to provide a broader perspective on healthcare needs.

Your dedication to these principles and commitments will not only elevate the quality of the internship program but also inspire future physicians to embody the highest values of their profession. Your leadership is essential in developing competent, ethical, and compassionate professionals.

We deeply appreciate your commitment to educational excellence and integrity in medical training.

Sincerely,

The Medical Internship Program Coordination
Universidad Autónoma de Guadalajara

Source: Own elaboration