

Barriers and Opportunities for Clinical Nutritionists in 13 Latin American Countries: A Qualitative Study

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Abstract

A clinical nutritionist (CN) is a university-educated professional trained to perform preventive and recovery functions in the health of patients. The actions of these professionals, both worldwide and in Latin America, may face barriers and opportunities that require careful identification and examination. The main objective of this study is to identify the most important barriers and opportunities for the clinical nutritionist in 13 Latin American countries. A qualitative study was carried out; the initial phase involved conducting in-depth individual interviews with 89 informants, experienced CNs from 13 Latin American countries. After calculating the mean and standard deviation, we ranked the top 10 most frequently reported barriers by assigning a score ranging from 1 to 10. Additionally, 3 opportunities were identified with a lower score from 1 to 3. Means and standard deviation were calculated to sort the responses. Results: the most important barrier was the absence of public policies that regulate and/or monitor compliance with the staffing of CNs according to the number of hospital beds, while the most important opportunity was the advances in technology such as software, body analysis equipment and other tools used in Nutritional Care. The identified barriers can interfere with the professional performance of CNs and, moreover, make it difficult to monitor the good nutritional status of patients. It is recommended to consider the barriers identified in this study, as well as the opportunities, with a view to improving the quality of hospital services with an adequate supply of nutritionists.

Keywords

nutritionists, clinical nutrition, nutrition policy, qualitative research, community health

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Introduction

The drastic increase in chronic non-communicable diseases (NCDs) related to increased risk factors such as overweight and obesity, hyperlipidemia, diabetes mellitus, cardio-cerebrovascular diseases, and cancer, poses a heavy burden on society and the financing of health systems,¹⁻⁵ as well as problems related to undernutrition continue to be a challenge for public health, with a complex solution.^{6,7} Worldwide,

unhealthy diets, lack of physical activity, and poverty are among the main risk factors for high prevalence numbers and increasing problems of malnutrition and NCDs.⁸ In this sense, the World Health Organization (WHO) estimates that adequate investment in nutrition could save 3.7 million lives by 2025.⁹ Therefore, health services must focus more on ensuring optimal nutrition at each stage of a person's life.¹⁰

On the other hand, clinical nutritionists are professionals with university training who play an important role in the



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benefit of adequate nutrition and the promotion of an optimal nutritional status of the population.¹⁰ In addition, they fulfill various functions in the recovery of health, among other activities, by strengthening nutritional care at different levels of health status, arranging early and timely nutritional interventions in the hospital setting as the main point, and integrating diagnosis and nutritional monitoring into the clinical evolution of patients, promoting and guaranteeing the right of patients to food, together with other professionals that make up the health team.¹¹

However, in many countries the professional performance of clinical nutritionists could be affected by multiple barriers that range from imprecise public policies related to nutrition and food issues¹² to the lack of this professional in many health institutions and the professional intrusiveness that prevents adequate patient care.¹³

Through nutritional counseling, the clinical nutritionist tailors a personalized plan to meet the unique dietary requirements of each patient, which considers the various pathological situations and physiological status of the patients.¹⁴ However, this task could be affected by dietary prescriptions carried out by pseudo-professionals or even by other health professionals that interfere with the inherent functions of the clinical nutritionist. Furthermore, it has been observed that eating habits and culture of both outpatients and hospitalized patients could represent challenges when it comes to complying with dietary prescriptions of clinical nutritionists, since their emphasis is oriented towards the prevention and treatment of nutrition-related diseases, as well as avoiding hospital malnutrition.

The aim of this study is to describe the most important barriers and opportunities for the practice of clinical nutritionists, but also to identify the opportunities that these

professionals have in the different countries of Latin America, as an analysis of lessons to be learned, as well as to formulate proposals for the improvement of working conditions and their regulation.

Methodology

In this exploratory qualitative study, a guide was designed and used, which included in-depth semi-structured interview guiding questions aimed at key informants, experienced nutritionists who are currently working in the clinical area, belonging to 13 Latin American countries, who were invited via email through the associations or colleges of nutritionists' membership list in each country. A database of 96 informants was obtained and, finally, 89 nutritionists consented to participation, and 7 reported not having time to participate. The mean number of interviewees per country was 7 CNs.

The interviews were carried out by healthcare practitioners with experience in qualitative studies, using the meet platform or personal video calls, as arranged with the informant, between October-December 2022. The information collected was analyzed using a classification of barriers developed in parallel, until saturation of the answers, that is, until all the answers could be classified in a previous item.

The identified barriers and opportunities were grouped into topics according to their meaning by 3 members of the research team, for each country independently. The agreement between the 3 observers was evaluated using the Kappa index, finding a value of 0.94.

In the second stage of the study, a table was prepared with the 10 main barriers identified by the authors of this work, and they were given a score from 1 to 10. The authors

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of this work are nutritionists with experience in the research area and there is at least 1 representative from each participating Latin American country. Finally, to analyze the responses, the mean and standard deviation of the scores were calculated, and barriers and opportunities were sorted.

Participants

The clinical nutritionists who participated as informants in this study were intentionally selected. Inclusion criteria were holding a professional degree of nutritionist, dietician or equivalent and having at least 2 years of work experience in the clinical-hospital area. Clinical nutritionists who work in Argentina, Bolivia, Ecuador, El Salvador, Chile, Colombia, Costa Rica, Guatemala, Mexico, Panama, Paraguay, Peru, and Uruguay were invited to participate. At the time of the study, clinical nutritionists were working in inpatient, outpatient, and hospital food service areas.

The purpose and methodology of the study were explained to all key informants, and an appointment was scheduled on a given day and time to conduct the virtual interview. The interview was audio and video-recorded once the nutritionist had already provided their personal data and sent the signed informed consent agreeing to participate in the study.

Recruitment

Participants were recruited between September and October 2022. Invitations were first sent through the emails of nutritionist associations or colleges in each country. A date and time were scheduled for the interview. In addition, we asked recipients to forward the invitation email to other CNs who met inclusion criteria, so in a second step we decided to use the snowball sampling method until reaching saturation through the interviews conducted.¹⁵

Ethical Aspects

Participants who met the criteria received an information sheet and consent form via email. All participants received an explanation of the study and signed the informed consent. This study was carried out with the approval of the Ethics Committee of the Universidad de Playa Ancha (CEC UPLA), through the Act of Approval No 007-2022.

Analysis of the Information

The semi-structured interview guide considered 5 categories that included: 1. Main functions of the clinical nutritionist; 2. Main challenges in the work area; 3. Interactions with other healthcare professionals; 4. Job opportunities for the clinical nutritionist; and 5. Alternatives to improve the current situation of the clinical nutritionist. The questions in

each category were developed based on the researchers' interest in capturing the barriers and opportunities for clinical nutritionists, but they were also aimed at identifying those aspects that highlight the work of clinical nutritionists and their role as part of the clinical team in public and private hospitals.

General notes were taken, such as interview number, interview location, beginning and ending time. Interviews were transcribed verbatim in the language of the clinical nutritionists (Spanish), and the confidentiality of participants was maintained by removing from the transcripts the names and data that could identify them.

The MS Word processor was used to identify topics, sub-topics, and verbatim comments from clinical nutritionists for each category, which allowed showing the perceptions and the exact content provided by clinical nutritionists. The authors of this paper were asked to review the verbatim comments and the themes and subthemes a second time to discuss controversies, reflexivity, and positionality of researchers as observers.

The thematic analysis was verified several times by the researchers (first author, second author and corresponding author). Theme analysis was sent by email to the informants for them to review it and identify controversies or errors in the sense of the transcripts. In addition, differences and controversies between countries were analyzed, thus presenting the results as a comprehensive analysis of the situation of clinical nutritionists in Latin America. Comments or suggestions were mostly of a linguistic nature, while content changes were added to the thematic analysis. Finally, the report was translated into English for the final report.

Results

A number of 89 nutritionists working in public, private and mixed establishments (public n=65, private n=18, and mixed n=6) were included. The average age of the participants was 39 years, with an age range between 24 and 60 years; n=77 women, and n=12 men were interviewed. Table 1 lists the 10 main barriers and the 3 opportunities perceived by participating nutritionists.

The most important barriers were: 1) Lack of public policies that regulate and/or monitor compliance with CNs staffing according to the number of hospital beds; 2) Low salaries, few positions for new contracts and no differentiation for professionals with a diploma or postgraduate degree; and 3) Professional intrusion where other healthcare professionals give discharge recommendations to the patient, while the least important barrier is the lack of recognition of the CN by the healthcare team, as well as by the patients. Nevertheless, also opportunities were identified: advances in technology such as software, body analysis equipment and other tools used in Nutritional Care; the residence of last-year Nutrition students in hospitals to improve

Table 1. Barriers and Opportunities for Clinical Nutritionists in Latin America.

Barriers	Mean	Standard deviation
Lack of public policies that regulate and/or monitor compliance with the number of CNs according to the number of hospital beds	8.4	1.58
Low salaries, few places for new contracts and no differentiation for professionals with a diploma or postgraduate degree.	7.5	2.21
Professional intrusion where other healthcare professionals give discharge recommendations to the patient	6.5	0.82
Lack of teamwork, where patients are not referred to the CN, therefore the patient never receives diet instructions	5.5	1.34
Treating physicians who do not request medical care in hospitalized patients	4.5	1.20
Lack of outpatient consultation time for nutritional care	4.2	2.37
Lack of anthropometric equipment, technology to carry out the Nutritional Care Process and nutritional education	3.0	1.51
Lack of articulation in the academic offering of postgraduate courses for CNs	2.8	1.85
Lack of recognition of CNs by the healthcare team, as well as by the patients	2.1	2.17
Opportunities		
Advances in technology: software, body analysis equipment, and other tools used in Nutritional Care	2.0	0.53
Residence for last-year Nutrition students in hospitals to improve patient care coverage	1.5	0.83
International alliances in teaching and research.	1.4	0.67

the coverage of patient care; and international alliances in teaching and research. With respect to the results, it could be mentioned, based on the standard deviation, that the lowest dispersion (response of the majority of the subjects) regarded the following barriers: professional intrusion, treating physicians who do not request medical care in hospitalized patients, and the lack of anthropometric equipment, nutritional education, and technology to carry out the Nutritional Care Process (NCP).

The findings regarding perceptions of barriers and opportunities for clinical nutritionists are presented below, according to the thematic network analysis carried out.

Functions of Clinical Nutritionists

The lack of standardization of the functions of CNs was perceived as a barrier, since many of these professionals perform multiple tasks, including administrative and planning activities.

Here in Bolivia, it is called an Administrative Clinical Nutritionist; you cannot do in-depth work because there are 5 clinical nutritionists for 2,000 patients. (Public worker, CN, woman, 57 years old, Bolivia)

When analyzing the functions of a CN, that is, the professional who performs the NCP and whose objective is patient care, an analysis of thematic networks was carried out in relation to the functions in external consultation. In this area, clinical nutritionists perceived barriers in terms of the time they have to carry out a correct NCP that

includes making a good anamnesis: anthropometric data collection, review of biochemical and clinical data, and analysis of dietary intake which allow an adequate diagnosis and dietary prescription for the patient. This problem was even reported by clinical nutritionists who work in the private area.

We lack time, especially with those patients where it is necessary to make a specific eating plan for pathologies . . . half an hour (30 minutes) is definitely not enough to do education, calculate the specific nutritional plan and other functions. (Private worker CN, man, 31 years old, Colombia)

Our regulations allow us to handle 16 patients per day, which means about 30 minutes for each patient in the outpatient care service. (Public worker CN, man, 47 years old, Panama)

Patient Care Time and Space

Regarding care for hospitalized patients, major difficulties were encountered. A hospitalized patient receives specialized dietary care based on their pathology, but when making a referral to address specific issues such as dietary care upon hospital discharge, the situation becomes complicated, which impairs patient care.

Due to lack of time, we give priority to more complicated patients. (Public worker CN, woman, 32 years old, El Salvador).

We review the diets prescribed for hospitalized patients, but a complete personal assessment cannot be given to everyone. (Public worker CN, man, 40 years old, Costa Rica)

The most frequently perceived barrier also referred to the ratio of clinical nutritionists per number of hospital beds. This reality has been perceived as a barrier for the patient to receive proper nutritional care.

There are many patients for a CN, unfortunately there is a lot of administrative work, so I spend little time with the patient. (Public worker CN, woman, 26 years old, Chile)

A perception about proposals that should be considered in the countries for achieving the best performance of clinical nutritionists was to prioritize nutritional care to higher risk cases, dividing the roles of professionals.

There should be nutritionists exclusively for the food service, who coordinate the diet and dietary plans of all hospitalization patients, while other CNs are in charge of nutritional care and discharge diets in hospitalized patients and also outpatient consultation, otherwise nothing would make sense. (Private worker CN, woman, 43 years old, Costa Rica)

Regulation of the CN

Some CNs reported that professional associations or associations in their countries have contributed to the regulation of both consultation time and its cost (in the private service sector), for example in Argentina.

Each province has its own regulation; this depends on the College of Nutritionists. It is also good that the price of the consultation is regulated, for a minimum ethical value. (Private worker CN, woman, 35 years old, Argentina)

However, public regulations are not clear in many countries. In Bolivia, Ecuador, El Salvador, Mexico, Colombia, Panama, Costa Rica, Guatemala, Uruguay, and Peru, professional associations, despite their efforts, have not been able to establish regulations on the functions and rights of the CN, although universities that offer Nutrition degree programs, who also contribute to the regulation of the official health systems of each country, should perform this task. In cases such as Chile and Paraguay, there are laws and government initiatives to regulate these aspects, but it is reported that they are partially enforced in public hospitals and not enforced at all in private settings.

INAN is the National Institute of Food and Nutrition that regulates the workload of nutritionists as specialists. (Public worker CN, woman, 49 years old, Paraguay)

Work Area of the CN

The remuneration of the clinical nutritionist was identified as a barrier in the field of employment. But this problem goes beyond value, since discomfort is mentioned due to

the lack of recognition compared to other healthcare professions and the lack of incentives related to academic degrees.

The salary can be the same as a nutritionist who only has a postgraduate degree. (Public worker CN, woman, 48 years old, Colombia)

The value of the clinical nutritionist can vary, depending on the service and the hospital. Many clinical nutritionists play an important role when giving a discharge diet to patients undergoing surgery, especially of the gastrointestinal system, as well as in patients with nutritional support, although the latter was controversial since in all countries it is reported that, besides CNs, both doctors and nurses can perform this function. In addition, in this study there were perceptions of a possible gender bias towards CNs.

Women colleagues are not taken into account very much, perhaps in my case because I am a man, I feel that my professional opinion is heard. (Public worker CN, man, 53 years old, Guatemala)

Job performance may also be limited due to a lack of training in some CN areas, both in undergraduates and graduates.

There is a lack of a specific postgraduate course in clinical nutrition, focused on pathologies or specific physiological status. (Private worker CN, man, 31 years old, Colombia)

But unemployment and the lack of opportunities for CNs also persist despite the training that many professionals could have.

There are many unemployed professionals even with specialties obtained abroad. (Public worker CN, woman, 43 years old, Costa Rica)

Opportunities and Barriers for CNs

An interesting proposal could be to form international alliances in teaching and research.

Joining, for example, with colleagues from other countries participating in scientific associations, congresses, conferences, interacting with our peers, forming networks, I think it helps a lot, we share the same challenges, we have the same opportunities. (Private worker CN, woman, 43 years old, Argentina)

Professional intrusiveness can affect the recognition of CNs. In addition, it could cause confusion for the patient.

There is a lot of intrusiveness in the career where the doctor acts as a nutritionist and hinders their role. (Private worker CN, woman, 53 years old, Ecuador)

They don't take us into account, they (the doctors) do the most important part for the patients, they do not tell me straight, they only prescribe the type of diet, but many patients need more personalized attention. (Private worker CN, woman, 31 years old, Bolivia)

In addition, there could be a lack of articulation in patient care due to intrusion, with the healthcare team seemingly not working in a coordinated manner.

We have difficulties for doctors to request a consultation, for example, in patients at nutritional risk, in this case, patients do not receive personalized attention and that can hinder their evolution. (Private worker CN, woman, 51 years old, Colombia)

Therefore, clinical nutritionists suggest raising awareness among the entire healthcare team, recognizing the importance of their role by emphasizing the benefits for the patient.

Realizing that in the health system costs related to fewer days in hospital could decrease for patients who receive good nutritional care. (Public worker CN, woman, 31 years old, Mexico)

Regarding opportunities in the workplace, the work of internship students, nutrition residents in their last year who train in hospitals that have an agreement with universities, was identified as a positive contribution that helps to obtain care for all patients. However, it should be considered that not all hospitals have this opportunity, but they always have medical and nursing residents.

It is enough in the sense that we have a nutrition residence. (Private worker CN, woman, 43 years old, Argentina)

Advances in technology in the work environment were identified as a positive aspect, which contributes to the CN job performance. Having modern anthropometric equipment, such as body composition analyzers and software for dietary analysis and prescription, are important factors for optimizing CNs time.

In our hospital there are bioimpedance scales, they are expensive, but this investment helped a lot to optimize time. (Public worker CN, man, 53 years old, Guatemala)

However, there are important differences between the public sphere (the latter with a shortage of equipment and supplies) and the private sphere. In addition, there were perceptions of equipment that required too much time to use.

We have very sophisticated bioimpedance equipment that even determines the phase angle, but it takes between 15-30 minutes per patient and we cannot use it. (Private and public worker CN, woman, 48 years old, Peru)

In relation to the computer systems that are used in each hospital, the perception of clinical nutritionists is that they could be complicated and cumbersome.

Much time is spent in computer systems when information is passed, they should be upgraded. (Public worker CN, woman, 43 years old, Uruguay)

Discussion

A qualitative study was conducted on clinical nutritionists from 13 Latin American countries. This study made it possible to collect the perceptions of professionals with work experience in the field of clinical nutrition. Barriers and opportunities were identified based on the functions performed by the CN and their work environment. The study notes the lack of time produced by an administrative system where the ratio number of beds/CNs is not fair, nor is the time that patients are scheduled for a professional. Public policies must work to legislate the adequate functions of the CN, avoiding professional intrusiveness, as well as to set guidelines that recognize the importance of these professionals in the public health system, with fair remuneration and recognition of merits. These actions could contribute to the improvement in the indicators of metabolic diseases, malnutrition due to deficit and excess, both of which affect the Latin American population.

The Functions of the CN and the Public System

It was found that one of the most perceived barriers for the CN was the lack of standardization of functions within the hospital. The excess of administrative activities means that CNs are devoted full-time to these activities, while patient care could be in the background. The lack of time for quality patient care was also related to the deficient control of the number of CNs that work per number of beds in the health services. This situation is a wake-up call to the public health system, since there is increasing evidence of the importance of nutritional care in patients and its benefits in the length of hospital stay, in the prevention of malnutrition⁶ related to complications and a suppressed immune system,¹⁶ and even in more severe complications such as admission to the Intensive Care Unit.¹⁷ In this sense, and in order to standardize the processes of these professionals, various protocols have been established, such as the NCP, which provides a framework to standardize care by all Nutritionists, regardless of practice area, with the aim of guaranteeing evidence-based care.¹³ However, this protocol cannot be used in all hospitals, since it involves a series of steps that include appropriate monitoring and follow-up. The results of this research indicate insufficient time for CNs to carry out

their activities and allocate time to patients, thus international guidelines should be considered in the formulation of consensus that regulate the functions and activities of these professionals.

Work Context of the CN

Low wages are common in almost all professions, which not only affect nutritionists, but the entire healthcare team. Low-paid work discourages professionals, since they do not see their daily effort reflected in a decent salary; a similar situation was found in a study in Chilean nurses, where salaries and promotions were the issues that cause the greatest dissatisfaction.¹⁸

Another negative point mentioned is the lack of recognition. Nutritionists indicated that they had to validate themselves against healthcare teams, since for other professionals, the activities of the nutritionist are unknown or given little importance; this is probably due to the lack of training in the formation of interdisciplinary healthcare teams, which affects teamwork and the quality of health care.¹⁹⁻²¹ It is likely that the impostor syndrome is hidden behind this lack of recognition, which is a psychological disorder in which successful people fail to internalize their accomplishments. A recent study including dietitians in the United States showed a high prevalence of this syndrome; it was found that older age, higher educational attainment and professional level, and membership in Academy of Nutrition and Dietetics groups were associated with lower syndrome scores. In contrast, greater use of social media was associated with higher scores.²²

Professional intrusion is also mentioned among the negative factors; an example of this is the situation in Chile, where the profession has more than 80 years and during the last decade regulations have been sought to be enforced in the National Congress (at least 2 projects) with respect to the definition and activities to be performed by both the nutritionist and other health professionals, however, despite the commitment of the governments in power and the willingness of senators and deputies, it has not been possible to specify a new Sanitary Code. To this day, professional intrusion is strongly present in the hospital and no legal tools are available to prevent this negative activity.^{23,24}

The strength of this study lies in having the perceptions and criteria of experienced professional CNs from 13 Latin American countries, which can give a good idea of the situation of these professionals in the region. We highlighted negative aspects reported by the professionals, but also positive situations that could be replicated in other countries. In this study, it was not possible to delve into more specific situations such as nutritional care in the Intensive Care Unit, neonatal care units, cancer patients care and other aspects that should be analyzed in future studies.

Conclusions

The main barriers and opportunities for CNs in 13 Latin American countries include specific work-related aspects, highlighting the lack of public policies and the poor recognition received by CNs, both economically and within multidisciplinary teams; however, opportunities were also identified, such as university agreements to have nutrition interns/residents in hospitals, the use of technology in the NCP, and the generation of international alliances in teaching and research related to healthcare and nutrition. Common themes were found in the analyses carried out in the 13 Latin American countries; however, we highlighted the differences that may exist in countries like Argentina, in which case aspects such as the regulation of care attention can represent a positive experience for other countries and lead to the improvement of the conditions of CNs unions.

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Supplemental Material

Supplemental material for this article is available online.

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