O MUNDO DA SAÚDE

DOI: 10.15343/0104-7809.202448e16052024I

Insights into nutrition education: a qualitative interpretive meta-synthesis from the Latin American perspective

Alexandra Pava-Cárdenas[1] Teresita Alzate-Yepes[2] Ana Maria Cervato-Mancuso[3]

[1]Departamento de Alimentación y Nutrición, Facultad de Ciencias de la Salud. Pontificia Universidad Javeriana Cali, Colombia.
[2]Escuela de Nutrición y Dietética, Universidad de Antioquia, Medellín, Colombia.
[3]Departamento de Odontologia Social, Universidade de São Paulo – USP. São Paulo, Brasil.
E-mail: alexandra.pavac@javerianacali.edu.co

Graphic Abstract

DOI: 10.15343/0104-7809.202448e16052024I

Abstract

Studies about health education have focused more on what is taught than on who is learning. This article reports the findings of a qualitative interpretive meta-synthesis (QIMS) on patients' experiences which emerge during participation in educational interventions on food and nutrition in Latin America. A search for studies based on constructivist, hermeneutic or interpretive paradigm published between 2006 and 2020 encompassing nine databases was conducted, identifying 1,676 records. Three stages were contemplated: I) identification of the sample through characterization and quality assessment forms, resulting in nine studies; II) extraction of themes addressed in the research results to understand the participation experiences, and III) translation of data and synergistic comprehension through an integration of experiences, including a new categorization of themes. The QIMS generated seven themes: "social conflict", "insecurity", "sacrifice", "care", "valuing the approach", "change in understanding" and "learning". Given the level of detail regarding the social reality in which participation occurs, the themes highlight three dimensions that are crucial in food and nutrition education from the patients' perspective: "life history", "food configuration" and "educational appreciation". The complexity of patient experiences demands an approach that better acknowledges the configuration within the encountered dimensions. This necessitates exploring how individual patient experiences relate to the broader context of nutrition and food education in the Latin American region.

Keywords: Systematic Review. Diet, Food and Nutrition. Patient Education as Topic. Latin America.

INTRODUCTION

In combating unhealthy eating habits, education emerges as a potent tool[1]. Despite substantial efforts, interventions encounter barriers, particularly when applying theoretically relevant frameworks. Previous systematic reviews using quantitative survey data indicate that the effectiveness of food and nutrition education (FNE) stands at 57.5%[2].

This is critical in Latin America where the prevalence of insufficiency of more than 50% for most nutrients[3]. For example, in Mexico and Brazil, over 22% of the adult population is obese, which is associated with unbalanced diets and deficiencies in essential micronutrients such as iron and vitamin A. In Peru, 10.8% of children under suffer from stunting, highlighting the need for effective, locally tailored educational interventions[4].

Despite progress in FNE within technical public policy documents, especially in Brazil and international organizations, Latin America lacks substantial scientific production on this topic. This gap is due to the absence of a consolidated concept of FNE, which needs further exploration[5,6]. Addressing this issue is crucial in Latin America, where food deficiencies persist despite efforts to promote healthy eating. Current studies often focus on professional processes and topics, neglecting the how and why of education and patient experiences[6,7].

In the expanding realm of qualitative research in FNE, there is increasing literature on how participants engage with educational programs in this field[6]. Clark-Barol *et al.*[8] have explored participant narratives to uncover how individuals interact with these programs, particularly focusing on affective factors. Despite these insights, the appreciation of participants' advancements in FNE often eludes professionals. Furthermore, professionals acknowledge the need for enhanced training and competencies to better support program participants, yet this area remains underexplored in existing literature[9,10].

Meta-studies aim to group qualitative studies on a specific phenomenon to gain deeper insights, employing an approach known as meta-synthesis. This approach, which addresses social constructs as its philosophical basis, acknowledges the coexistence of multiple singular objectives and the inconsistency among realities. The outcome does not seek to be a prescription for practice but rather a reflection on various interpretive tools. The goal is to construct a reality that is more plausible, coherent, comprehensive, and useful compared to the current understanding[11].

In the field of food and nutrition, qualitative research has been instrumental in understanding the experiences lived by participants in educational interventions. However, there

DOI: 10.15343/0104-7809.202448e16052024I

is a need for a more comprehensive review of relevant literature to properly contextualize this study within the broader landscape of research. Therefore, in light of the current research landscape in FNE, this study seeks to explore the experiences lived by participants in educational interventions on food and nutrition in Latin America.

To advance the theoretical framework of health education, it is crucial to integrate the findings of qualitative studies conducted in Latin America. Currently, there is a significant gap in understanding patients' experiences during their participation in FNE in the region. This study aims to address the key research question: What are the experiences of patients during their participation in FNE? This question arises from the recognition that experiences extend beyond formal educational elements to encompass what participants gain from these interventions. Given the scarcity of comprehensive studies on this topic in Latin America, this research seeks to fill this gap and provide a more holistic understanding of patients' experiences within the context of FNE in the region.

METHODOLOGY

The use of evidence in the form of qualitative synthesis has the potential of contributing to patient-centered concepts and methods[12,13]. The aim of qualitative interpretive meta-synthesis (QIMS) is to emphasize a holistic approach to the phenomenon, i.e. to create a synergy among the qualitative data, based on the constructivism paradigm[14]. The study comprised three phases involving the coauthors practitioners in nutrition and experienced in qualitative research and health education.

Phase: Sample Identification

The literature search was conducted using Microsoft Excel 2017. Sampling was performed on 9 bibliographic databases, each with a devised search strategy for uniformity (Table 1). Equations were then applied to identify and exclude duplicates (Fig. 1). Articles were verified against inclusion criteria based on their titles, abstracts, and full texts.

When necessary, we used a Microsoft Excel spreadsheet to verify inclusion criteria: a) available digitally; b) actions involving FNE; c) focus on the perspective of the educated individuals; d) qualitative methods; e) constructivist, hermeneutic, or interpretive paradigm; f) from a Latin American country; g) in Portuguese, Spanish, or English; and h) published between 2006 and 2020. This stage pre-selected 67 articles.

An article was considered educational when the authors, clearly and explicitly, had an educational intent in formulating both the study and its results. Therefore, studies that had implicitly educational scenarios, yet were not addressed as such, were excluded.

For each potential article, two researchers independently reviewed and completed two forms. The first form characterized the article, covering objectives, participants, theoretical bases, research methods, results, limitations, researcher roles, retention reasons, and observations[11]. The second form provided a quantitative quality assessment using the EPPI-Reviewer from the EPPI Centre, UK, with an added criterion: "Was there coherence among the paradigm or theory, method, and techniques used in the study?" This item assessed methodological congruence.15 Articles were rated as high quality (≥10 criteria), average quality (7-9 criteria), or low quality (≤7 criteria).

For an article to be included in the QIMS, both examiners had to find it pertinent to the paradigm and rate it as averages quality or higher. If disagreements arose, discussions were held, and a third examiner made the final decision. The nine studies included in the sample were drawn from various qualitative traditions in health. When articles did not follow a tradition, we ensured the method aligned with the research paradigm. Study design characteristics are detailed in Table 2.

DOI: 10.15343/0104-7809.202448e16052024I

Phase: Extraction of Themes

Themes were recorded using the original studies' language. A third examiner then compared the themes and selected those with the greatest consistency in describing the results.

Phase: Translation And Synergistic Understanding

Open and axial coding were performed, including definitions for each code[16]. The researcher then revised the coding. In case of doubts, the second examiner consulted the first to clarify issues and make necessary changes.

Triangulation encompassed the perspectives of educated individuals and levels of immersion/engagement in the qualitative study. The analytic approach aimed to present and preserve diversity in theories, methods, and data handling. Various educational perspectives were included, from explicit interventions to simple follow-ups.

Table 1 - Database and equations used for the bibliographic search of the review in the period 2006 to 2020, as described in the methodology, 2024.

N°	Data base	Equations
1	Lilacs	"EDUCACAO ALIMENTAR E NUTRICIONAL" [Dsubject descriptor] or EDUCA$ AND (ALIMENTA$ OR FEEDING OR NUTRIC$ OR NUTRITION$) [Words] and "PESQUISA QUALITATIVA" [subject descriptor]
2	Scielo	(ab:(("educacao nutricional" OR "educacao alimentar" OR "educacion nutricional" OR "nutrition education") AND (qualitativ* OR cualitativ*)))
3	Redalyc	"educación alimentaria" & "educacion nutricional"
4	Biblat	Palabra clave: educacion alimentaria y nutricional OR educación nutricional.
5	Imbiomed	educación nutricional & educación alimentaria y nutricional
6	Pubmed	nutrition education[Title/Abstract]) OR ((health education [Title/Abstract] AND nutrition [Title/Abstract])) OR ((health education [Title/Abstract] AND feeding [Title/Abstract]))AND (qualitative [Title/Abstract]
7	Web of Science	Tema: ("nutrition education") OR Tema: ("health education" and ("nutrition" or "feeding")) AND Tema: ("qualitative")
8	Proquest	ab("nutrition education") OR ab(("health education" AND nutrition OR "health education" AND feeding)) AND ab(qualitative)
9	Scopus	(ABS (nutrition education) OR ABS (health education AND nutrition) OR ABS (health education AND feeding) AND ABS (qualitative)) AND DOCTYPE (ar)

DOI: 10.15343/0104-7809.202448e16052024I

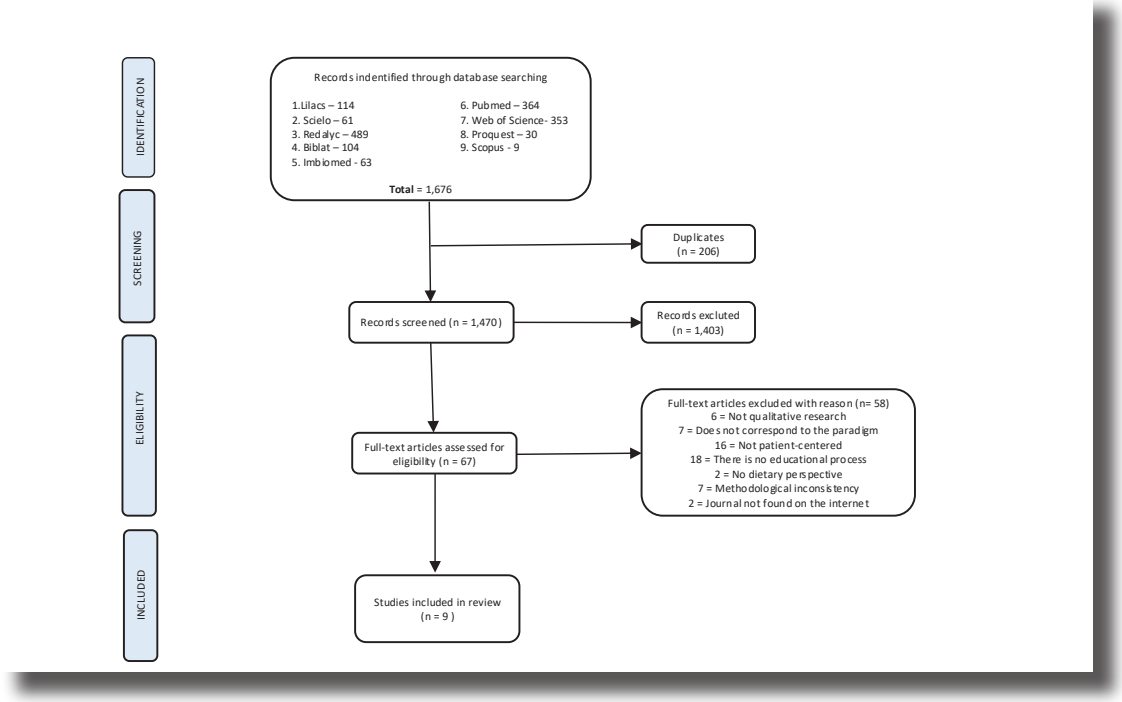

Figure 1 - Flowchart of sampling process.

Table 2 - Author, year, country, study title, method, user characteristics, educational basis, and educational outreach of articles included in the QIMS search across nine databases from 2006 to 2020, as described in the methodology, 2024.

Lead author	Year	Country	Study	Tradition / method	Users
Caicedo	2016	Colombia	Breastfeeding Education: disagreement of meaning	Not specified / Particularistic ethnography	Mothers, family, and health staff
Dodou	2017	Brazil	Educational practices of nursing in the puerperium: social representations of puerperal mother	Social Representations Theory / interviews	Postpartum women
Giaretta	2010	Brazil	Nutritional care: sensitive observation, interdisciplinary, for families of persons with Down Syndrome	Symbolic interactionism / Listening and sensitive observation intervention	Families of adolescents
Jurgensen	2020	Brazil	Impact of a nutrition education program on gymnasts' perceptions and eating practice	Not specified / Interviews, focal group, and participant observation	Athletes and coaches
Machado	2017	Brazil	The symbolic dimension of prenatal nutrition care in diabetes *mellitus*	Interpretive perspective/ Participant observation, semi-structured interviews, and medical record reviews	Postpartum women
Moreira	2018	Brazil	"When you can eat, you eat": information sources on feeding during pregnancy and eating choices	Interpretive perspective with phenomenological view / Interviews	Postpartum women
Ribeiro	2012	Brazil	Arterial hypertension and educational home visits: the strategic role of family healthcare	Not specified / Focus groups and interviews	Women aged
Rodrigues	2006	Brazil	Problem discussion as a nutritional education strategy with obese adolescents	Hermeneutic/Interviews and observation	Adolescents
Yonamine	2013	Brazil	Perceptions of family of patients with allergy to cow's milk regarding treatment	Not specified / Interviews	Family members

DOI: 10.15343/0104-7809.202448e16052024I

RESULTS

A synthesis of studies revealed a comprehensive overview of patients' FNE experiences in Latin America. The 39 themes identified were categorized into three dimensions within the experiential model. QIMS outlined seven primary themes based on categories devised by researchers and healthcare professionals, not the participating patients.

First Dimension: Life History

Social Conflict. This theme pertains to the impact on dietary routine amid new circumstances or illness. Across the four studies analyzed, four distinct mechanisms have been identified.

One such mechanism, labeled "pressure", emanates from authority figures, including healthcare professionals and family members. They address dietary issues with a simplistic dichotomy of right and wrong, exerting influence to enforce compliance. This approach fosters a sense of obedience among individuals, resulting in dietary practices shaped by a dynamic of submission to external pressures[17].

The "desperation" mechanism emerges from challenges within the family unit, primarily associated with male figures who demonstrate a tendency towards detachment and a reluctance to assume responsibilities in treatment or engagement. This dynamic engenders feelings of uncertainty stemming from a dearth of dialogue or familial interest[17,18]. Often, the father attributes blame to others for the situation or illness and restricts his support for the treatment[17]. An adolescent remarked, "The more they told me to lose weight, the more I ate. My dad would say, 'You have to lose weight,' and that just made me more desperate, so I ate more"[17].

The "social stigma" mechanism stems from being perceived as different and the reactions it can elicit from the patient. A routine is constructed based on beliefs and social labels for interaction between parents and children, resulting in contradictory eating behaviors characterized by compensatory overconsumption of food[19].

Finally, the "financial situation and violence" mechanism instills a sense of embarrassment in patients due to the obstacles it poses in obtaining food. This may result from financial constraints, or the danger associated with accessing food vendors. This highlights the discrepancy between the guidance provided by healthcare services and the patient's life circumstances[20].

Care. This process involves acknowledging the new situation or illness and understanding its causes. Diet is seen as guidance rather than therapy. This understanding is derived from two studies with patients adapting to treatment demands or social norms, revealing three mechanisms[18,21].

The first is "hope and faith in God" as a way to overcome the uncertainties of healing and the helplessness of not being able to speed up the process because even doctors don't know when it will happen. The second is "social interaction" which helps to raise awareness and learn more about the situation through support and camaraderie to work on dietary practice. A teenager mentions: "We argue when someone is eating cake or something similar because she can't, it will weigh on the training"[21]. Finally, "support in healthcare" contributes to care, even if not all problems are resolved. There is supported to improve lifestyle, although quick follow-up is a matter of luck and does not always happen[18]. A grandmother mentions: "Today, I questioned myself when I left home. I miss a day of work... [...] So, I keep asking myself: 'What am I going to do there?' The nutritionist still guides me, still gives me some advice [...]"[18].

Second Dimension: Food Configuration

Insecurity. It arises from the confrontation between patients' reality and care possi-

DOI: 10.15343/0104-7809.202448e16052024I

bilities, mediated by three mechanisms identified in two QIMS studies.

The first mechanism, "difficulty," stems from patients' interpretation that learning to eat is for those who have problems and is associated with not eating real food, spending time counting calories, and paying attention to portions[22]. A woman mentions: "Nutrition is ... learning to eat better, doing things I thought only overweight people had to do"[22].

The second, "fear", affects the patient undergoing treatment, as they consume non-recommended foods, generating insecurity in consumption[22]. In contrast, cycles of anxiety and food consumption arise with the lack of commitment to abstinence and with support from religion, making it difficult to problematize what happens[17]. A teenager mentions: "They tell me not to get upset about being fat, that God made me this way"[17].

Lastly, "incapacity" is related to the situation of not being able to eat well, even if only for a few weeks, due to reasons such as work schedules, the desire to eat, and trying to adjust the treatment dose, resulting in outcomes contrary to the expected weight[22]. A woman says: "[...] we give each other some ideas. [...] sometimes we think we can, then we take insulin"[22].

Sacrifice. This refers to situations where efforts are made to follow recommendations despite difficulties. The four QIMS studies highlight this issue, associating it with three scenarios influenced by outcomes beyond control or treatment of the new situation.

The first situation, "effort", is sustained by the patient for several reasons: eating is an act of love, of bonding, a gift from God, a privilege, a commitment to improve performance. Thus, it becomes natural to pursue a desired outcome, but it is not always related to health[21,23].

The second situation, "dedication", arises when people close to the patient give advice about diet, requiring them to choose between: ignoring what family and neighbors say, accepting what the healthcare professional says, or making a decision for themselves. Some situations persist in practice, such as those caused by pain, work requirements, and difficulties related to healthcare personnel[23]. A mother comments: "In spite of the aforementioned, mothers persist in breastfeeding: I was among the mothers who fed my child exclusively with my milk [...] yes, I would be very tired because it hurt me, I was tired, sleepy, staying up late. My nipples were completely sore! [...]"[23].

Lastly, "deprivation" refers to the willingness to cope with specific dietary restrictions related to what is deemed right and wrong. The classification system of patients tends to be dichotomous, a result reinforced by the service model. This is not isolated from the life stage where elements of right and wrong are incorporated but also from their religious understanding of what is pleasant and purifying. This includes knowledge of "everything" about forbidden and allowed foods, reading labels and recipes, and meal planning. And all of this is further compromised by the difficulty of purchasing food due to high prices[18].

Third Dimension: Educational Appreciation

Valuing the approach. Here, the experience is shaped by how the approach is implemented, involving three mechanisms highlighted in the four QIMS studies.

The mechanism of " how it's done " attracts patients, although it does not necessarily lead to changes in their actions. They interpret what professionals teach them when it is expected that they simply perform the activity[23]. Home visits are a more effective strategy, allowing for better explanations, individualized approaches, and the formation of a bond between professionals and patients. On the other hand, the group is presented as a less effective strategy[24] "[...] At home, it is explained even better. In a group... they show us slides, posters, or speak orally... people don't retain all that... practicing with us individually at home is much better [...]"[24].

"How the content is addressed" is rela-

DOI: 10.15343/0104-7809.202448e16052024I

ted to valuing the professionals' guidance to achieve patient learning and providing more detailed explanations, such as emphasizing what is taught in the lecture to be followed in practice, with support to do it correctly[25]. A mother says: "In the first few months, I attended a breastfeeding lecture, and then I learned from that lecture. Then, at the maternity ward, they were always watching, seeing if I was breastfeeding properly, if she was latching on correctly"[25].

Lastly, "relationship with the educator" presents three possibilities regarding the acceptance of dietary guidance. One of them refers to the provision of guidance by older individuals, family members, friends, or professionals who, being loved ones and having more experience, end up providing a sense of security to follow the guidance[20].

Another possibility arises from the need for patients to make their own decisions, so they feel capable of taking on the role of protagonists, even when they oppose the advice of older individuals, who may even speak nonsense[20]. Here, the significant influence exerted by the family is addressed, especially by the husband, whether participating in and benefiting from the learning process or acting as an obstacle to dietary changes[22]. A woman says: "[...] The guidance was for the family, and my husband is also getting involved... now the whole family has caught on to my pace. Thank God! [...]"[22].

And the last one refers to the divergence in guidance provided by healthcare professionals during the process because it depends on who the follow-up is aimed at and the life stage. Initially, it includes indications of what to eat and how to eat. But this changes, making it difficult to continue the care, except for a priority group, shifting the focus to other needs[20,25]. A mother comments: "The follow-up I had was only for the child, regarding me, there's no guidance, no professional to guide you, do you understand?"[25].

Change in understanding. It denotes the most well-defined aspects of change throughout the process, which involve altering the understanding of guidance, facts, and dietary practices, highlighting three key points. Three studies point out findings for this experience.

Regarding "content" patients can report the guidance provided by professionals with various details and focus on the messages[25]. A mother says: "They talked about the importance of the baby staying immune, it's good when the little teeth come out, and for health, that I should do everything to breastfeed until six months"[25].

The "symbols" related to food touches upon the imagery of the act of eating, where the meanings of dietary practices vary from family to family, such as unity, survival, and abundance. Through educational experiences and encouragement for reflection, families discover and recognize the imagery related to culture, social factors, and dietary experiences[19].

The "perception of everyday eating" is influenced by the educational experience, which includes anchoring dynamics, stress, and boundaries. Identifying fear, control, and risks related to illness, as well as the way of educating the patient during the dynamics, allows for the expression of family desires for changes regarding the act of living and eating. A teenager says: "Oh, I'm like this on TV, and in the movie [from a TV channel] it says, 'now sit on your couch, open [a soda] and watch the movie.' Do you need to open [a soda] to watch the movie? They treat us like puppets"[17].

Learning. This experience varies across different contexts, influenced by living conditions, the educational process, and family and individual situations. The five QIMS studies highlight this issue, associating it with three learning-related situations.

In the "commitment" situation, patients fall short of being able to comply with recommendations; nonetheless, they manage to fulfill them by incorporating other preferences. Despite the panorama of obstacles and tensions generated in patients during

the educational process, including work, studies, obligations, and financial limitations, commitment ensures that this change persists[22,23]. One person says: "[...] Before, We didn't change because we didn't have anyone to talk to us, tell us what was good ... so we didn't know anything, it's the same as being ignorant, being blind, walking blind in the dark. And through explanation, we come to know everything [...]"[22].

Another situation, "application" demonstrates the tranquility of having done everything they were told during the course, which helped a lot, coupled with the support received from family and professionals[25]. In the process of following the diet, some aspects are valued, such as initially eliminating a food completely and then being able to moderate its use, which includes using a method to learn to eat and discipline oneself, even when feeling lazy[22]. A woman comments: "I think carbohydrate counting is a very good method; first, we learn how to eat well ...; second, we can discipline ourselves to learn the amount of food we can eat, although sometimes we are also too lazy to count"[22].

The last situation, "satisfaction" stems from understanding what can and cannot be eaten at home with the family, in the pursuit of a healthy diet and foods that are more flavorful and real, learning to eat "everything" and how to be flexible in treatment[21,22,25]. The dietary changes implemented and their benefits, combined with the patients' perception of the limits to be reached in eating, bring awareness of the effects of food[22].

Theoretical Model

Different experiences can coexist because of participation in FNE. Reviewing the patterns and characteristics of these seven experiences reveals an alignment into three dimensions (Figure 2).

The "life history" dimension supports the senses of social conflict and care. The "dietary configuration" carries a sense of synthesis, which incorporates the values of insecurity and sacrifice. The third dimension, "educational appreciation," provides support for the senses of approach, behavior change, and learning.

These three dimensions, depicted as a spatial, flexible figure, form the basis for proposing interpretative and explanatory hypotheses in the theoretical model. For example, exploring the experience of being cared for may highlight aspects like 'insecurity' and Change in understanding. This becomes evident when one dimension is emphasized, with others in the background. Figure 2 also allows for including other variables within each dimension. The hypothesis of voids/shadows arises because many studies, while illuminating the patient's experience, focus primarily on the researcher or educator's role in the educational process.

This study shows how patients in educational practices navigate through stages toward transformation. The process begins with "life history", followed by "dietary configuration" prompted by education, leading to "educational appreciation" through recognizing the approach, voluntary changes, and learning. This framework depicts education as a process and may relate to the constructivist educational model used in the analyzed studies.

Patients' experiences in educational practices are shaped by axes inherent to the educational model itself, where these dimensions become actionable intentions. Figure 2 illustrates decision axes linked to the educational process provision, with participation initiated through the invitation of the researcher/educator. In Latin America, this axis corresponds to social inclusion, addressing challenges in accessing essential social rights such as nutrition, education, and healthcare.

DOI: 10.15343/0104-7809.202448e16052024I

DOI: 10.15343/0104-7809.202448e16052024I

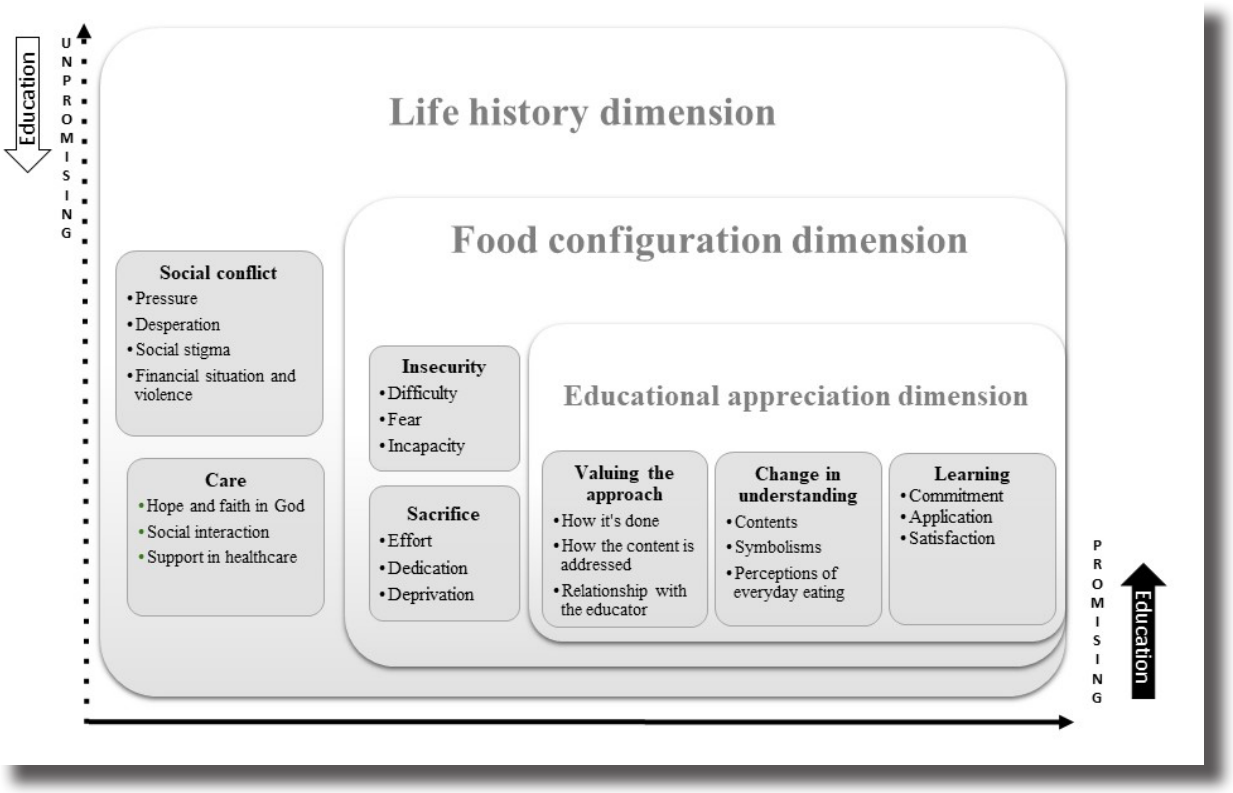

Figure 2 - Theoretical model of emerging patient experiences during participation in nutritional education in Latin America.

DISCUSSION

Our synthesis outlines the experiences of patients that emerge during their participation in FNE in Latin America. In the model proposed here, patients' positive experiences are mainly found in the dimension of educational appreciation, where experiences of "valuing the approach", "change in understanding", and "learning emerge". These experiences correlate with perceived benefits, including behavioral changes, heightened awareness, and practical application of acquired information in daily life[26].

We verified strategies in the analyzed texts such as “learning with practical teachings”[25], “construction of family decisions to change, during educational dynamics”[19] or even “strategies to follow the diet, even if you are lazy”[27]. From this perspective, researchers in their studies highlights the importance of using theoretical frameworks for implementing appropriate strategies[4].

On the other hand, in the proposed model, categories related to negative experiences emerged, particularly in the dimensions of life history and dietary configuration, including "social conflict", "insecurity", and "even sacrifice". This aligns with intervention studies where qualitative research methods reveal patients' dissatisfaction experiences, as this type of research provides a more in-depth understanding of experiences[26].

Research on patient perspectives highlights difficulties in understanding beliefs, attitudes, and practices due to a lack of credible information[28]. To address this, patients must be central to the educational process,

facilitated by professional communication. However, outcome evaluation depends on the educational model. In Latin America, the lack of theoretical basis results in scarce pedagogical descriptions of educational interventions[7].

In the present study, the categorization of experiences highlights constant tensions across a broad spectrum, requiring a configuration that enables the utilization of educational action. Other studies demonstrate how nutritional education can improve dietary choices regarding food intake, extending beyond mere food assistance when the approach is configured within financial aid programs for purchasing food in low-income families[29].

Often, it is believed that restrictions are individual when, in reality, they are material/structural[8,28]. Economic status and income level are among the factors that cannot be easily changed. However, NE is a low-cost method that can significantly improve diet quality and reduce the unwanted effects of poverty on health[30].

Beliefs about individual restrictions are influenced by the low and limited quality of research reports that overlook concepts of dietary practice, constructs, and theoretical implications for health practice, particularly in exploring dietary configuration dimensions[30]. The effectiveness of FNE hinges on intervention duration, clear objectives, theory application, intervention fidelity, and support from policymakers and management for environmental interventions[2].

Our findings predominantly stem from healthcare services where women are monitored by professionals during pregnancy, breastfeeding, or childcare. Studies in social protection indicate that women are more engaged in programs involving saving, investment, and sharing benefits. However, lack of family support acts as a barrier to their participation and retention in these programs[31].

In Latin America, the region with the world's second-highest social inequality[4], additional barriers such as local violence and lack of continuous professional support hinder access to food and healthcare. Designing programs FNE requires alignment with policies aimed at mitigating the impact of "social conflict" on participation experiences. This involves recognizing community action mechanisms from a gender equality perspective, institutional logics to implement policies in food and healthcare systems, and sociocultural norms[31].

A common issue is lack healthcare professionals with nutrition training tailored to the needs of the population[32,33]. The "social conflict" and its impact on dietary care highlight the need for a more critical perspective on the educational model, including examining the aspects of economic food production models and their impact in dietary choices[34,35].

Most research originates from Brazil is likely due to robust food policies, including efforts to combat hunger and increased investment in research. This suggests that educational measures in food and nutrition are influenced by local public policies[36,37].

While Aguirre & Bolton's formulation[14] is specific to social work, it has relevance to FNE, which was a limitation in this review. One constraint was the exclusion of gray literature due to operational challenges. Additionally, accessing high-quality qualitative research in the region was identified as challenging. One vulnerable aspect involves reducing qualitative research to predefined categories or analyzing narratives without theoretical foundations. Despite diverse realities, common situations in everyday healthcare underscore the need to improve research quality, potentially enhancing comparative research and understanding the "how" and "why" of phenomena[38].

Lastly, the studies often lack detailed descriptions of planning and executing educational approaches, emphasizing the education effect over the process itself. This affects the ability to understand how social and cultural norms are incorporated into planning and also in achieving the expected effects[39].

DOI: 10.15343/0104-7809.202448e16052024I

DOI: 10.15343/0104-7809.202448e16052024I

CONCLUSION

Research findings underscore the importance of program planners and healthcare professionals monitoring patients' experiences in FNE. Tailoring strategies to patients' needs enhances the ability to track what they experience and internalize during educational encounters. Moreover, supplementing individual approaches with group-based interventions and offering experiences aligned with patients' daily lives outside of healthcare settings could be advantageous.

To dietary change, addressing factors that influence patient engagement and tailoring interventions to the Latin American healthcare context is essential. Research on interventions should assess healthcare team training in health education, service facilitators for educational approaches, detailed pedagogical strategies, didactic methods, and outcome indicators.

Integrating the pedagogical model with patients' educational experiences, based on the three dimensions and seven categories identified in this meta-synthesis, enables more sensitive and tailored support aligned with patients' goals. This approach captures both positive and negative perspectives, facilitating a comprehensive understanding of their experiences.

Further research, particularly comparative studies, is necessary to deepen understanding of programs for patients facing similar challenges. This will improve knowledge of educational interventions and yield more precise indicators regarding nutrition and education processes. Future studies should emphasize rigorous methodologies based on established research paradigms and educational approaches, offering detailed intervention description and evaluate their long-term effects.

The manuscript is the result of a thesis: Pava-Cárdenas, A. "Scopes of food and nutritional education in the light of the Latin American context: the user". 2017. University of São Paulo.

CREdiT author statement

Conceptualization: Pava-Cárdenas, A; Cervato-Mancuso, A.M; Alzate-Yepes, T. Methodology: Pava-Cárdenas, A; Cervato-Mancuso, A.M; Alzate-Yepes. Qualitative Analysis: Pava-Cárdenas, A; Cervato-Mancuso, A.M; Alzate-Yepes, T. Formal Analysis: Pava-Cárdenas, A; Cervato-Mancuso, A.M; Alzate-Yepes, T. Research: Pava-Cárdenas, A. Writing - original draft preparation: Pava-Cárdenas, A. Writing - review and editing: Pava-Cárdenas, A; Cervato-Mancuso, A.M; Alzate-Yepes, T. Visualization: Pava-Cárdenas, A. Supervision: Cervato-Mancuso, A.M; Alzate-Yepes, T; Project administration: Pava-Cárdenas, A.

All authors have read and agreed to the published version of the manuscript.

REFERENCES

1. Liguori J, Trübswasser U, Pradeilles R, et al. How do food safety concerns affect consumer behaviors and diets in low- and middle-income countries? A systematic review. Glob Food Sec. . [Internet]. 2022; [Acessado em 01 março de 2023] 32:100606. Disponível em: https:// doi:10.1016/J.GFS.2021.100606
2. Murimi MW, Kanyi M, Mupfudze T, Amin MR, Mbogori T, Aldubayan K. Factors influencing efficacy of nutrition education interventions: a systematic review. J Nutr Educ Behav. . [Internet].2017; [Acessado em 01 março de 2023]49(2):142-165.e1. Disponível em: https:// doi:10.1016/j.jneb.2016.09.003
3. Leme ACB, Fisberg RM, Mello AV, Sales CH, Ferrari G, Haines J, et al. Food sources of shortfall nutrients among latin americans: Results from the latin american study of health and nutrition (elans). Int J Environ Res Public Health. . [Internet].2021; [Acessado em 01 março de 2023]18(9). Disponível em: https://doi:10.3390/ijerph18094967
4. FAO, IFAD, PAHO, UNICEF, WFP. Regional Overview of Food Security and Nutrition – Latin America and the Caribbean 2022: Towards Improving Affordability of Healthy Diets.; . [Internet].2023. [Acessado em 20 fev 2024] Disponível em: https:// doi:10.4060/cc3859en
5. Contento IR, Koch PA. Nutrition Education: Linking Research, Theory, and Practice: Linking Research, Theory, and Practice . 4th ed. Burllington: Jones & Bartlett Learning; 2020.
6. Fuentes S, Estrada B. Alimentación escolar y educación alimentaria: tendencias recientes en la investigación en América Latina entre 2005 y 2021. Rev Educ. . [Internet].2023[Acessado em 20 fev 2024]; 47(1):1-15. Disponível em: https://https://doi.org/10.15517/revedu.v47i1.51724
7. Alzate TY. Desde la educación para la salud: Hacia la pedagogía de la educación alimentaria y nutricional. Perspectivas de nutrición humana, 2006; 16 (1): 21–40.

8. Clark-Barol M, Gaddis JE, Barrett CK. Food agency in low-income households: A qualitative study of the structural and individual factors impacting participants in a community-based nutrition program. Appetite. . [Internet]. 2021[Acessado em 01 março de 2023];158. Disponível em: https:// 10.1016/j.appet.2020.105013
9. Billing-Bullen G, Nielsen D, Wham C, Kruger R. Enablers and barriers to prevent weight-regain post bariatric surgery – A qualitative enquiry. Eat Behav. . [Internet].2022[Acessado em 20 fev 2024];47. Disponível em: https://doi:10.1016/J.EATBEH.2022.101677
10. McHugh P, Smith M, Wright N, Bush S, Pullon S. If you don't eat meat... you'll die. A mixed-method survey of health-professionals' beliefs. Nutrients. . [Internet]. 2019; [Acessado em 20 fev 2024]11(12):3028. Disponível em: https://doi:10.3390/NU11123028
11. Paterson BL, Thorne SE, Connie C, Jillings C. Meta-Study of Qualitative Health Research: A Practical Guide to Meta-Analysis and Meta-Synthesis. Thousand Oaks. Sage Publications Inc; 2001. 162p.10.
12. Booth A, Noyes J, Flemming K, Gerhardus A, Wahlster P, van der Wilt GJ, et al.. Guidance on Choosing Qualitative Evidence Synthesis Methods for Use in Health Technology Assessments of Complex Interventions . [Internet].].; 2016.[Acessado em 01 março de 2020]. Disponível em: http://www.integrate-hta.eu/downloads/
13. Siddaway AP, Wood AM, Hedges L V. How to Do a Systematic Review: A Best Practice Guide for Conducting and Reporting Narrative Reviews, Meta-Analyses, and Meta-Syntheses. Annu Rev Psychol. .2019;70:747-770.
14. Aguirre RTP, Bolton KMW. Why do they do it? A qualitative interpretive Meta-Synthesis of crisis volunteers' motivations. Soc Work Res. 2013;37(4):327-338.
15. Burns N. Standards for qualitative research. Nurs Sci Q. . 1989;2(1):44-52.
16. Saldaña J. The Coding Manual for Qualitative Researchers. 1st ed. London. Sage Publications Ltd; 2009. 240p.16.
17. Rodrigues ÉM, Boog MCF. Problematização como estratégia de educação nutricional com adolescentes obesos. Cad Saude Publica. 2006;22(5):923-931.
18. Yonamine GH, Contim D, Castro APBM, Jacob CMA, Pastorino AC. Percepção dos familiares de pacientes com alergia ao leite de vaca em relação ao tratamento. J Hum Growth Dev. . 2013;23(1):58.
19. Giaretta AG, Ghiorzi A da R. Cuidado nutricional: olhar sensível, interdisciplinar, para as famílias de pessoas com síndrome de down. Rev Enferm UERJ. . [Internet]. 2010 [Acessado em 29 abril de 2017];18(5):610-615. Disponível em: http://www.facenf.uerj.br/v18n4/v18n4a18.pdf
20. Moreira LN, de Barros DC, Baião MR, Cunha MB. "Quando tem como comer, a gente come": fontes de informações sobre alimentação na gestação e as escolhas alimentares. Physis Rev Saúde Coletiva. . [Internet]. 2018 [Acessado em 29 abril de 2017];28(3): e280321. Disponível em: https://doi:10.1590/S0103-73312018280321
21. Jürgensen LP, Daniel NVS, da Costa Padovani R, Juzwiak CR. Impact of a nutrition education program on gymnasts' perceptions and eating practices. Mot Rev Educ Física. . [Internet].2020; [Acessado em 29 abril de 2017]26(1). Disponível em: https://doi:10.1590/S1980-6574202000010206
22. Ribeiro AG, Cotta RMM, Silva LS da, Ribeiro MR, Dias CMGC, Mitre SM, et al. l. Hipertensão arterial e orientação domiciliar: o papel estratégico da saúde da família. Rev Nutr. 2012;25(2):271-282.
23. Caicedo Martínez NS, Carrillo Pineda M, Gómez Dávila JG. Breastfeeding Education: disagreement of meanings. Investig y Educ en Enfermería. . [Internet].2016; [Acessado em 29 abril de 2017]34(2):396-404. Disponível em: https://doi:10.17533/UDEA.IEE.V34N2A20
24. Recine E, Porto EBS, Fernandez PM, Pereira MR. Analysis of nutrition (and food) education syllabus of nutrition undergraduate courses. Rev Nutr. . 2016;29(6):885-897.
25. Dodou HD, Oliveira TDA de, Oriá MOB, Rodrigues DP, Pinheiro PN da C, Luna IT. Educational practices of nursing in the puerperium: social representations of puerperal mothers. Rev Bras Enferm..2017;70(6):1250-1258.
26. Greene M, Houghtaling B, Sadeghzadeh C, De Marco M, Bryant D, Morgan R, et al. African Americans' Perceptions of Nutrition Interventions: A Scoping Review. Nutr Res Rev. 2023; 36: 320–339.
27. Machado RCM, Baião MR, Líbera B Della, Saunders C, Santos MMADS. The symbolic dimension of prenatal nutrition care in diabetes Mellitus. Rev Nutr. 2017;30(6):703-711. Disponível em: https:// doi:10.1590/1678-98652017000600003
28. Champlin S, Walker LO, Mackert M. Beliefs, Attitudes, and Practices of Latinas Related to Gestational Weight Gain: A Qualitative Meta-Synthesis. Matern Child Health J. . [Internet].2021; [Acessado em 29 junho de 2023];25(1):107-117. Disponível em: https://doi:10.1007/S10995-020-03092-1
29. Rivera RL, Maulding MK, Eicher-Miller HA. Effect of Supplemental Nutrition Assistance Program-Education (SNAP-Ed) on food security and dietary outcomes. Nutr Rev. . [Internet].2019 [Acessado em 29 junho de 2023];77(12):903-921. Disponível em: https:// doi:10.1093/NUTRIT/NUZ013
30. Atoloye AT, Savoie-Roskos MR, Guenther PM, Durward CM. Effectiveness of Expanded Food and Nutrition Education Program in Changing Nutrition-Related Outcomes Among Adults With Low Income: A Systematic Review. J Nutr Educ Behav. . [Internet].2021 [Acessado em 29 junho de 2023];53(8):691-705. Disponível em: https:// doi:10.1016/J.JNEB.2021.03.006
31. Perera C, Bakrania S, Ipince A, et al. Impact of social protection on gender equality in low- and middle-income countries: A systematic review of reviews. Campbell Syst Rev. . [Internet]. 2022; [Acessado em 29 junho de 2023]18(2). Disponível em: https://doi:10.1002/CL2.1240
32. Awad A. The determinants of food insecurity among developing countries: Are there any differences? Sci African. . [Internet].2023[Acessado em 20 fev 2024];19. Disponível em: https://doi:10.1016/J.SCIAF.2022.E01512
33. Braunstein N, Guerrero M, Liles S, Germann A, Kuppich M, Martin H, et al. Medical Nutrition Therapy for Adults in Health Resources & Services Administration-Funded Health Centers: A Call to Action. J Acad Nutr Diet. . [Internet].2021; [Acessado em 29 junho de 2023]121(10):2101-2107. Disponível em: https:// doi:10.1016/J.JAND.2020.10.023
34. Davis AM, Affenito SG. Interprofessional Education to Create and Sustain High-Performance Teams to Support Our Transforming Health Care System and Future Educational Model: How Nutrition and Dietetics Can "Weigh-in." J Acad Nutr Diet. .. 2017;117(12):1871-1876.
35. Van Meijl H, Shutes L, Valin H, Stehfest E, Van Dijk M, Kuiper M, et al. Modelling alternative futures of global food security: Insights from FOODSECURE. Glob Food Sec. . [Internet].2020; [Acessado em 29 junho de 2023]25:100358. Disponível em: https://doi:10.1016/J.GFS.2020.100358
36. López-Giraldo LA, Franco-Giraldo Á. Revisão de enfoques das políticas alimentares: entre a segurança e a soberania alimentar

DOI: 10.15343/0104-7809.202448e16052024I

DOI: 10.15343/0104-7809.202448e16052024I

(2000-2013) . Cad. Saúde Pública . [Internet].2015; [Acessado em 20 maio 2024] 31(7):1355-1369. Disponível em: https://doi:10.1590/0102-311X00124814
37. Almeida GM, Recine E, Fagundes A. Objectives and Competencies in Food and Nutrition Education in the Brazilian Undergraduate Nutrition Program. J Nutr Educ Behav..2020;52(4):385-393.
38. Moisey LL, A. Campbell K, Whitmore C, Jack SM. Advancing qualitative health research approaches in applied nutrition research. J Hum Nutr Diet. . [Internet].2022; [Acessado em 20 de maio 2024]35(2):376-387. Disponível em: https:// doi: 10.1111/jhn.12989
39. Ashman AM, Brown LJ, Collins CE, Rollo ME, Rae KM. Factors Associated with Effective Nutrition Interventions for Pregnant Indigenous Women: A Systematic Review. J Acad Nutr Diet. . [Internet].2017[Acessado em 20 de maio 2024];117(8):1222-1253.e2. Disponível em: https://doi.org/10.1016/j.jand.2017.03.012

Received: 26 march 2024.
Accepted: 24 june 2024.
Published: 24 july 2024.