Advances in Medical Education and Practice

Dovepress
Taylor & Francis Group

Open Access Full Text Article

ORIGINAL RESEARCH

Structural Determinants of Health-Related Quality of Life in Internal Medicine Residents: An Ethnographic Study

Luis Felipe Higuita-Gutiérrez[1], Jaiberth Antonio Cardona-Arias[2]

[1]Facultad de Medicina, Universidad Cooperativa de Colombia, Medellín, Colombia; [2]Escuela de Microbiología, Universidad de Antioquia, Medellín, Colombia

Correspondence: Luis Felipe Higuita-Gutiérrez, Email Luis.higuita@campusucc.edu.co

Introduction: There is limited qualitative evidence in the global medical literature regarding the quality of life of medical residents.
Objective: To understand the meanings of health-related quality of life (HRQoL) among internal medicine residents in Medellín, Colombia, in 2024.
Methods: An ethnographic study was conducted with 12 internal medicine residents selected through theoretical sampling. In-depth interviews, participant observation, and field diaries were employed. The hermeneutic analysis was based on coding, categorization, conceptual sorting, and semantic relationships. Methodological rigor was ensured through reflexivity, triangulation, credibility, and auditability.
Results: The concept of HRQoL encompasses both physical and mental health aspects, as well as the structural elements of the training process that emerged as determinants of HRQoL. These factors were grouped into three categories: meanings of HRQoL among residents which includes subcategories such as family life, leisure, income, and recognition; individual, institutional, and healthcare system determinants affecting HRQoL, and the impacts of residency associated with lifestyle changes, including poor sleep quality, high consumption of energy drinks, smoking, poor nutrition, sedentary behavior, and worsened physical and mental health.
Conclusion: The HRQoL of medical residents is negatively affected by healthcare system structures, such as limited residency positions, faculty profiles, high tuition, and low compensation. These stressors lead to unhealthy coping strategies, including poor sleep, diet, and limitation of social interactions, risking residents' health and compromising patient care quality. It is recommended that regulatory and institutional changes be made to improve the HRQoL for this population.
Keywords: health-related quality of life, medical residents, internal medicine, qualitative studies, lifestyles, meanings

Introduction

The concept of health-related quality of life (HRQoL) emerged in the medical literature in the 1960s and was incorporated as a health outcome in the 1970s, marking a paradigmatic shift for several reasons: HRQoL demonstrates how certain social achievements become tangible for individuals, serves as an ethical and economic criterion for acquiring health technologies by incorporating patients' perspectives, and expands the traditional measurements of morbidity, mortality, and disability. In contemporary healthcare, merely preventing disease and prolonging life is insufficient—living with quality is essential.[1] Between the 1960s and 1980s, HRQoL became a parameter for decision-making in healthcare, with the primary focus on developing measurement instruments. From the 1980s to the present, it has been used to make moral judgments regarding life and medical treatments and to assess medical practices and the impact of various diseases.[2]

The proliferation of HRQoL measurement instruments has led to a broad diversity of underlying concepts. Even pioneers in this field have referred to it using terms such as perceived health status, "well-being, utilities, achievements, and subjective evaluations". Despite these discrepancies, most academics agree that HRQoL encompasses physical, mental, and social relationship dimensions.[3] Today, most academic texts adopt the World Health Organization's definition, which describes HRQoL as

Received: 5 February 2025
Accepted: 13 April 2025
Published: 7 June 2025

> An individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns.[4]

Biomedical publications on HRQoL have increased exponentially over the past three decades, primarily focusing on patients with various diseases and employing quantitative study designs. However, research on medical residents remains limited. A PubMed search using the strategy (quality of life[Title/Abstract]) AND (medical residents[Title/Abstract]) yielded only 52 studies, most of which included QoL as a secondary outcome. Investigating HRQoL in medical residents is crucial, as this group has been shown to experience high rates of verbal and physical abuse, as well as various forms of mistreatment.[5–7] They also face an elevated risk of burnout, depression, suicidal ideation, and a range of mental and physical health problems, which, in turn, compromise the quality of patient care, contribute to dehumanization, and reduce empathy.[8–12] Specifically in Colombia, some studies have shown that 34.7% of medical residents experience symptoms of anxiety and depression, 24.2% engage in problematic alcohol consumption,[13] and burnout prevalence has been documented as high as 47.5%.[14] These findings indicate that medical residents are exposed to multiple stressors inherent to their specialized training, and this situation is particularly pronounced in internal medicine residents,[14] which put at risk both their HRQoL and their patients' well-being.

Despite the importance of HRQoL among medical residents, studies on this topic remain scarce and predominantly quantitative. One study involving 425 residents across 19 specialties, assessed using the Short Form Health Survey (SF-36), reported lower HRQoL scores among women, married residents, and those in medical-surgical specialties (compared to laboratory-based specialties).[15] In Mexico, a study of 349 residents using the SF-36 found low HRQoL scores, with HRQoL being a predictor of increased workplace mobbing.[16] Another study conducted in Brazil with 1281 residents, assessed using the WHOQOL-Bref, reported moderate HRQoL scores (approximately 60 points on a 0–100 scale). The lowest scores were observed among first-year residents, those with low salaries, excessive workloads, and those diagnosed with depression or anxiety.[17] Other studies have documented poor HRQoL in this population, further intensified by sleep deprivation, which negatively impacts SF-36 dimensions such as physical function and health, bodily pain, and general health.[18]

Qualitative research on HRQoL in medical residents is scarce. A systematic search in PubMed retrieved only three studies: two mixed-methods[19,20] and one phenomenological study.[19] No qualitative studies on HRQoL in this population were found in Colombia. One mixed-methods study included a quantitative component with 86 medical residents assessed using the WHOQoL-Bref, concluding that HRQoL is

> Influenced by the three burnout domains, marital status, education level, gender, age, type of residency, night shift, difficult/rare cases, working hours, and number of emergency cases.

The qualitative component involved 10 interviews exploring the causes of burnout and its impact on HRQoL.[21] Another mixed-methods study examined HRQoL among 109 residents using quantitative methods, while the qualitative component focused exclusively on the factors influencing HRQoL from female residents' perspectives, identifying key themes such as

> Difficulty in concentration and knowledge acquisition, insecurity, feelings of loss, greater critical perception, self-doubt, and difficulty in creating effective bonds to support the training period.[22]

The only qualitative study identified involved 14 pediatric residents but concentrated on HRQoL in relation to manifestations of compassion fatigue and compassion satisfaction, highlighting that this group experiences work overload and compassion fatigue, "manifested in negative emotions and diminished empathy and sensitivity toward patients' families".[19]

Qualitative studies explore phenomena in their natural state and daily context, capturing experiences, perceptions, behaviors, meanings, and social interactions. This research approach has been widely applied in health studies to investigate the sociocultural aspects of disease, the historical, political, or social context of health programs and policies, the specific behaviors of particular groups, barriers and motivations for adherence to medical recommendations, and the determinants of program effectiveness by incorporating the lived experiences of affected individuals.[20] While there are numerous qualitative approaches, ethnography is one method that has been employed in medical education for over 50 years. This is because it is conducted in a natural setting, involves close interaction with participants, reflects their perspectives and behaviors, allows for the construction of local cultural theories, frames human behavior within

a sociopolitical and historical context, and uses the concept of culture as a lens to interpret the study's findings.[23] Despite its importance and the growing trend of qualitative publications in health research, ethnographic studies on HRQoL among medical residents are virtually missing.

Given this gap, the objective of this study was to understand the meanings attributed to HRQoL by internal medicine residents in Medellín, Colombia, in 2024.

Methods

Study Type

A particularistic ethnography was conducted (also known in some contexts as micro-ethnography or institutional ethnography), which focuses on small-scale settings such as educational or healthcare institutions to understand social interactions, perspectives, practices, and behaviors within an immediate environment. This contrasts with classical ethnography, which prioritizes studying the cultural totality of a group. Ethnography is considered an approach, a method, and a text, emphasizing the importance of participants' experiences and meanings.[24,25]

Study Context and Participants

Medellín is one of the main cities in Colombia, with seven medical schools, four of which offer a specialization in internal medicine, admitting a total of 29 residents per year. The program lasts three or four years, with training primarily conducted in hospitals, involving patient care, academic sessions, and supervised meetings with faculty members, including internal medicine specialists and subspecialists such as hematologists, oncologists, rheumatologists, and emergency medicine physicians, among others.

Participant selection was conducted using saturation sampling based on predefined and emerging categories. First, the researchers contacted the participants and presented the project. Then, we conducted the interviews and simultaneously analyzed the data between interviews to identify the point at which the information became monotonous and redundant, thus preventing the inclusion of additional participants. This point was reached after interviewing 12 internal medicine residents aged between 31 and 35 years, 33.3% (4/12) female, with 4 to 9 years of work experience as physicians, and 50% trained at public universities.

Data Collection

The data collection was conducted between August 2024 and January 2025. An invitation was extended to students enrolled in the specialization program. Those who voluntarily agreed to participate were contacted to receive general project information, sign the informed consent form, and schedule the time and location of their interviews. Data collection included semi-structured interviews, participant observation, and field diaries, all of which were transcribed.

Each participant underwent an interview exploring two main topics: (i) the most significant experiences during their specialist training, and (ii) the main impacts of this specialization on their health and quality of life. Based on their responses, a fluid dialogue was established, allowing for spontaneous follow-up questions emerging from the participants' narratives. After reviewing and analyzing the recordings, the participants were contacted for follow-up interviews aimed at either expanding the specific category content or validating the researchers' interpretations.

The interviews were complemented with participant observation notes and field diaries. These two instruments were used to record students' interactions within their educational environment, non-verbal communication during interviews, methodological notes to refine questions and follow-up inquiries, and theoretical notes to consult key concepts for data analysis.

Reflexivity

The study design highlighted that the researchers have experience in teaching medical specializations, have conducted educational and health research, possess over ten years of expertise in qualitative research methods, and hold postgraduate degrees in social sciences. During data collection, field diaries included reflective notes to promote awareness of the researchers' actions and roles throughout the process (considering the researcher's experience as an object of reflection). During the analysis, both researchers participated in coding and categorization, comparing their interpretations, theoretical frameworks, and previous research in health-related quality of life (HRQoL).

Validity and Reliability

Methodological triangulation was employed by combining different data collection techniques, enhancing the validity and the comprehensiveness of repeated findings while capturing information that may not be revealed by a single instrument. Investigator triangulation and reflexivity allowed for identifying and contrasting discrepancies, explaining variations between emic and etic perspectives, expanding the theoretical frameworks used in hermeneutic analysis, and deepening the study's core themes. Throughout all study phases, the credibility (trustworthiness, prolonged participant engagement) and auditability (triangulation, validation with participants, reflexivity) criteria were applied.

Data Analysis

All transcribed material from interviews, participant observations, and field diaries was read multiple times to ensure familiarity with its content. Coding was conducted using in vivo codes (direct language from interviewees, mainly for emergent categories) and predefined codes (theoretical framework and predetermined categories). Similar codes were grouped to determine the categories and subcategories, which were then integrated into the semantic networks. These networks were used for participant feedback and validation. To compose the results section, semantic networks were accompanied by selected testimonies to approximate the participants' natural language and support the hermeneutic analysis conducted by the researchers.

Ethical Considerations

The study complies with the Declaration of Helsinki. All participants signed an informed consent form that included publication of anonymized responses/direct quotes. Confidentiality and participant identity protection were ensured. The project was approved by the Bioethics Committee of the Universidad Cooperativa de Colombia, under Act No. 01, dated January 26, 2023.

Results

The concept of HRQoL among participants encompasses aspects of physical and mental health, as well as structural elements of the internal medicine training process that emerge as determinants of residents' HRQoL or as effects of undergoing residency on their HRQoL. These factors were grouped into three categories, which are further developed in the following sections (Table 1).

Table 1 Categorical System of the Study

Category	Subcategories	Type
Meanings of HRQoL in residents	Family life	Pre-established
	Leisure time	Pre-established
	Economic income	Emerging
	Prestige - Recognition	Emerging
Determinants of residents' HRQoL	Barriers to specialized training	Emerging
	Training objectives	Emerging
	Workload	Pre-established
	Working conditions	Emerging
Impacts of residency on HRQoL	Lifestyle changes	Pre-established
	New social pressures	Emerging

Notes: The pre-established categories are those derived from the theoretical and conceptual framework of the researchers. The emerging categories are new categories that arise during the data collection process.

Meanings of HRQoL in Residents

For internal medicine residents, HRQoL is a multidimensional construct that includes aspects of physical and mental health, as well as social relationships. Throughout the training process, residents' entire lives revolve around their curriculum, particularly clinical rotations and academic meetings. Consequently, four subcategories emerged in relation to their quality of life: family life, time for leisure activities, the prospect of high financial earnings, and the recognition received from colleagues for their clinical skills.

Family life is a highly significant aspect of HRQoL, emphasized for two reasons: (i) as general physicians in Colombia, it is difficult to earn high incomes, which often requires physicians to take on long shifts or even work at multiple institutions, reducing time spent with family; (ii) during internal medicine training, the curriculum is extremely demanding, limiting residents' time to two primary activities: hospital rounds and personal study or academic preparation. When discussing the meaning of HRQoL, residents assume that upon obtaining their specialist title, these restrictions (low general practitioner salaries and the high level of knowledge requiring extensive study) will disappear, allowing them to enjoy a better quality of life with their families.

> As a medical student, you see professors, and you see that specialist professors have a good quality of life. I met a professor whom I thought was a genius, and it was super admirable to see him as an internist. So, I said: internal medicine is the best there is. From that moment, I decided I was going to be an internist. That man seemed like an excellent internist to me. He was very intelligent and lived well, meaning he would go from hospitalization to his house and be with his wife. (Male, 35 years old, recently graduated from residency)

In connection with the previous description, two subcategories that expand on the meaning of HRQoL are the ability to allocate time for leisure and the prospect of high financial earnings. These two aspects converge in enabling multiple existential benefits, such as having time for sports or exercise, getting adequate sleep, traveling, avoiding work overload, or having to work multiple jobs.

> In this country, I believe there are two reasons to specialize: because as a specialist, you can have both time and a higher income than a general practitioner. To have a better quality of life. For me, quality of life means having a good income without having to work excessively to achieve it, and having space to enjoy life, dedicate time to home, do sports, and, obviously, have the necessary financial resources to grow economically. (Male, 35 years old, recently graduated from residency)

> The moment I decided to start my postgraduate studies was when I had already worked in all three levels of care and was tired of being a general physician. At that point, I decided to apply for the internal medicine program. I felt that the effort required of a general physician was much greater than that required of a specialist. We general physicians have to work much harder and do more difficult tasks than specialists. That was when I decided I would rather become a specialist than continue working so hard as a general physician. (Male, 30 years old, third-year resident)

The final subcategory centered around the prestige and recognition that come with the specialist title and how these contribute to perceiving a better HRQoL. Internal medicine specialists enjoy recognition and prestige within medical teams for various reasons, which participants highlighted: (i) their clinical skills in diagnosis, case analysis, therapeutic guidance, and coordination across specialties are widely recognized and documented; (ii) they embody one of the core ideals of medical care—holism—by not limiting their expertise to a single bodily system like most specialists and subspecialists, thus addressing one of the main criticisms of specialized care, which is patient fragmentation, but with greater depth and precision than general physicians; (iii) those who choose internal medicine generally have a strong vocational commitment to healthcare as a whole, and these vocational elements contribute to the prestige and recognition they receive.

> It was for passion and interest, because it aligned with my personal preferences. I think that's the most important thing. It was something that filled me with passion. I was really excited when we analyzed patients, when no one knew the answer, during multidisciplinary meetings where internal medicine had to integrate information from different specialties. I found that very, very appealing. Well, besides passion, another factor influencing my decision to specialize is that internal medicine has many subspecialties. (Male, 34 years old, third-year resident)

Determinants of Residents' HRQoL

The meanings of HRQoL are shaped by individual, institutional, and structural elements within the Colombian healthcare system, with participants emphasizing the latter. Among the individual determinants, the interviewees identified multiple barriers to specialized training. At the institutional level, they reported a lack of coordination between the clinical training sites and the university's curriculum and learning objectives. At the structural level, they highlighted workload and working conditions.

The main barriers to specialized education, identified as determinants of HRQoL, include: (i) academic gaps in undergraduate education, as some universities have lower academic rigor than others and omit research topics from their curricula, leaving some physicians unprepared for the residency entrance exam or for improving their academic credentials, leading to frustration; (ii) the limited number of programs offering internal medicine residencies, the small number of accepted applicants, the high number of general practitioners competing for admission, and concerns about transparency in the selection process contribute to high levels of stress during exam preparation and, in cases of rejection, negatively impact mental health; (iii) the cost of residency entrance exams, which can limit the number of applications a general practitioner can afford, restricting their chances of applying to multiple universities or specialties.

> In our undergraduate program, we had many gaps, disadvantages, or deficiencies. Our academic training was focused on producing general practitioners, nothing more. Compared to students from other universities, some were trained from the beginning to become specialists. (Male, 35 years old, recently graduated from residency)

> First of all, university slots. I have never understood why, if there is such a shortage of specialists, as evidenced in statistics, universities continue to offer only five or six slots per program. It's absurd. (Female, 30 years old, second-year resident)

> I'll give you an example from Medellín with a specific specialty: oncology. Currently, cancer is one of the leading causes of morbidity and mortality worldwide, including in Colombia. I find it absurd that in Medellín, where several clinics treat oncology patients, there is no oncology specialization program available. I believe that many specialists close these opportunities to maintain control over patient management and protect their salaries. (Female, 30 years old, second-year resident)

> I think one of the main barriers to entering a medical specialization is the financial barrier. Most universities are private, and tuition fees, in my opinion, are high. Additionally, transitioning from a stable job with a high income and comprehensive benefits such as vacation time and sick leave to a residency program is very difficult because the income is significantly lower compared to working as a general physician. (Female, 30 years old, second-year resident)

Regarding the determinants, issues related to curricula and training objectives were also highlighted. Often, some specialists who supervise residents in clinical settings are unfamiliar with the training plan, which creates confusion and additional burdens for residents due to the lack of clear planning regarding the curriculum, topics to be studied, types of patients they will manage, and other daily aspects of hospital and university life.

> I believe that many of those who act as our professors likely do not have formal training in teaching. They try to teach the way they were taught or the way they believe is best. If we were to ask them how many of them know the rotation objectives, I am sure many would not be able to answer. What is lacking is proper teacher training for those responsible for our education. (Male, 34 years old, third-year resident)

Finally, among the structural issues in the Colombian healthcare system that affect the HRQoL of residents, the high workload imposed on residents in hospitals stands out. This reduces the time available for studying and fulfilling academic responsibilities, increasing the risk of burnout, anxiety, depression, and other health problems. Additionally, the precarious nature of medical labor includes unstable employment contracts (mainly service contracts or hourly payment schemes), decreased purchasing power due to salaries that do not keep up with inflation, among other factors.

> I started my studies with a lot of energy, and I was lucky to have the most demanding rotations at the beginning when I still had that energy. It was hard, but I managed. However, that energy gradually turned into chronic fatigue. At some point, you reach a state of prolonged exhaustion. My first vacation was one year and four months after starting residency. By the 11th or 12th month, you reach a near burnout state because exhaustion drains your motivation. It is not that you dislike the work, but you

need a break to readjust certain aspects of your life before continuing. For me, that was one of the hardest things. Especially because I could feel the exhaustion accumulating—not just daily fatigue from a tough shift, but a chronic, persistent exhaustion. Another thing is sacrificing personal life: missing family gatherings, giving up hobbies. Sometimes, you simply lack the energy for anything else. (Male, 32 years old, fist-year resident)

The job market has worsened somewhat, but I believe there will always be demand for internists because the specialty is currently very needed. So, in terms of employment, I am not worried; I have never heard of an internist in Colombia being unemployed. What does concern me are the working conditions in some places. (Female, 30 years old, second-year resident)

It is not ideal that in 85% to 90% of cases, contracts are based on service provision. If you ask me, I would prefer a lower salary —even if, in total, I end up earning less—but with a proper employment contract that includes all legal benefits such as vacation, social security, and job stability. The reality is that specialists are mostly hired under service contracts, and I do not like that. (Male, 32 years old, third-year resident)

Impacts of Residency on HRQoL

The main effects of residency include lifestyle disruptions and exposure to multiple social pressures. The academic and work demands of residency negatively impact lifestyle habits, leading to reduced sleep hours, increased sedentary behavior, higher consumption of energy drinks and tobacco, and poor dietary habits due to irregular eating schedules and low-quality meals.

Toward the end of residency, the most frequently reported issue was the emergence of new social pressures. Internists face expectations to pursue a subspecialty, save money for further studies, among other pressures.

I have always liked coffee, but during my first year, I abused it—toxically speaking. I consumed 1.5 Liters per day because I felt I needed it to stay awake. I also drank energy drinks. And here is another thing—I smoked a lot. A lot. It was terrible. During some rotations, I smoked 15 cigarettes a day, and when things got really stressful, I smoked an entire pack daily. There is also something trendy now—certain stimulant medications that are approved by Invima and internationally indicated for sleep disorders like narcolepsy. I do not take them, but I know colleagues who use Modafinil and Neoresotyl for their stimulating effects. (Male, 32 years old, third-year resident)

And let me tell you, social pressure never goes away. It is the same now in internal medicine. As I approached graduation, everyone asks, "Are you going to stay as an internist?"—from the hospital staff to senior specialists who pursued subspecialties. The pressure is there. I think one always feels that if they don't do it, in one way or another—whether they're happy, have made money, or whatever the case may be—they still say, "F***, if I don't do this, maybe I won't feel fulfilled". (Male, 32 years old, third-year resident)

I plan to work for a year because my goal is to pursue a subspecialty. I am very interested in hematology or oncology, so I want to save up a bit before applying again. (Male, 34 years old, third-year resident)

I would like to work for one or two years to pay off my student loan for this specialization and save money to pursue a subspecialty. That would be my plan. I would work in multiple places if possible. (Female, 30 years old, second-year resident)

Several relationships were established between the categories and subcategories: i) The determinants of HRQoL influence residents' perceived quality of life and explain some of the negative impacts of the training process during specialization. ii) The meanings of HRQoL are linked to the negative impacts reported by residents. iii) In turn, the negative impacts of residency influence and reinforce the meanings of HRQoL. The subcategories are interconnected, as the different dimensions of quality of life are influenced by individual, institutional, and healthcare system determinants. Additionally, they exhibited reciprocal relationships with the unhealthy lifestyle changes described by the participants (Figure 1).

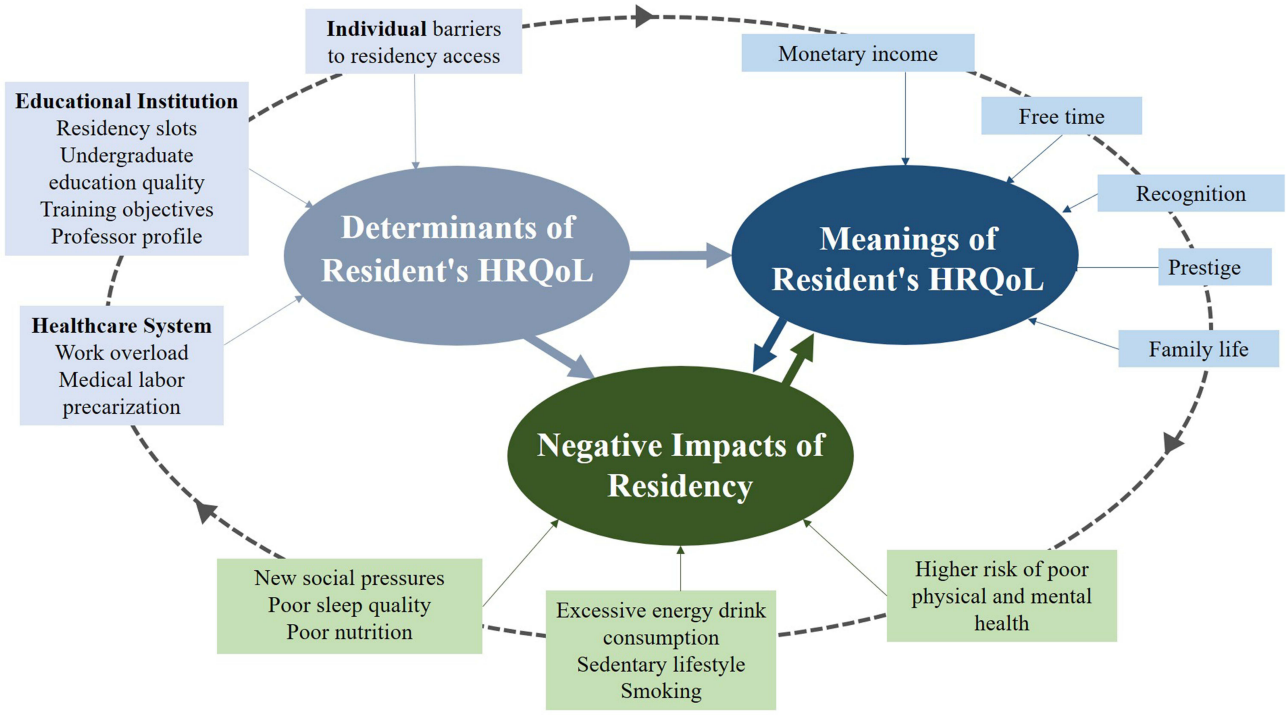

Figure 1 Relationships between categories and subcategories in the study.

Discussion

Determinants of HRQoL

The main determinants of the residents' HRQoL included individual barriers (undergraduate training and economic issues) and institutional barriers to entering internal medicine, with the latter being more significant. Admission to medical residency is limited to a minority of physicians due to a low number of available slots, paradoxically coinciding with a high demand for medical specialists given Colombia's morbidity profiles and the limited number of these healthcare professionals. This issue has been identified as a structural problem in the Colombian healthcare system, where the number of physicians is acceptable compared to the OECD average, but the number of specialists is significantly lower. For instance, in 2021, Colombia had 1.84 physicians per 1000 inhabitants compared to the OECD average of 1.07, but only 0.61 specialists per 1000 inhabitants, whereas the OECD average was 2.35 per 1000, revealing an unmet demand of 90,000 specialists.[26]

The Colombian observatory of universities has described multiple barriers to specialized medical training, highlighting the following: limited availability of slots (1–2 per cycle), long program duration (3–4 years), control by specialist medical associations functioning as monopolies or oligopolies, lack of market regulation by universities and the Ministries of Education and Health, high tuition costs, low or absent remuneration for residents, and difficulties in credential recognition for those trained abroad.[27]

Participants also described other determinants of HRQoL, including excessive workload, poor working conditions, precarious employment, and the overall deterioration of the medical profession. This finding aligns with studies from medical sociology that describe doctors as shock absorbers who routinely absorb demands from the social, organizational, and professional levels, at a significant cost to their mental health.[28] These factors intensify the already limited number of specialists by adding quality-related challenges for those who do enter these postgraduate programs. This highlights a severe structural problem that requires national-level initiatives (Ministry of Health, Ministry of Education, universities, hospitals, etc)., as WHO reports demonstrate that increased coverage, improved healthcare services, and the effective functioning of health systems depend on workforce availability, accessibility, acceptability, and quality.[29] Enough healthcare professionals are associated with greater service coverage, better care, and lower mortality rates. In

the case of medical specialties, an increased number of specialists would also help reduce the high costs associated with specialist care. Addressing these structural determinants is urgent, as they encompass issues related to training, employment, performance, and retention of healthcare workers.[26,27,29]

Meanings of HRQoL

The meanings of HRQoL for residents include family life, leisure time, financial income, and professional recognition. These dimensions align with common HRQoL conceptualizations, particularly the psychosocial domain (leisure, family, recognition), while some aspects of the physical domain emerged in relation to the negative impacts of residency.[3,4] Both in the participants' narratives and in previous research using the SF-36 and WHOQOL-Bref, alterations in HRQoL have been documented as attributable to specific aspects of medical specialization, with sleep deprivation identified as a major risk factor.[15–18]

Despite these similarities, the current study's findings significantly differ from those previous research. Most studies on residents' HRQoL rely on the SF-36 and WHOQOL-Bref, which assess physical, mental, and social functioning over the previous 2–4 weeks.[15–18] In contrast to these pre-established, generic HRQoL measures designed for broad population comparisons, the ethnographic approach of this study enabled the identification of more specific and explanatory dimensions of residents' HRQoL.

As such, direct comparison of the current study's results with the available evidence was not feasible. The limited research on residents' HRQoL predominantly employs quantitative survey-based approaches,[15–18] and the scarce qualitative studies focus on burnout and its impact on HRQoL,[21] female residents' perceptions of HRQoL with non-comparable categories such as difficulty concentrating, insecurity, and self-doubt,[22] or compassion among pediatric residents.[19]

This limitation in contrasting available evidence with the study's findings underscores several key aspects: i) a scarcity of research in this field, with most studies on HRQoL relying on generic surveys;[15–18] ii) in this population, research has primarily focused on burnout, depression, quality of care, and clinical skills (as inferred from a PubMed search using the equation medical residents[Title]); and iii) a general lack of research interest in healthcare workers' HRQoL, as WHO guidelines prioritize workforce availability, accessibility, acceptability, and quality but do not explicitly highlight the importance of their quality of life.[29]

These findings also illustrate the novelty of this study and highlight some ontological and epistemological advantages of qualitative research, which seeks to deeply understand everyday phenomena for various purposes: unveiling the social determinants of an event, understanding group behavior particularities, incorporating the perspectives and emotions of those affected, emphasizing humanistic values, and generating explanatory theories centered on the person as a holistic and indivisible entity (in contrast to positivist sciences, which focus on fragmenting reality and the individual).[20,24,25]

Negative Impacts

Finally, several negative effects of medical residency emerged, associated with lifestyle changes, including poor sleep quality, high consumption of energy drinks, smoking, poor diet, physical inactivity, and deteriorating physical and mental health. These results are consistent with previous studies describing how residency leads to increased study and work hours, reduced sleep, burnout, stress, physical fatigue, emotional exhaustion, and negative emotions affecting mental health.[19,21,22,30–32] This topic is important because previous studies have described how these situations have traditionally been linked in the practice and teaching of medicine to the idea of sacrifice, to the point that they are normalized and incorporated as part of the profession; however, it is necessary to establish limits to this idea of sacrifice due to the serious consequences it can have on physical and mental health.[33]

Beyond the severity of residency's impact on physicians' HRQoL, this issue is further compounded by previous evidence demonstrating that these negative effects not only harm physicians' health but also result in lower quality patient care, dehumanization, and a lack of empathy.[9–11]

Considering the multiple relationships among this study's subcategories—where individual, institutional, and health system determinants influence HRQoL meanings, which in turn reciprocally relate to negative lifestyle impacts—it is evident that improving residents' HRQoL is crucial. Enhancing HRQoL could lead to improved patient health indicators, for which several interventions proposed in previous studies could be implemented: specific interventions targeting major

affected dimensions such as psychological stress, psychosocial support, and relationship improvement programs; avoiding sleep deprivation and fatigue; and mentoring to enhance time management and coping strategies.[16–18,22]

From an organizational perspective, it is essential to expose these and other negative effects of residency, demonstrate how HRQoL issues affect care quality, highlight the implications of burnout on organizational management, and ensure that educational legislation in training sites prevents the precarization of medical work. Specialist training programs should not solely focus on clinical qualifications but must also integrate residents' HRQoL, protecting them both for their inherent dignity and because doing so enhances the safety of treatments, procedures, and other medical actions involving their patients.

Limitations and Strengths

The main limitation of this study was the inability to secure the participation of professors or administrative personnel responsible for structuring and managing the residency programs. Their insights could have enriched certain emerging categories, such as institutional determinants of HRQoL or a deeper exploration of other determinants of the negative impacts of medical specialization. Future studies could address these aspects.

Despite this limitation, the study presents several strengths: it provided a space of trust for residents to express their voices, emotions, and experiences; it described the complexity of their work and training process; it documented determinants that can be extrapolated to the entire Colombian healthcare system, particularly those related to precarization and the risks posed by specialist monopolies; and it generated a network of interrelated categories that could inform various strategies to improve HRQoL or guide future studies in designing a specific HRQoL scale for medical residents.

Conclusion

The HRQoL of medical residents is shaped by structural factors within the healthcare system that contribute to the precarization of medical work in general, as well as by specific institutional factors within educational settings. These include the professional profile of faculty members, the limited availability of residency positions, the lack of transparency in the selection process, and the high tuition costs imposed on students who are required to dedicate themselves exclusively to their training while receiving low financial compensation. These determinants negatively impact residents' HRQoL, leading them to adopt strategies aimed at enhancing their performance, such as drastically reducing sleep hours, limiting both the time available for meals and the quality of their diet, eliminating leisure activities and social interactions with family and friends, and increasing the consumption of energy drinks, tobacco, and, in some cases, psycho-stimulant medications. These findings align with the global body of evidence and emphasize the need to reconsider the teaching processes in postgraduate medical education. Furthermore, this context highlights the impossibility of resolving the problem with fragmented actions limited to the university and reflects the need for intersectoral actions that involve the states with their health and education departments, as the current situation of residents affects their physical and mental health and compromises patient care by contributing to dehumanization, reduced empathy, and lower quality of care.

Disclosure

The authors report no conflicts of interest in this work.

References

1. Armstrong D, Caldwell D. Origins of the concept of quality of life in health care: a rhetorical solution to a political problem. *Soc Theory Health*. 2004;(2):361–371. doi:10.1057/palgrave.sth.8700038
2. Pennacchini M, Bertolaso M, Elvira MM, De Marinis MG. A brief history of the quality of life: its use in medicine and in philosophy. *Clin Ther*. 2011;162(3):e99–e103.
3. Post MW. Definitions of quality of life: what has happened and how to move on. *Top Spinal Cord Inj Rehabil*. 2014;20(3):167–180. doi:10.1310/sci2003-167
4. WHO Group on Quality of Life. The World Health Organization Quality of Life Assessment (WHOQOL): position paper from the World Health Organization. *Soc Sci Med*. 1995;41:1403–1409. doi:10.1016/0277-9536(95)00112-K
5. Hu YY, Ellis RJ, Hewitt DB, et al. Discrimination, abuse, harassment, and burnout in surgical residency training. *N Engl J Med*. 2019;381(18):1741–1752. doi:10.1056/NEJMsa1903759
6. Finn KM, O'Connor AB, McGarry K, Harris L, Zaas A. Prevalence and sources of mistreatment experienced by internal medicine residents. *JAMA Intern Med*. 2022;182(4):448–450. doi:10.1001/jamainternmed.2022.0051

7. Mejía R, Diego A, Alemán M, Maliandi Mdel R, Lasala F. Perception of mistreatment during medical residency training. *Medicina*. 2005;65 (4):295–301.
8. Mata DA, Ramos MA, Bansal N, et al. Prevalence of depression and depressive symptoms among resident physicians: a systematic review and meta-analysis. *JAMA*. 2015;314(22):2373–2383. doi:10.1001/jama.2015.15845
9. de Oliveira GS, Chang R, Fitzgerald PC, et al. The prevalence of burnout and depression and their association with adherence to safety and practice standards: a survey of United States anesthesiology trainees. *Anesth Analg*. 2013;117(1):182–193. doi:10.1213/ANE.0b013e3182917da9
10. Pereira-Lima K, Loureiro SR. Burnout, anxiety, depression, and social skills in medical residents. *Psychol Health Med*. 2015;20(3):353–362. doi:10.1080/13548506.2014.936889
11. Ferreira S, Afonso P, Ramos MDR. Empathy and burnout: a multicentre comparative study between residents and specialists. *J Eval Clin Pract*. 2020;26(1):216–222. doi:10.1111/jep.13147
12. Molina Rodríguez JM, Toledo Arenas JD. Ideación suicida en residentes de especialidades médico-quirúrgicas en una universidad en Bogotá, Colombia: prevalencia y factores de riesgo. Bogotá: Universidad del Bosque; 2022. Disponible en: https://repositorio.unbosque.edu.co/server/api/core/bitstreams/02f4c911-cf87-4bd8-96ce-b74615929e3b/content. Accessed June 5, 2025.
13. Cárdenas Suárez AM, Matulevich Jaimes JA. *Prevalencia de problemas de salud mental en residentes de medicina en el contexto de la pandemia por COVID-19* [Tesis para optar al título de psiquiatra]. Universidad del Rosario; 2021. doi:10.48713/10336_33573.
14. Jácome SJ, Villaquiran-Hurtado A, García CP, Duque IL. Prevalencia del síndrome de Burnout en residentes de especialidades médicas. *Rev Cuid*. 2019;10(1):e543. doi:10.15649/cuidarte.v10i1.543
15. Al Wahaibi N, Al Kindi R, Al Hinai M. Quality of Life among postgraduate medical residents in Oman: a cross-sectional survey. *Oman Med J*. 2023;38(6):e568. doi:10.5001/omj.2023.115
16. Enriquez Estrada VM, Antonio-Villa NE, Bello-Chavolla OY, et al. Assessment of psychological terror and its impact on mental health and quality of life in medical residents at a reference medical center in Mexico: a cross-sectional study. *PLoS One*. 2023;18(12):e0295138. doi:10.1371/journal.pone.0295138
17. Moreira WCA, de-Souza FT, Dias EC, et al. Quality of life of physicians in the state of Minas Gerais, Brazil. *Rev Bras Med Trab*. 2023;20 (3):375–386. doi:10.47626/1679-4435-2021-730
18. Alami YZ, Ghanim BT, Zyoud SH. Epworth sleepiness scale in medical residents: quality of sleep and its relationship to quality of life. *J Occup Med Toxicol*. 2018;13:21. doi:10.1186/s12995-018-0203-z
19. Kaplan O, Kaplan M, Shalve Shamay R. Negative and positive aspects of professional quality of life among pediatric residents in er rotation: compassion fatigue and compassion satisfaction from the residents' perspective. *Harefuah*. 2024;163(4):220–225.
20. Das MK. An Introduction to qualitative and mixed methods study designs in health research. *Indian Pediatr*. 2022;59(5):416–423. doi:10.1007/s13312-022-2523-4
21. Nurikhwan PW, Felaza E, Soemantri D. Burnout and quality of life of medical residents: a mixed-method study. *Korean J Med Educ*. 2022;34 (1):27–39. doi:10.3946/kjme.2022.217
22. Kobayasi R, Tempski PZ, Arantes-Costa FM, Martins MA. Gender differences in the perception of quality of life during internal medicine training: a qualitative and quantitative analysis. *BMC Med Educ*. 2018;18(1):281. doi:10.1186/s12909-018-1378-9
23. Goodson L, Vassar M. An overview of ethnography in healthcare and medical education research. *J Educ Eval Health Prof*. 2011;8:4. PMID: 21637319; PMCID: PMC3100516. doi:10.3352/jeehp.2011.8.4
24. Boyle J. Styles of ethnography. In: Morse J, editor. *Critical Issues in Qualitative Research Methods*. Thousand Oaks: Sage Publications; 1994:186–214.
25. Gómez ÁV. Etnography as an Integrative Method. *Rev Colomb Psiquiatr*. 2012;41(2):421–428. doi:10.1016/S0034-7450(14)60015-9
26. Asociación Colombiana de Empresas de medicina integral [Internet]. Talento humano en salud: Pilar fundamental del sistema de salud; 2023 [Consulta de enero de 28, 2025]. Disponible en: https://acemi.org.co/wp-content/uploads/2024/02/2023_10_10_Personal_salud_Colombia_Acemi.pdf. Accessed June 5, 2025.
27. Observatorio de la Universidad Colombiana [Internet]. Colombia: Con pocos especialistas en salud, y es un drama poder estudiar una especialización; 2021 [Consulta de enero de 28, 2025]. Disponible en: https://www.universidad.edu.co/colombia-con-pocos-especialistas-en-salud-y-es-un-drama-poder-estudiar-una-especializacion/. Accessed June 5, 2025.
28. Jenkins TM. Physicians as shock absorbers: the system of structural factors driving burnout and dissatisfaction in medicine. *Soc Sci Med*. 2023;337:116311. doi:10.1016/j.socscimed.2023.116311
29. World Health Organization. Global strategy on human resources for health: workforce 2030. Geneva: World Health Organization; 2016 [Consulta de enero de 28, 2025]. Available from: https://iris.who.int/bitstream/handle/10665/250368/9789241511131-eng.pdf. Accessed June 5, 2025.
30. Lourenção LG, Moscardini AC, Soler ZA. Saúde e qualidade de vida de médicos residentes [Health and quality of life of medical residents]. *Rev Assoc Med Bras*. 2010;56(1):81–91. Portuguese. doi:10.1590/s0104-42302010000100021
31. Yadollahpour MH, Eydi M, Yaminfirooz M, Gholinia H, Shahrokhi S, Faramarzi M. Predictors of quality of professional life and well-being of medical residents and interns: role of gender and workplace spirituality. *Health Sci Rep*. 2024;7(9):e70064. doi:10.1002/hsr2.70064
32. Sangi-Haghpeykar H, Ambani DS, Carson SA. Stress, workload, sexual well-being and quality of life among physician residents in training. *Int J Clin Pract*. 2009;63(3):462–467. doi:10.1111/j.1742-1241.2008.01845.x
33. Aluri JT, Chisolm MS, Liao L. Sacrifice as a Part of Medical Education: a Reflection on the COVID-19 Pandemic. *J Med Educ Curric Dev*. 2024;11:23821205241250144. doi:10.1177/23821205241250144