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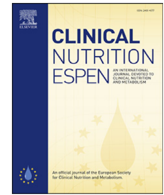

Original article

Nutrition care as a health policy in the 21st century: A phenomenological study

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SUMMARY

Background: Addressing the high prevalence of disease-related malnutrition (DRM) requires political will. The aim of this study is to define DRM as a health public policy issue from the point of view of the stakeholders.

Methods: We conducted a qualitative phenomenological study consisting of grey data search and individual semi-structured in-depth interviews with stakeholders (policy-makers, academics, and civil society organization representatives) from 17 Latin American countries. The analyzed themes reflected ideas repeatedly found across the interviews.

Results: 26 respondents were interviewed (5 policy-makers, 18 academics, 3 civil society organizations representatives). The grey data research and interviews showed that Brazil and Costa Rica were the only countries in the Region that had developed a specific public health policy addressing DRM and nutrition care issues. The rest of the Latin American countries had a nutrition policy which neither addressed DRM specifically nor included nutrition care, with important heterogeneity existing in terms of national regulation of selected nutritional care categories. Stakeholder opinions allowed to identify heterogeneity in the understanding of the nature and causes of DRM, confusing DRM with malnutrition caused by food insecurity and lack of food availability. Policy in the field of clinical nutrition can be addresses from two approaches: interdisciplinarity and a human rights-based approach.

Conclusion: DRM is an unaddressed problem by health policy. Due to internal and external factor related to the health systems DRM has not been able to become a public policy issue. The study highlights the need for the development of public policy in clinical nutrition aimed at improving access to nutrition care.

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1. Introduction

Disease-related malnutrition (DRM) is a global public health concern [1,2]. This type of malnutrition is caused by disease-related factors and is a very different from malnutrition caused by food insecurity or lack of food availability [3]. Its origin is multifactorial and includes impaired nutrient absorption, decreased food intake, disease-associated metabolic and inflammatory disturbances leading to altered body composition, and impaired physical and mental function [3]. Despite the fact that efficacy of nutrition care has been extensively documented, nutrition care implementation is deficient in most hospitals worldwide [1]. This was demonstrated in the analysis of the nutritionDay 2005–2015 worldwide data, where nearly 50% of the patients received nutritional care [1] and merely 32% of patients at nutritional risk in Latin America received some type of nutritional therapy [4]. Therefore, efforts must focus

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on the implementation of effective nutritional care programs that appropriately address DRM.

Different strategies have emerged worldwide to address these issues [5,6]. In Europe, this issue was addressed in a resolution of the Council of Europe in 2003 [6] and by the multi-stakeholder initiative “Optimal Nutritional Care for All” (ONCA) [7]. With the support from ONCA, DRM found a place in the political and social agenda in some European countries. For example, a national policy for effective screening implementation was developed in Portugal, while the “Másnutridos” national program was launched in Spain. In Latin America, this problem was addressed by scientific societies in the International Declaration on the Right to Nutritional Care and the Fight Against Malnutrition, named the Cartagena Declaration, signed in May 2019 [8]. For the first time, nutritional care was given the status of a human right and should be considered as a strategy to give visibility and draw the attention of policy makers to address these issues and overcome these barriers. The right to nutritional care should be understood as the responsibility of governments to ensure that “all people, especially those who are ill and at risk of malnutrition, are guaranteed access to nutritional care and, in particular, to optimal and timely nutritional therapy, in order to reduce the high rates of hospital malnutrition and associated morbidity and mortality” [8,9]. The Declaration provides a coherent framework of 13 Principles which serve as a guide for the development of programs and action plans [10,11]. This initiative needs to ripen and be under active consideration by policy-makers and followed by national regulatory actions.

Evidence-based information should be disseminated to policy advocates, who in turn, distribute the information to decision makers for policy or legislation development [10]. Therefore, the aim of this study is to define disease-related malnutrition as a health public policy issue from the point of view of the stakeholders by addressing the following questions: What are the views and perceptions of nutrition care stakeholders regarding DRM, the opinion regarding the current status of public policy and legislation on nutritional care, and the approaches for policy development?

2. Methods

We conducted a qualitative phenomenological study consisting of a document review and individual semi-structured in-depth interviews based on the policy analysis model by Eugene Bardach [11]. The phenomenon addressed was public policy interventions for the management of DRM, analyzed from the perspective of the stakeholders. The relevance of this approach for public health nutrition research has been previously highlighted including its relevance to develop theories which could help inform policy [12].

2.1. Data collection

Two data collection methods were used: document review and individual semi-structured in-depth interviews. Document review was used at the initial stage of the research to identify the current status of health policy in nutrition care in Latin American countries. Grey literature databases (i.e., policy reports, health policy documents and national legislation and regulations) were reviewed and a search for national health policy and legislation from 17 Latin American countries was conducted in Google. Information was extracted in a standardized format and coded according to nine categories, in order to facilitate the analysis:

1. Parenteral Nutrition
2. Enteral Nutrition
3. Dietary foods for special medical purposes
4. Oral Nutritional Supplements
5. Nutrition Support Team
6. Central Admixtures Pharmacy Services
7. Medical Devices
8. Home Artificial Nutrition
9. Nutrition Care Process (Screening, Diagnosis Nutritional Therapy and Monitoring)

We defined health policies as formal written codes, regulations and decisions and written standards that guide choices, laws, regulations, procedures, administrative actions, incentives or voluntary practices of governments and other institutions [13,14].

Semi-structured in-depth interviews were carried out between June 2020 and October 2020 to collect detailed information from three groups of purposively selected stakeholders: policy-makers, academia and representatives of civil society organizations (CSOs). A pilot test of the interview guide was conducted with one actor of each group in order to adjust the questionnaire. Data from the pilot test were not included in the final analysis.

Three sources informed the development of the interview questions: 1) A review of the literature that demonstrated the knowledge gap on public health policies in clinical malnutrition for Latin America; 2) The results of the grey literature review; and 3) The expertise of three of the researchers (DC, LAGB and GD). The first set of questions focused on the definition of the problem, inquiring about: a) who is affected by the problem, b) whether an intervention to address this problem is required, c) who should intervene and d) what would happen if there is no intervention. The second set of questions were aimed at gathering evidence on the existence of public policies addressing DRM or nutrition care, and constructing alternatives: a) specific nutrition care policies including comprehensive national and territorial plans or programs to address the issue of DRM, b) general public health policies that included the nutritional care process (i.e., screening, diagnosis and assessment of nutritional status, nutrition therapy products), and c) the foundations of policy and programs on nutrition care as a human right. Where policies were non-existent in the country, the respondents were asked to give their opinion. In those cases, in which policies were available, the respondents were asked about the history, the development process and their impact. The third set of questions addressed regulations pertaining to nutrition care organization and nutritional products.

Four members of the research team conducted the interviews (GD, AP, DC and LAG). Two interviewers attended each interview. One person asked the question while the other took notes to supplement the video recording. One researcher attended all the interviews (DC). The interview team consisted of two dietitians (GD and AP), a medical specialist in clinical nutrition (DC) and a doctor in political studies (LAG). The interviews were semi-structured, with open-ended questions in a suggested order, allowing interviewers to deviate from specific questions to elicit new themes and information.

The interviews were held and recorded through video calls using the zoom platform, and each interview lasted between 20 and 40 min. All interviews were taped, transcribed verbatim and uploaded to ATLASti software (version 9 for Windows).

2.2. Sampling and recruitment

We used a homogeneous purposive sampling technique to recruit participants [15]. This technique is pertinent because the research question is specific to the selected groups: policy-makers, academics, and CSO representatives. The focus in selecting these participants was to get a representation of the different groups of stakeholders who were involved in nutrition care practice, policies and programs. Eligibility criteria included Spanish or Portuguese-

speaking adults over 18 years of age, with more than 10 years of experience in the field of clinical nutrition for the academic group; being currently a policy-maker or decision-maker at a national level for the policy-maker group; representing a CSO concerned with the use of nutrition care, for example as patient, relative or CSO director. Recruitment of policy-makers and CSO interviewees was stopped when similar quotation emerged (i.e., Saturation technique). Candidates were contacted by email. If the participant accepted, the informed consent and a guide for the interview with current vocabulary in DRM and nutrition care were sent a week prior to the interview.

2.3. Data analysis

Quality control checks were performed for each transcribed interview by the interviewers. The transcripts were thoroughly read by three researchers involved in the analysis. The interviews were analyzed by assigning codes to structural and emergent information and expressed views. Codes were derived from the research questions. Words, phrases, and segments of text were coded, grouped together, rearranged and categorized to identify similar concepts, emerging themes, linkages and associated codes. The themes were derived from the analyzed data and reflected ideas found repeatedly across the interviews. Four researchers (DC, AP, GD, and DCH) participated in data coding using the qualitative data analysis software ATLASti 9. This software was used to assist with code creation, code inter-relation, data organization and summary, and theme identification. Codes were compiled into a code book along with their individual definitions. Emerging concepts and themes were discussed and analyzed by the team.

Ethical approval for the study was obtained from El Bosque University Research Ethics Committee (UEB 003–2019). All participants provided written informed consents. Confidentiality was guaranteed to participants. Interviews were recorded only with interviewee permission.

3. Results

3.1. Document review

Our search showed that Brazil and Costa Rica were the only countries in the region that have developed a specific public health policy addressing DRM and nutrition care issues. The rest of the Latin American countries have nutrition policies but none specifically addressing DRM or nutrition care.

High heterogeneity was observed concerning national regulations and legislation of selected nutrition care categories. Every country was found to have specific regulations on oral nutritional supplements. However, none have a specific legislation on any of the steps of the nutrition care processes in the clinical context or on nutritional risk screening. Regulation of Dietary Foods for Special Medical Purposes (DFSMP) varies, with great gaps and high definition variability. Table 1 shows national health policies, legislations and regulations pertaining to nutritional care in 17 Latin American countries.

3.2. In depth and semi-structured interviews

3.2.1. Participant characteristics

In all, 26 respondents from 17 different Latin American and Caribbean countries were interviewed: 5 policy-makers, 18 academics, 3 CSO representatives. All the academic respondents were members of the national clinical nutrition society (one for each of the 17 Latin American countries, 2 for Mexico). Of these, two respondents had been involved in formulating policy documents in their respective countries. The policy-makers were government officials or legislature representatives; CSO representatives were 2 patients and 1 president of a non-governmental organizations concerned with clinical nutrition Table 2 shows the characteristics of the respondents.

3.2.2. Key themes

Key themes arising from the interviews were: the problem (DRM), indirect or direct deficiencies in nutrition care, individual current intervention, associated policy guidelines, and recommended approaches for future policy making (Fig. 1, Table 3). The themes are presented below in the form of narrative text supported by verbatim quotes. Respondents are identified by type of stakeholder and study ID number.

3.2.2.1. The problem: disease-related malnutrition. Respondent comments reflected that the problem of DRM is not recognized homogeneously by the stakeholders. Academics recognize that DRM is a highly prevalent disease-related problem worldwide which still remains untreated: “We know today about the problem of DRM, but we do not deal with it” (Academic 1). One policy-maker had difficulties recognizing this kind of malnutrition, confusing DRM with malnutrition caused by food insecurity and lack of food availability: “In particular, we are fortunately facing less and less problems with malnutrition, especially in children, while we have a serious problem with over-nutrition” (Policy-maker 24). This confusion is also acknowledged by a doctor: “The problem is focused on primary nutrition, for example, child malnutrition, while there is very little or no intervention in other areas” (Academic 3). For a patient needing long term total parenteral nutrition the problem was finding an expert capable of treating this problem: “Since they couldn't find a way to take care of me here, my children looked for a doctor to treat me elsewhere” (CSO 19). An NGO director feels that the problem of DRM has to do with the way medical nutrition is understood, and with access to nutritional products: “If I have a child with wounds that is fed bread, water and “arepa” (a traditional food made of ground maize dough), it is difficult to achieve our objective.” (CSO 20). Among the interviewed, there is a consensus on the lack of clarity of the nature of the problem. For example, one dietitian said “There is no clarity on the problem; what is missing is the definition of the problem, I believe it is not sufficiently defined” (Academic 14). A common feeling among all stakeholders is the disregard for nutritional care of patients, as reflected by one academic's comment: “Talking about malnutrition is like putting your finger on a sore spot that nobody wants to touch, because it reflects a problem of abandonment, because it reflects a problem of negligence.” (Academic 8).

In order to define the problem, two key categories were identified: the individuals affected by the problem, and the impact on healthcare systems. Interviewed academics identified the patients as being the most affected by DRM, “I think it affects everyone, mainly the patients.” (Academic 1). This can occur at the hospital arrival or during the hospital stay: “In the hospital, the patient's nutritional status worsens” (Academic 2). A patient recognized that the disease and the lack of food contributed to his malnutrition “when I was without food, I lost a lot of weight.” (Patient 19) In view of the difficulty to identify DRM as a disease-related condition, some policy-makers identified the food insecurity vulnerable population as the most affected: “I believe that the vulnerable groups are affected.” (Policy-maker 25).

The health care systems are being identified as affected by the high prevalence of DRM and the failure to deal with the problem: “Obviously that is going to fall on the system, on the hospital and on the rest of the health system.” (Academic 4), “The other major affected party is undoubtedly the health care system itself, be it in

Table 1
National health policies, legislations and regulations pertaining to nutritional care in Latin American countries.

Country	Clinical nutrition categories									
	PN	EN	ONS	DFSMP	NST	CAPS	MDevs	HAN	NCP	National health policy
Argentina	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Bolivia	No	No	Yes	No	Yes	No	Yes	No	No	No
Brazil	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Chile	Yes	No	Yes	No	No	No	Yes	Yes	No	No
Colombia	No	No	Yes	No	No	Yes	No	No	No	No
Costa Rica	No	No	Yes	No	No	No	Yes	No	No	Yes
Cuba	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	No
Ecuador	No	No	Yes	No	No	No	Yes	No	No	No
El Salvador	No	No	Yes	No	No	No	Yes	No	No	No
Guatemala	No	No	Yes	Yes	No	No	No	No	No	No
Mexico	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No
Panama	No	No	Yes	No	Yes	No	Yes	Yes	No	No
Paraguay	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Peru	Yes	Yes	Yes	No	Yes	No	Yes	No	No	No
Dominican Republic	Yes	No	Yes	No	No	No	No	No	No	No
Uruguay	No	No	Yes	No	No	No	Yes	No	No	No
Venezuela	No	No	Yes	No	Yes	Yes	No	Yes	No	No

PN: Parenteral Nutrition; EN: Enteral Nutrition; DFSMP: Dietary foods for special medical purposes; ONS: Oral Nutritional Supplements; NST: Nutrition Support Teams; CAPS: Central Admixtures Pharmacy Services; MDevs: Medical Devices; HAN: Home Artificial Nutrition; NCP: Nutritional Care Process (Screening, Diagnosis Nutritional Therapy and Monitoring).

Table 2
Interview respondent characteristics.

Stakeholder	Id # and profession	Countries
Academics	1 Doctor	Argentina, Bolivia, Brazil, Chile,
	2 Doctor	Colombia, Costa Rica, Cuba,
	3 Doctor	Dominican Republic, Ecuador,
	4 Doctor	El Salvador, Guatemala, México,
	5 Doctor	Panama, Paraguay, Peru, Uruguay,
	6 Doctor	Venezuela
	7 Doctor	
	8 Doctor	
	9 Doctor	
	10 Dietitian	
	11 Dietitian	
	12 Dietitian	
	13 Dietitian	
	14 Dietitian	
	15 Dietitian	
	16 Dietitian	
	17 Pharmacist	
	1. Nurse	
CSO representatives	19 Patient	• Colombia
	20 Patient	• Mexico
	21 NGO Medical director	• Guatemala
Policy-makers	22 Legislator	• Colombia
	23 Legislators	• Mexico
	24 GE	• Guatemala
	25 GE	
	26 GE	

CSO: civil society organization, NGO: Non-government organization, GE: Government employees (Health Ministry).

our country, public, private or insurance companies, whoever is the payer is also affected." (Academic 5), "moreover, it even affects the country's economy." (Academic 10). A policy-maker identifies that the problem worsens in the context of COVID 19 "Now with Covid it is very noticeable and patients go many days without adequate nutrition" (Policy-maker 24).

3.2.2.2. Indirect and direct deficiencies in nutritional care. Despite the fact that the three types of interviewed stakeholders expressed concern regarding the lack of nutrition care, their views regarding the main causes varied. The reported causes of inadequate nutritional care according to the stakeholders are outlined in Table 4.

The consequences of DRM and of non-intervention have been identified by academics and policy-makers as being mainly and increased rate of complications and mortality, "Patients develop more complications, or die more in the hospital, or die more at home." (Academic 5) Other identified consequences have to do with economics: "This has a direct repercussion on patient recovery and also on the economy; more is spent and the economy of hospitals, patients and the population are more affected." (Academic 12).

The indirect deficiencies in nutrition care can be grouped into three aspects: the lack of public policy, policy recognition, and the legal aspects of nutrition care. The lack of public policies addressing the problem of malnutrition and deficient nutritional care has been described. Two main causes were reported by academics and policy-makers alike. First, the lack of visibility and recognition of the problem. This point was addressed by an academic stakeholder who expressed that since DRM is inherent to the disease, and has always existed, "It does not attract attention [as a public policy issue], probably because there are other priorities or other pathologies that are considered much more important" (Academic 4); another stakeholder thinks that as clinical nutrition is a relatively new discipline, the lack of public policies has to do with "the maturity of the discipline" (Academic 6). A policy-maker revealed that DRM in the hospital is not visible, "So the issue of nutrition is not valued as it should; the eyes do not see what the head does not think". (Policy-maker 24). The same policy-maker considered that the lack of visibility of the problem among policy-makers can be explained by the lack of healthcare professionals among this kind of stakeholders: "So trying to show this problem and make it visible in the same way as they give visibility to the lack of fertilizers in the countryside, when eight of the deputies you are talking to are farmers, is a little more complex." (Policy-maker 24). Second, the lack of recognition of the cost-effectiveness of nutrition care has been also identified as a cause of lack of public policy addressing the problem of DRM and nutrition care. One academic stated that "Hospital nutritional support does not make a good topic for marketing. It is a dormant job, it is great, it is very rewarding for the soul but in reality, it does not work for marketing as would be the case with a slimming clinic or another disease." (Academic 4).

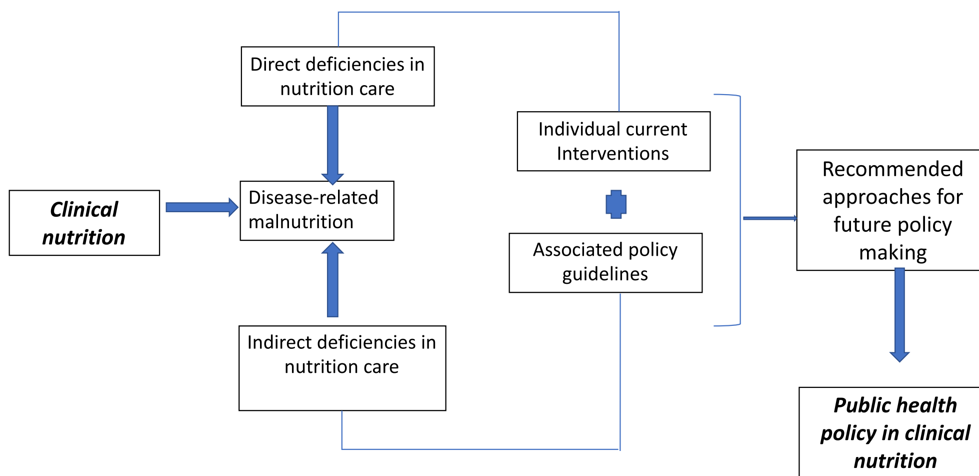

Fig. 1. Data analysis. Concept map of themes.

Table 3
Themes and codes for interview data analysis.

Theme	Definition	Atlas.ti Codes
The problem: Disease-related malnutrition	Mechanisms through which malnutrition is manifested or recognized	1. The problem of DRM 2. Affected by DRM 3. Patients Affected by DRM 4. View of the Health care systems
Indirect or direct deficiencies in nutritional care	Reasons for DRM occurrence associated with lack of nutritional care in healthcare	5. Causes of highly prevalent DRM and deficiencies in nutritional care 6. Consequences of highly prevalent DRM and deficiencies in nutritional care 7. Causes of lack of public policy 8. Consequences of no intervention 9. Policy acknowledgement/recognition 10. Legal aspects
Individual current Intervention	Processes that intervene tangentially or from individual motivation	11. Associated policy 12. Regulation
Associated policy guidelines	Experience of countries that have developed policies to address it	13. Nutritional care policy
Recommended approaches for future policy-making	What is specifically proposed to build the policy	14. Intervention 15. Intervention owners 16. Human rights

DRM: Disease-related malnutrition.

3.2.2.3. Associated policy guidelines. In the first part of this research, grey data and literature review allows us to identify that in Latin America only two countries have developed specific public health policies addressing the problem of DRM and nutritional care. The interviews allowed us to confirm the results of the grey data search. Associated policy guidelines were considered by the interviewees as interventions that partially addressed the problem at the institutional or national level. According to academic stakeholders, associated policy guidelines are mostly related to hospital milk banks, and access to nutritional products: “What little there is in public policy is focused on the acquisition of enteral nutrition products”. (Academic 5) Moreover, according to the interviewees, although institutional guidelines may exist, they focus mainly on access to nutritional products but do not cover the different steps of the nutrition care process (screening, diagnosis, assessment, nutrition therapy and monitoring). An interviewed policy-maker stated that “Each institution has its own guidelines, but there are no national guidelines.” (Policy-maker 25). Meanwhile, an academic recognized that “There is a resolution of the Ministry of Health on clinical practice guidelines for enteral and parenteral nutritional support in hospitalized and home care patients” (Academic 17).

3.2.2.4. Current individual interventions. In Latin America, some initiatives have tried to put the problem of DRM on the public policy agenda, without success. In Uruguay, a draft bill of law was submitted to the legislature without success. An interviewed academic actor recognized that “A preliminary draft that was not touched during a whole legislature; and now we pray that in this new legislature that has now taken office, we can take up the issue again”. Only two countries, Brazil and Costa Rica, have managed to garner attention for this problem at a national policy level. Over the past three decades, these two countries have been developing national policies and regulations addressing the problem of DRM and nutrition care. In Brazil, the starting point for this development was the publication of studies showing the situation of malnutrition in the country's hospitals. According to the academic actor “It was in 1999-2000-2001, when all the provinces adopted their own regulations, and eventually all adopted the national policy … It was then, due to the results of the IBRANUTRI study, that we managed to reach the government, to have several meetings with the minister and with the health technicians and then to develop all the rules about hospital nutrition.,(…) the reason for the study was just to show the government that we had problems, that the problem

Table 4
Reported causes for the high prevalence of disease-related malnutrition and deficiencies in nutrition care according to stakeholders.

Criterion	Academics	Policy-makers	CSO
Economic factor -Reimbursement of nutritional products	"Lack of resources" (Academic 2) "We have evidence that there are no resources in the healthcare systems." (Academic 5)	"Expenses are paid out of people's pockets" (Policy-maker 24)	"Policies cover expenses up to a certain amount." (CSO 20)
Lack of awareness and visibility	"Lack of awareness of the problem, especially on the part of the physician." (Academic 5) "Lack of visibility; it is perceived as something secondary and not as a fundamental pillar of patient treatment." (Academic 16) "Most boards of directors and hospital managers do not take nutrition into account." (Academic 8) "The issue of malnutrition and its treatment is a subject that is not considered indispensable for hospitalized patients" (Academic 17)	"This aspect is never given enough importance." (Policy-maker 25) "What happens is that malnutrition does not hurt. Pain is taken care of. Thus, it should be treated in the same way as the right of patients not to suffer pain." (Policy maker 25)	"Medical unawareness of nutrition or nutritional intervention." (CSO 20)
Lack of healthcare professionals education	"Lack of training of medical professionals in clinical nutrition." (Academic 9) "If there is no adequate training on the importance of nutrition, lack of awareness, knowledge and education in health professionals." (Academic 12) "Ignorance of the effects of malnutrition, no idea or understanding of how much malnutrition and its complications, increased hospital stays, and costs can cost." (Academic 8) "There is no specialty for clinical nutritionists" (Academic 10)	"Education in nutritional support is an aspect that is generally lacking in physicians and residents." (Policy-maker 25)	"Initially, the doctor called some place for the parenteral nutrition, but they sent a nutrition that would be as good for me as for Mr. Juan Perez, that is to say, a nutrition that would do for just anyone." (CSO 19)
Lack of health care professionals	"Lack of dietitians in hospitals." (Academic 10) "Very few hospital have a nutrition support team." (Academic 19) "There is a person in charge of coordination of hospital nutrition." (Academic 14)		
Iatrogenic	"Talking about malnutrition is like putting your finger on a sore spot that nobody wants to touch, because it reflects a problem of abandonment, because it reflects a problem of negligence." (Academic 8)		
Lack of knowledge and awareness among hospital administrators	"Hospital administrators lack knowledge and awareness of nutritional problems or have no idea of the real dimension of hospital malnutrition." (Academic 8) "If you tell an administrator, 'I need this product' his answer will be that it is not a priority; he is not interested, he does not see any benefit in incorporating this product to the current portfolio." (Academic 18) "Managers are not interested; what is a worse is that managers are not interested in nutrition. For the manager it is all about food, not really about nutrition." (Academic 18) "I think that hospitals are patronizing and absolutely ignorant when it comes to nutrition; they believe that having a good kitchen is synonymous with good nutritional care." (Academic 18)		
Lack of DRM diagnosis criteria and nutritional care indicators	"Another cause is the lack of malnutrition criteria and nutritional care indicators. So how can one approach the problem without a way to identify it or measure it?" (Academic 11) "Malnutrition is under-diagnosed, and there are no statistics to prove the need for personnel or human resources, or supplies or manpower dedicated to malnutrition." (Academic 7)		
Lack of data on the problem	"Some countries such as Bolivia do not have data on hospital malnutrition at a country level. It was something that worried us because, obviously, without information how can one find the support to continue advocating for this issue. Thus, no one at the level of the authorities attaches any importance to the problem." (Academic 11)		
Lack of economic compensation	"If we look at support groups, they lack resources and are very poorly paid." (Academic 18)		
New discipline	"Nutrition in some countries is relatively new with respect to other fields of medicine. Thus, it has not been integrated into the medical field." (Academic 7). "The most important problem of Clinical Nutrition lies in the definition that goes through the minds of those of us who have some relation with this problem about what is Clinical Nutrition. What is Clinical Nutrition? What does it focus on? Who should do it? Why is it important? And there is where all the mess starts". (Academic 14) "If a patient needs to receive enteral nutrition at home, this nutrition is not seen as nutritional therapy" (Academic 14)		
Access to, and regulation of, nutritional products	"Access to food products is very precarious." (Academic 15) "For some products, when they reach the market, it is difficult to define if it is regulated by the General Directorate of Food, or will be regulated by the General Directorate of Medicines." (Academic 14) "There are difficulties to introduce new products in the country; there are no regulations for handling those products." (Academic 14)	"Not all hospitals have the possibility of providing nutrition, whether enteral or parenteral, to patients who require it." (Policy-maker 25)	
Lack of national regulation and guidelines on clinical nutrition	"We do not have a national guideline" (Academic 14) "The fact that there are no regulations." (Academic 10)		

CSO: civil society organizations; DRM: Disease related malnutrition.

was not recognized and that it would be necessary to change policies" (Academic 1). The interviewed actor participated in the development of the policy: "We actively participated with the policy-makers and government technicians - when I say "we", I mean the Brazilian society - and we discussed each stage of the process."

The impact of the development of these policies and regulations was important for Brazil. According to the same interviewed academic actor, "At that time, the government only paid for parenteral nutrition but not for enteral nutrition, so it was also a way to show that there were simpler, more low-cost ways to treat a patient" (Academic 1). Despite the fact that Brazil developed policy and legislations on nutrition care, the problem of DRM and the lack of nutrition care needs still to be addressed. The academic actor explained it: "However, although Brazil is one of the countries where we have had regulations for a couple of years now, there are still problems in the hospitals … since the end of the last century, in the 90's, the Brazilian government created rules for all hospitals on the importance of screening and early intervention; so the rules are in place and they are very thorough. There is no lack of rules or protocols or direction on how to do things. The issue is that there is no oversight to determine compliance". (Academic 1).

On the other hand, in Costa Rica, public policies and legislation have been developing since the 1980s. As explained by the academic stakeholder "At the hospital level there are specific standards for enteral and parenteral nutritional support. There are specific manuals on how it is done, each hospital has its own area for the preparation of parenteral and enteral nutrition, there are specific manuals that must be complied with not only for use but also pertaining to equipment and construction, and all of this is regulated and is part of specific guidelines." (Academic 2) Patient access to nutrition care was the main benefit of developing policies and regulations in nutritional care in Costa Rica, according to the same interviewed academic actor: "Yes, I think they have helped at least to offer nutritional therapy to patients who require it at the hospital level, and they have also helped us to unify the care provided. (Academic 2).

3.2.2.5. Recommended approaches for future policy-making. Two approaches were identified as fundamental for the development of policy in the field of clinical nutrition: the human rights-based approach and the interdisciplinarity approach. The three types of stakeholders recognize the importance of these approaches. "The approach of the right to nutrition that has been raised as a pillar since the Cartagena Declaration, as a driving force for the development of the policy (…) I think it is implicit in the right to health; with no right to health and the basic right to food, which are fundamental rights, there is nothing" (CSO 20). A policy-maker states that nutrition care "would fall within the framework of the right to health and the right to food." (Policy-maker 24) An academic actor states that "The policy is based on human rights, "specifically on the right to life, because nutrition is life" (Academic 1). Concerning the interdisciplinary approach, most of the academic actors underline the importance of the convergence of different disciplines in nutrition teams: "Intervention is needed, specialized intervention, creation of interdisciplinary support groups" (Academic 4). "Undoubtedly, interdisciplinarity is a cornerstone of nutritional care" (Academic 5). "There must be an interdisciplinary team, because one swallow does not make a summer" (Academic 8).

Stakeholders have stated that those responsible for policy development in the field of clinical nutrition should be led by specialists in order to come up with clear evidence for decision-makers, "Always the members of the healthcare team but, obviously, the more we are, the more strength we will have and the more we will be able to include in government and health policies" (Academic 4). A single person should not be expected to make the decision and take the lead; I think that scientific societies such as nutrition societies, are the example and should take the first steps to demonstrate the problem, bring the problem to the stakeholders, in this case the public and private system. But this is a job for all of us." (Academic 1).

Patients have been identified as playing a role in the development of the policies, "When the patients, the final recipients of these working groups intervene, things move more quickly." (Academic 4). Scientific societies have also a role to play "I believe that medical organizations, especially underpinned by the academies of this country, should be the means to bring this to the public debate" (Academic 5). "The people in the front lines in this case are the physicians. If they submit an interdisciplinary initiative through the strongest organizations in this country, it will make it into public policy or a law in the Lower Chamber" (Academic 5). The interviewed academic actors highlighted that the policies should include all levels of healthcare, including primary healthcare. "This must be a joint system in which the entire health system must participate, starting with primary care physicians and the whole primary care team." (Academic 2).

4. Discussion

This is the first qualitative study aiming at gaining insights on the current status of public policy in nutritional care and DRM, exploring key stakeholder opinions in order to recognize DRM as a policy issue, and identifying the approaches needed for future development of policy in the field of clinical nutrition. Acknowledging that the process of policy development is complex [10], this study was framed within the first four steps of Bardach's policy analysis [11]: define the problem, assemble some evidence, construct the alternatives, select the criteria.

According to this approach, the problem should be defined in such a way as to allow research into its specific variables. That is why the first part of the study, grey data search, show us that we are facing a totally new research field, that of clinical nutrition and health policy. This was confirmed after a bibliographic search of scientific articles exploring this topic. The topic has been addressed by some authors who express their concern about the subject [1], but we have not found in different databases (PUBMED, Scopus, Embase) any articles delving into the subject. The grey data search allows us also to underscore the challenges Latin American countries face when building a public policy on nutritional care, including the high heterogeneity of nutritional care regulations and the lack of public policies on DRM and nutrition care processes. It is important to emphasize that Latin American health systems tend to be overburdened and to operate in a reactive manner, attending to the "most serious" problems. Thus, the way DRM could be included in this "list of priorities," and the reasons why it has been ignored (haphazard neglect versus scarcity of resources in the face of innumerable challenges to be addressed) needed to be addressed based on stakeholder opinions.

In view of these results, we interviewed three groups of purposively selected stakeholders (policy-makers, academics and CSO representatives, including patients) who helped characterize the problem of DRM, made a diagnosis of the causes and consequences of the problem, and gave their perspectives and opinions on health policy development. The interviewed stakeholder opinions provided us with the elements for defining criteria and selecting categories and variables for analyzing policy development.

The three types of stakeholders were selected in accordance with the relevant stakeholders involved in nutritional care described by M. Hiesmayr and colleagues [1,16]. The views and

opinions of interviewed stakeholders lead to the realization that DRM is widely under-recognized and under-treated condition, and is not perceived in the same way by all stakeholders. The views of some interviewed policy-makers reflect that DRM is an unknown issue and that malnutrition is believed to be associated with food insecurity and community malnutrition. The lack of awareness of the importance of nutrition in disease states, particularly in the clinical context, has been previously reported by other authors [1,2] and has been recognized as a problematic area which calls for political action (i.e., nutrition care campaign, education for patients and families, etc.) [1]. This lack of visibility and knowledge of the problem has been confirmed by the academics interviewed. In order to move forward in the definition of public health policy for nutritional care, DRM and its impact should receive more visibility and recognition.

In order to characterize the problem, direct and indirect deficiencies in nutritional care were identified by the interviewees. The nutritional care process and access barriers to the different stages are at the core of the problem. The nutrition care process has been recognized as being a “systematic problem-solving method used by food and nutrition professionals to think critically and make decisions that address practice-related problems.” [17,18] The results of our study highlight the challenges associated with incorporating the identified nutrition care practice steps that are required to support the evidence-based approach to the development of effective legislation, policies and programs.

Based on the results of the study, we were able to recommend the approaches needed for future development of policy in the field of clinical nutrition, according to the views and opinions of the stakeholders. It appears that the human rights-based approach (HRBA) and the interdisciplinarity approach should be at the core of policy. Both approaches have been recognized in key publications as being central to the fight against DRM. The HRBA is identified as having a rhetorical power that can contribute to define policy guidelines [19]. According to Principle #1 stablished in a position paper published by an international working group, “Public health policy must make fulfillment of the right to nutritional care a fundamental axis in the fight against DRM” [9]. Interdisciplinarity has been recognized in the Cartagena Declaration as being an approach that “involves the equitable integration of the various disciplines related to nutritional activity.” [20] Moreover, scientific evidence shows the advantages of this approach in terms of cost-effectiveness, safety and efficiency [21].

The study shows that in Brazil, despite the fact that policy and legislations on nutrition care have been developed since the 1990′s, the problem of DRM and the lack of nutrition care needs still to be addressed mainly due to policy and regulations implementation failures. The gap between what is defined as a policy and what is executed has been recognized as a critical issue in policy implementation [22]. Understanding why these gaps are generated and how to reduce them is the subject of current research on policy implementation [23]. The results of the interviews showed that health personnel have tried to intervene directly in the problem. It would be key for public policy to systematize this “know how” in order to develop strategies based on processes that are already working in practice.

According to Brownson et al., public health policy in the form of laws, regulations and guidelines, has a profound impact on the health status of the population [20]. Some public health achievements of the 20th century have been influenced by policy changes such as tobacco control and Maternal and Infant Health [24]. That is why this study aims at positioning the problem of DRM and the access to nutrition care in the public policy agenda. Policy relevant evidence includes both quantitative (e. g. epidemiological data) and qualitative information like the one obtained in this study. Moreover, the formulation of public health policies depends on a variety of scientific, economic, social and political inputs. Thus, this study highlights two approaches for a policy brief and public health policies on nutrition care. That is why we believe that our study provides an original assessment of stakeholder opinions on the problem of disease-related malnutrition and its treatment through the process of nutrition care.

This study has some potential limitations. The interviews were based upon purposive sampling, and content saturation techniques were applied to CSO and policy-makers. Acknowledging that wide generalization of qualitative study results is not to be expected, more studies are need in order to strengthen this kind of analysis. Interviewing a limited number of policy-makers may be considered a limitation. Understandably, it is difficult to find stakeholders of this kind willing to participate, given the low level of awareness on the subject. Hopefully then, these results will increase awareness and future participation of these stakeholders in research.

Despite these limitations, our study strongly suggest that significant gaps remain in terms of the nutrition care legal framework and that there are some great opportunities for policy creation in this field. Without public health policy and regulatory frameworks to ensure that every ill individual has access to nutrition care, patient quality of life, excess morbidity, mortality and healthcare costs will continue to be impacted by DRM and deficient nutrition care. The 21st century will be marked by the COVID 19 pandemic. The interviews were performed a few months after the beginning of the pandemic, perhaps bringing tome to the participants the importance of nutrition care as an integral part of the treatment of the disease. However, the body of knowledge is sufficient to indicate that the problem of DRM precedes the pandemic and that the latter was a trigger to affirm the need for intervention at the political level.

4.1. *Perspective for clinical nutrition*

The results of this study allow for the first time to consider opportunities for the development of nutrition care policies. The joint work of opinion leaders in clinical nutrition should focus on placing the problem of access to nutritional care in the political agenda in order to work hand in hand with CSOs and policy-makers. Therefore, a much greater effort is required at all levels in order to advocate for effective legislation, policies and programs, including all the categories identified for addressing clinical nutrition practice.

The opportunities should focus on the formulation of public policy guidelines on clinical nutrition aimed at promoting, in each country, the generation of plans, projects, goals and indicators, so that health systems can measure the progress in DRM and its burden.

5. Conclusion

This study highlights the heterogeneity of nutrition care regulations and the lack of public policies addressing the problem of DRM and the access to nutrition care processes in Latin America. DRM has not been able to become a public policy issue due to factors both internal and external to the health systems. There is a need to develop public health policy in this field, based on the human rights-based and interdisciplinarity approaches. We draw the attention of stakeholders to the particular problem of DRM and nutrition care access and propose two approaches for the development of public policy in nutritional care.

Statement of authorship

Conceptualization, Diana Cardenas and Charles Bermudez; Atlasti software, Diego Chaparro and Irene Parra; Data curation,

Rafael Adrián Pacheco-Orozco, Diego Chaparro, Luis Alejandro Gomez-Barrera and Angélica Perez; Formal analysis, Diana Cárdenas, Gustavo Díaz, Irene Parra-Garcia, Luis Alejandro Gomez-Barrera; Methodology, Diana Cardenas, Irene Parra-Garcia, Luis Alejandro Gomez-Barrera; Writing-original draft, Diana Cardenas and Gustavo Diaz; Writing-review & editing, Diana Cardenas, Gustavo Diaz, Charles Bermudez, Rafael Adrián Pacheco-Orozco, Diego Chaparro and Luis Alejandro Gomez-Barrera, Angélica Perez and Irene Parra-Garcia.

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Declaration of competing interest

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