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Professional competencies: self-perception of graduates working in the field of Nutrition in Food Services

Competências profissionais: autopercepção de egressos inseridos na área de Nutrição em Alimentação Coletiva

Abstract

Introduction: The contemporary reality in the scientific, political, and labor spheres impacts the training of nutritionists, encouraging them to interrelate knowledge, skills, and attitudes, ultimately leading to the development of well-established professional competencies. Although advances occurred in the field of Nutrition, research in the area of Nutrition in Food Services remains incipient. *Objective:* To identify the self-perception of alumni of the Nutrition course regarding their professional skills acquired in the area of Nutrition in Food Services in relation to the skills required by the labour market. *Method*: This is a descriptive, exploratory, cross-sectional study with a qualitative-quantitative approach, conducted with 50 nutritionists who graduated from a federal university and work in the field. A structured electronic questionnaire was used as a research instrument. The data were analysed using descriptive statistics and similarity analysis with the support of the Iramuteq software. *Results*: Graduates showed better ability in competencies such as professional ethics and commitment to the client. However, competencies related to "knowing how to act," "knowing how to learn," and "knowing how to mobilize resources" showed a low degree of proficiency compared to those required for professional performance in the area, which may compromise meeting the food and nutrition needs of the user. *Conclusion*: The diverse contexts of the workforce market, its complexity, and scope require nutritionists who can adapt to the current scenario and solve the challenges imposed, where practice plays an extremely important role in developing competencies and should be further explored during undergraduate studies.

Keywords: Professional Competence. Nutricionist. Food Services. Labour market.

Resumo

Introdução: A realidade contemporânea nos âmbitos científico, político e laboral impacta na formação dos nutricionistas, despertando-os a inter-relacionar conhecimentos, habilidades e atitudes que culminem na construção de competências profissionais bem consolidadas. Embora avanços tenham ocorrido no campo da Nutrição, na área de Nutrição em

Alimentação Coletiva as pesquisas nesse sentido se mostram incipientes. *Objetivo*: Identificar a autopercepção dos egressos do curso de Nutrição quanto a suas competências profissionais adquiridas na área de Nutrição em Alimentação Coletiva em relação às competências requeridas pelo mercado de trabalho. *Método*: Trata-se de pesquisa descritiva, exploratória, transversal, de abordagem quali-quantitativa, realizada com 50 nutricionistas egressos de uma universidade federal que atuam na área. Utilizou-se como instrumento de pesquisa um questionário eletrônico estruturado. Os dados foram analisados por estatística descritiva e análise de similitude, com apoio do *software* Iramuteq. *Resultados*: Os egressos demonstraram melhores domínios nas competências como ética profissional e comprometimento com o cliente, porém competências profissionais englobadas nas dimensões "saber agir", "saber aprender" e "saber mobilizar recursos" apresentaram baixo grau de domínio em relação às requeridas para atuação profissional na área, podendo comprometer o atendimento às necessidades de alimentação e nutrição do usuário. *Conclusão*: Os contextos plurais do mercado de trabalho, sua complexidade e abrangência exigem nutricionistas capazes de se adaptar ao cenário atual e solucionar os desafios impostos, nos quais a prática é fator de extrema importância para desenvolver as competências e deve ser mais explorada durante a graduação.

Palavras-chave: Competência Profissional. Nutricionista. Alimentação Coletiva. Mercado de trabalho.

INTRODUCTION

The urban-industrial lifestyle has favoured an increase in meals consumed outside the home in Brazil.[1] In 2020, the food service sector generated more than 52 billion Brazilian *reais*, employing 250 thousand workers and producing about 20.15 million meals daily across the country. Even during the Covid-19 pandemic (2020-2021), companies in the sector reported an increase in revenue from 20.6 in 2019 to 21.1 billion Brazilian *reais* in 2021.[2] In this context, in addition to playing a significant role in the Brazilian economic system, collective food services, responsible for meals consumed outside the home, create favourable environments for the Adequate and Healthy Food Promotion, focusing on the health of its users.[3]

This sector represents a large field of work for nutritionists, known as Nutrition in Food Services,[4] and includes 30.8% of working professionals in Brazil,[5] establishing itself as one of the pillars of Nutritional Science. In this area, professionals perform various activities related to the Management of Food and Nutrition Units, commonly referred to as Food Services Management (FSM), which requires critical and transformative performance to keep pace with the challenges of the dynamic organizational context.[6,7]

The training of nutritionists in Brazil has been guided by generalist, humanistic, and critical aspects, in accordance with the National Curriculum Guidelines for undergraduate nutrition courses, established by the *Ministério da Educação* (Ministry of Education) through CNE/CES Resolution No. 5 of November 7, 2001. The National Curriculum Guidelines reinforce that competencies and skills integrate dimensions of knowledge in their general and specific training, related to content in the major areas of practice, including Nutrition in Food Services, balancing knowledge, know-how, and know-how in professional practice.[8]

Historically, however, Nutrition training has emphasized biological knowledge, focusing on technical competencies,[9] highlighting gaps related to the increase of knowledge in leadership, decision-making, administration, management, and entrepreneurship,[10] which are essential for interacting with the meal production activity and health promotion. This aspect is corroborated by the study conducted with graduates on the education they received in the Nutrition undergraduate program at a Brazilian federal university in which the majority of former students considered the specific axis of Nutrition as insufficient for their professional performance compared to the general axis.[11]

Recently, the National Health Council reviewed the National Curriculum Guidelines, publishing a draft proposal for its update based on the competencies required for the profile of Nutrition graduates:

> [...] competence is understood as the mobilization of a set of cognitive, procedural, and attitudinal resources that, articulated together in a specific context, enable excellent professional performance by the graduate (Cap. 3, sole paragraph, Resolution No. 703 of October 20, 2022, CNS[12]).

The concept of competence is polysemic, generally understood as the mobilization of knowledge and learning to perform an action. According to Fleury & Fleury,[13] competence enhances the ability to face complex demands with pillars based on knowing how to act, knowing how to mobilize, knowing how to transfer, knowing how to learn, knowing how to engage, having strategic vision, and having responsibility.

The nutritionist is a health professional whose training is based on the interaction of the human being and society with food and its nutrients, acting in public and private spaces where food and nutrition contribute to the promotion, maintenance, and recovery of health.[12] Thus, their training encompasses theoretical knowledge - which guide Nutritional Science with general and specific content, and technical knowledge - which includes various practical applications of the theory acquired, upon which the development of professional competencies should be based.

Research on this topic is progressing slowly, with lines of investigation focused on different areas within the field of study.[14,15] Thus, further investigations on the professional competencies of nutritionists in this specific area are justified in order to contribute to the advancement of knowledge in this field. It is noteworthy that research conducted with graduates is a complex methodological resource and allows for an analysis of training, trends, and the behaviour of the work market.[16]

Moreover, in their daily professional practice, degree holders encounter complex and challenging situations that lead them to confront the competencies developed during their undergraduate studies with those required in professional practice.[17] From the perspective of these professionals, it is possible to identify the strengths and weaknesses of the pedagogical political projects of undergraduate nutrition courses, as well as the strategies to be adopted for the improvement of the training process, ensuring that the needs and expectations of the employment market are met.

Given the above, this study aims to identify the self-perception of alumni from the Nutrition undergraduate program regarding the professional competencies they acquired in the area of Nutrition in Food Service, in relation to the skills required by the labour market.

MATERIALS AND METHODS

This is a cross-sectional, descriptive and exploratory research, regarding the objectives and qualitative and quantitative approach. The analysis included graduates from the Nutrition undergraduate program at the Multidisciplinary Institute of Health, *Anísio Teixeira Campus of the* Federal University of Bahia (IMS-CAT/UFBA), located in the municipality of *Vitória da Conquista – BA*, who graduated between 2011, when the first class completed their studies, and the end of 2020, when the last class graduated until the study was carried out.

The establishment of IMS-CAT/UFBA occurred in 2006 as part of the incorporation process of UFBA, which integrates the Federal Government's higher education expansion policy, and its activities began with the implementation of the Bachelor's degree in Nutrition and two other health-related courses: Nursing and Pharmacy.

In this context, we chose to investigate the alumni of the Nutrition program at this university since it presented a recent pedagogical project based on "early professional insertion, flexibility of the matrix, and sequential organization of knowledge to allow the construction of the necessary skills and competencies for the performance of the Nutritionist" (p. 4).[18]

Participants were selected by accessibility at the invitation of the researcher, forming a non-random convenience sample. The list with the names and contacts of the graduates was provided by the course management upon request and presentation of the research project. The former students were contacted individually by the researcher via email. The study included graduates who were engaged in professional activities in the area and who agreed to participate by signing the Informed Consent Form (ICF). Those who showed interest in collaborating with the research received the electronic form link through the same communication channel. Those who declined to participate in the research, those who did not return the completed questionnaire or submitted incomplete responses, and university graduates who declared they were not engaged in activities in the field of the study after being contacted were excluded from the study.

To estimate a representative sample for the study, the total of degree holders from the program at the time of data collection was considered, totalling 255 graduates at IMS-CAT/UFBA according to the database of the institution. For the sample size calculation, it was considered that 30.8% of the total alumni work in the

area, according to estimates of professional entry of nutritionists in the labour market,[5] reaching an estimated sample of 79 participants. The response rate was 63%.

The data collection instrument was a self-administered electronic questionnaire developed for this study, formatted on the Googleonline form platform, and sent to participants via an exclusive link through email. The data collection instrument was a self-completing electronic questionnaire, developed for this study, formatted on Google's online forms platform and sent to the participants by exclusive link through electronic mail. The signature of the ICF was requested before the questions were presented. The questionnaire was structured in two blocks: the first referring to sociodemographic data, academic background, and professional activity. The second block aimed to identify the perception of graduates about the professional skills necessary for their performance in FSM. The questionnaire was previously tested with 10 nutritionists working in FSM and who did not study at the selected university to check the response time and semantic adequacy of the questions.

The analytical categories related to the professional competencies required for nutritionists to work in FSM were listed based on the studies by Freitas et al.[14] and Freitas[19] as listed in Chart 1

Chart 1. Professional competencies for the performance of nutritionists in Nutrition in Food Services by dimension of knowledge

KNOWLEDGE (DIMENSIONS)	DESCRIPTION	PROFESSIONAL COMPETENCE
Knowing how to act (*Know what you do and why you do it, know how to judge, choose and decide)*	Keep up to date on evidence-based practice, perform sanitary management, decision-making skills, contribute to continuous improvement, perform control and supervision and continuous improvement of processes.	Decision-making Continuous process improvement Sanitary management
Knowing how to mobilize resources (*Create synergy and know how to mobilize resources- materials (supplies, equipment, structure and technology), human and financial - and skills)*	Have leadership and people management skills, financial management and managerial skills.	Leadership in nutrition Financial Management Management skills
Knowing how to communicate (*Understand, work, convey information and knowledge)*	Communication skills, have professional networking, socialization and dominion attitudes, and knowledge in information systems.	Efficient communication Professional networking Socialization Mastery in information systems
Knowing how to learn (*Working on knowledge and experience, revise mental models, know how to develop)*	Perform reflective practice, promote permanent and continuing education and have skill in research with aptitude to carry out and disseminate research related to the area, promoting technical-scientific exchange.	Ability to develop research Reflective Practice Permanent and continuing education

Chart 1. Professional competencies for the performance of nutritionists in Nutrition in Food Services by dimension of knowledge.

KNOWLEDGE (DIMENSIONS)	DESCRIPTION	PROFESSIONAL COMPETENCE
Knowing how to engage (*Know how to undertake, take risks, commit). Motivational factors, personality characteristics and act according to commitment to the nutritional and dietary needs of the client/user.*	Motivational factors, personality characteristics and act according to commitment to the needs of the client/user.	Motivation for work Dedication and cooperation Commitment to the customer/user
Knowing how to assume responsibility (*Be responsible, assuming the risks and consequences of their actions and being therefore recognized)*	Work in a team, have time management skills, have emotional intelligence, act in accordance with the principles of ethics and respect hierarchy.	Teamwork Emotional Intelligence Professional ethics Respect hierarchies
Knowing how to have a strategic vision (*Know and understand the organization's business, its environment, identifying opportunities and alternatives)*	Add value to the service provided/product, develop actions for quality oriented towards organizational objectives, reconciling economic and social objectives, have analysis capacity and provide services focused on the customer.	Adding value to the service/product Quality oriented towards organizational objectives Analytical ability Customer Service

Source: Freitas et al. (2019)[14]; Freitas (2020)[19]

The competencies were structured by 24 items in the five-point Likert scale format, with a score ranging from 0, corresponding to none mastery, to 4, which refers to the total mastery. In addition to the competency scale, the block included three open-ended questions regarding the perception of former students of the professional competencies necessary for their professional performance.

The collected data were tabulated in Microsoft Excel (2010) and analysed using descriptive statistics. Qualitative data, resulting from the open-ended questions, were transcribed into a single file, called textual *corpus*, and analysed using the IRAMUTEQ software (*Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*), which allows the processing and analysis of texts produced.[20] The *corpus* was subjected to similarityanalysis, which allowed the visualization of co-occurrences, processed through statistical frequency indicators that present a word tree with branches based on the relationships between words,[21] allowing the interpretation of the structure of the identified professional competencies.

The research was delimited from November 2020 to July 2021 and was approved by the Ethics and Research Committee of the Instituto Multidisciplinar em Saúde (IMS) (Multidisciplinary

Institute in Health) of the *Universidade Federal da Bahia (UFBA)* (Federal University of Bahia), under CAAE No. 33711020.2.0000.5556.

RESULTS

Characterization of graduates

Fifty alumni from the Nutrition undergraduate course at IMS-CAT/UFBA participated in the research, predominantly female (82%), with a mean age of ±29.1 years (SD= 2.42) and residing in the state of Bahia (100%). As for professional training, 80% of the graduates completed some postgraduate course, especially *lato sensu*, with only 15% in postgraduate studies in an area related to Nutrition in Food Service.

The former students predominantly work in Management of Food and Nutrition Units (UAN), with an average of five years of professional experience (42%) and a salary range of 3-5 minimum wages (62%). The distribution of the segments of their work is presented in Table 1..

Table 1. Distribution of graduates from the Nutrition program at IMS-CAT/UFBA regarding their areas of activity in Nutrition in Food Services. Vitória da Conquista (BA), 2021.

AREA OF ACTIVITY	SUBSEGMENT	%
Food and Nutrition in the School Environment	National School Feeding Program (PNAE)	36%
Institutional Food and Nutrition Unit (UAN) (public and private)	Institutions (public or private)	28%
	Hospitals	26%
Commercial Food Service.	Commercial Restaurants and similar	10%

Source: Research data, 2021.

The predominant role was technical manager (48%), followed by production managers (32%) and meal contract inspectors (6%). Among the main responsibilities reported by participants in their respective workplaces were the management of food and nutritional assistance, quality management in meal production, preparation of technical product data sheets, and actions in Food and Nutrition Education. Other responsibilities reported included supply management, people management, cost management, and other activities related to food service management

Perception of professional competencies by graduates

Considering the Likertscale applied, the participants responded to questions related to their self-perception regarding the professional competencies they believe they have mastered for good performance in Nutrition in Food Services. Data are presented in Table 2..

Table 2. Self-perception regarding the mastery of knowledge related to professional competencies attributed by nutritionists graduated from the Nutrition program at IMS-CAT/UFBA working in the area of Nutrition in Food Services. Vitória da Conquista (BA), 2021.

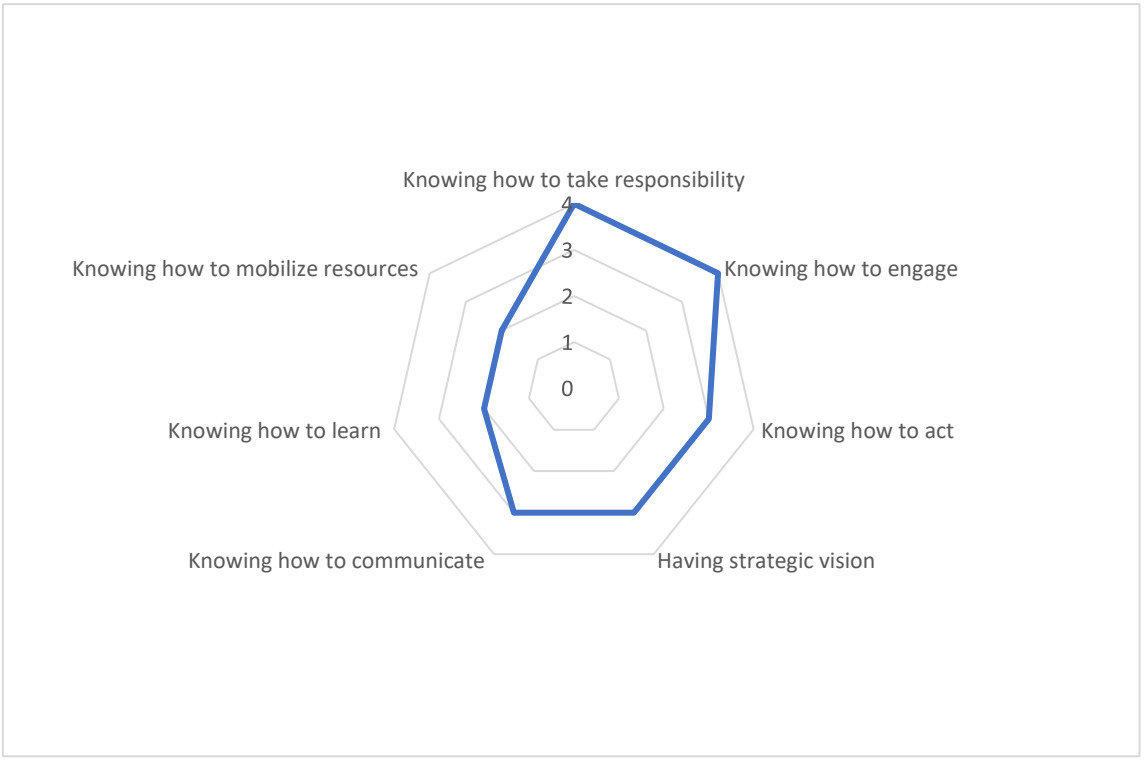
KNOWLEDGE (DIMENSIONS)	PROFESSIONAL COMPETENCE	None mastery (0)	Insufficient mastery (1)	Sufficient mastery (2)	Almost total mastery (3)	Total mastery (4)
Knowing how to act	Decision-making	0.0%	8.6%	31.2%	43.0%	17.2%
	Continuous process improvement	0.0%	**16.0%**	31.4%	35.3%	17.3%
	Sanitary management	0.0%	**13.4%**	33.3%	33.3%	20.0%
Knowing how to mobilize resources	Leadership in nutrition	**1.3%**	10.7%	33.3%	37.3%	17.4%
	Financial Management	**2.7%**	**25.4%**	33.3%	24.0%	14.6%
	Management skills	0.0%	18.0%	44.0%	27.3%	10.7%
Knowing how to communicate	Efficient communication	0.0%	9.3%	26.0%	34.0%	**30.7%**
	Professional networking	0.0%	11.3%	31.3%	24.0%	**33.4%**
	Socialization	0.0%	10.7%	17.3%	39.3%	**32.7%**
	Mastery in information systems	0.0%	12.0%	42.0%	32.0%	14.0%
Knowing how to learn	Ability to develop research	0.0%	**29.3%**	36.0%	22.7%	12.0%
	Reflective practice	0.0%	12.0%	40.7%	32.6%	14.7%
	Permanent and continuing education	0.0%	**24.0%**	24.0%	23.3%	28.7%
Knowing how to engage	Motivation for work	0.0%	13.3%	24.0%	37.4%	25.3%
	Dedication and cooperation	0.0%	14.7%	16.7%	35.3%	**33.3%**
	Commitment to the customer/user	0.0%	10.0%	21.3%	20.0%	**48.7%**
Knowing how to assume responsibility	Teamwork	0.0%	8.7%	20.6%	26.7%	**44.0%**
	Emotional intelligence	0.0%	12.0%	45.4%	31.3%	11.3%
	Professional ethics	0.0%	8.0%	16.0%	22.0%	**54.0%**
	Respect hierarchies	0.0%	7.3%	16.7%	16.0%	**60.0%**
Knowing how to have a strategic vision	Adding value to the service/product	**1.3%**	**17.4%**	28.7%	30.0%	22.6%
	Quality oriented towards organizational objectives	0.0%	14.7%	34.6%	**30.7%**	20.0%
	Analytical ability	0.0%	18.7%	38.0%	**31.3%**	12.0%
	Customer Service	0.0%	6.0%	16.0%	37.3%	**40.7%**

Data source: Research data, 2021

In general, higher mastery was predominant in the competencies related to the dimension "Knowing how to assume responsibilities," such as respect for hierarchies (60%) and professional ethics (54%), and "Knowing how to engage" with commitment to the client/user (48.7%) and teamwork (44%). On the other hand, dimensions such as "Knowing how to mobilize resources" and "Having strategic vision" showed no self-perception of mastery by nutritionists in competencies such as Leadership in nutrition (1.3%), Financial management (2.7%), and Adding value to the service/product (1.3%). Although the dimension "Knowing how to learn" did not stand out in competencies with no mastery reported by the participants, most rated their mastery as insufficient in developing research skills, reflective practice, and permanent continuing education.

The global analysis of the competencies perceived by the graduates, by dimension of knowledge, is presented in Figure 1.

Figure 1. Dimensions of knowledge of professional competencies perceived by graduates of the IMS-CAT/ UFBA Nutrition course regarding the area of Nutrition in Food Service. Vitória da Conquista (BA), 2021.



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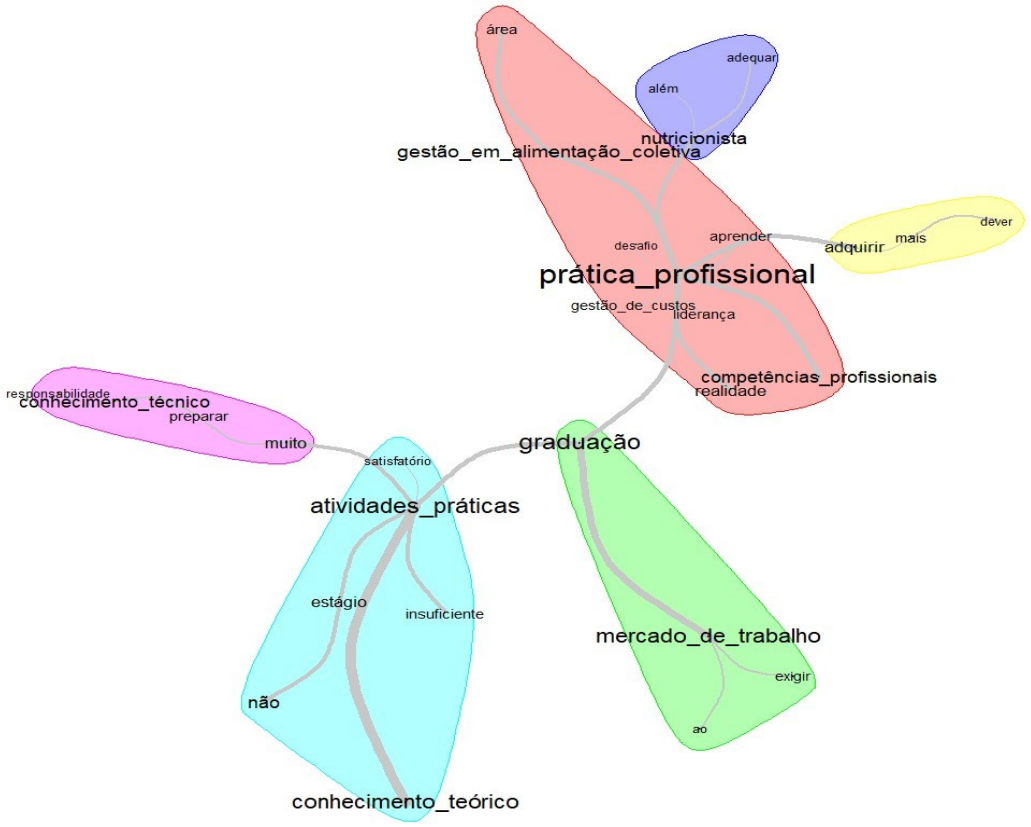
Note: Scale range: 0, none mastery to 4, total mastery.
Source: Research data, 2021

It can be observed that the dimensions "Knowing how to act," "Knowing how to mobilize resources how to learn" and "Knowing how to mobilize resources how to mobilize resources" are perceived by nutritionists with a low degree of mastery in relation to those required for professional performance in the area of study, remaining distant from the ideal fulfilment of the complete web.

Analysing alumni perception of the demands of the employment market, similarity analysis was performed to identify central nuclei and existing structures in the analysed text based on their responses (Figure 2).

Figure 2. Perception of graduates from the Nutrition program at IMS-CAT/UFBA regarding the professional competencies acquired throughout their undergraduate studies and those required by the labor market to work in the area of Nutrition in Food Services. Vitória da Conquista (BA), 2021.



Source: Research data (obtained using IRAMUTEQ), 2021

Note: Prática profissional (professional practice); Mercado de trabalho (labour market); Conhecimento teórico (theorical knowledge); Conhecimento técnico (technical knowledge)

The similarity tree shown in Figure 1 highlights the ramifications that derive from graduation, as a central axis, establishing connections with “professional practice,” “labour market” and “practical activities”. It can be observed that the "practical activities" of the graduation, according to the perception of the participants, are strongly connected with "theoretical knowledge" and more tenuously with "technical knowledge," but they appear distant from what is required by the workforce market.

Conversely, the branch representing "professional practice," that is, what is required in the performance in FSM, sequentially connects to "learning" and "acquiring," in addition to making connections with "professional competencies," "cost management," and "leadership," but appears dissociated from practical activities and distant from the theoretical and technical knowledge perceived by graduates.

DISCUSSION

Initially, the empirical effort to apply, in an unprecedented way, the analysis of the self-perception of nutritionists inserted in the FSM labour market on the professional skills mapped for the specific area of activity in Nutrition in Food Service is emphasized.[14]

The nutritionists participating in the research, who graduated in Nutrition from a federal public institution, where most are female, corroborate the intense female presence historically recorded in the nutritionist profession, although there has been greater male insertion in nutrition courses in recent decades.[5,22]

The low presence of specialization in the area of activity among those who reported having postgraduate education may reflect a limited availability of courses in the field. Despite Nutrition in Food Services being a significant area of practice contributing to the insertion of former students in the labor market, there is little expressiveness in scientific practice and in the training of researchers, and their participation is limited in graduate programs, especially *stricto sensu*, in Brazil.[23] Such factors may negatively impact the development of competencies in the "Knowing how to learn" dimension, which involves the ability to conduct research, reflective practice, and permanent and continuing education.

In reflective practice, a study on its influence on organizational learning in food services concluded that, in the process of knowing-in-action, the meanings of theory, acquired during graduation and continuing education, are constructed regarding their own practice, favouring more satisfactory decision-making and acting as a driver for the development of managerial skills. Competencies related to people management and financial performance were highlighted as the greatest challenges faced by nutritionists in institutional restaurants.[24] For Gaba et al.,[25] the training of nutritionists should place greater emphasis on this issue (incipient in the training process).

The considerable percentage of graduates working in the school segment may be related to Law No. 11.947 of June 16, 2009, from the National School Feeding Program (PNAE), which attributed to the nutritionist the technical responsibility for school feeding in the states and municipalities and in federal schools.[26] However, when addressing the role of nutritionists within the PNAE, it is observed that most research concentrates on the duties of this professional, disregarding the skills necessary to ensure the quality and frequency of the activities performed.[27] It is crucial to emphasize that these different dimensions are complementary since the assessment of attributions should be conducted alongside the competencies and skills acquired. This reinforces the need for more in-depth discussions on the topic.

Overall, respondents claim that performance in the realm of food services is guided by the perspective of health promotion and disease prevention, which requires diversified perceptions, combining knowledge of health, biological, human and economic sciences. A study conducted by Freitas et al.[14] among nutritionists working in the field of study highlighted the managerial action of this professional, demonstrating the interdisciplinarity with other fields of knowledge, particularly administrative sciences.

According to CFN Resolution No. 600/2018, work performed in the context of Food Services requires nutritionists to carry out functions related to planning, organization, direction, supervision and evaluation, which anticipates the development of professional skills.[4] Studies conducted with nutritionists indicate the use of the principle of cost-effectiveness or rational use of resources as a guiding principle for their practice –such as in menu planning.[28] However, the responses from graduate participants in the research pointed to insufficient mastery in cost management and in adding value to the product–the offered meal.

The work carried out in this area anticipates the development of specific and well-established professional competencies. The organization of work in Food Services is characterized by Taylorist-Fordist organizational principles marked by routines, technical standards, with a rigid hierarchical structure.[29] Therefore, the administrative activities performed by nutritionists reflect their position in the hierarchy of the organizations, where higher positions indicate a greater performance of administrative and managerial activities and, consequently, a lower execution of technical activities.[30]

It is noteworthy that in a study conducted to determine the competence indicators among managers and employees of Food and Nutrition Units, professional ethics was the most relevant aspect in the competencies among managers,[31] which reinforces the relevance of the code of ethics and conduct of nutritionists in Brazil.[32] Additionally, the work of nutritionists is of utmost importance for promoting, maintaining, and recovering health.

In the complex scenario in which organizations are situated, such professionals must use strategies fostered by their commitment to customers/users. From this perspective, professional training should place greater emphasis on this issue since discussions focused on client-oriented service and commitment to the client remain incipient. The contemporary employment market demands the inclusion of professionals possessing diverse competencies to make work teams comprehensive, innovative, and capable of promptly responding to demands.[33] Thus, through teamwork, demands are met effectively, enhancing skills of professionals, which results in added value to the products and services offered.

The panorama of action in Nutrition in Food Services requires the development of diverse, yet strongly interrelated, competencies since the demands and requirements of the labour market interfere in the position of professionals in relation to it. Nevertheless, in the perception of degree holders working in the area, there is a distance between the practical activities that relate theoretical and technical knowledge to those required in professional practice. The numerous situations experienced in the work environment constitute an exceptional *locus* for the development of competencies necessary to meet the imposed challenges, gaining relevance in the face of the complex and full of time pressure and risks environment, such as that found in the Food and Nutrition Units.[24]

Thus, although the practical activities developed in graduation are a source of strengthening theoretical knowledge, they are insufficient as to what is required by the job market.In this regard, the expressed need by graduates to "learn" and "acquire" during professional practice suggests that professional competencies are developed only in the labour market, which remains a challenge in nutrition education.

While evidence indicates that professional practice leads professionals to learn and develop their expertise, it is important to highlight that Nutrition Science predominantly features a biological-focused training, struggling to associate knowledge, skills, and attitudes from other fields of knowledge. It is focused on technical skills and is fragmented and disarticulated concerning theoretical and practical activities, hindering the performance of future professionals' ability to promote the human right to adequate food and to support the promotion of adequate and healthy eating.[9]

As limitations of the research, the difficulty in raising awareness among alumni about the importance of participating in the study, as well as the limited number of respondents, is noted, which may not fully represent the diversity of graduates from the Nutrition program. Such limitations compromise the generalization of the results beyond the studied sample. Nevertheless, the findings indicate gaps in studies in the field of Nutrition in Food Services, aiming to strengthen the professional competencies required for the professional performance of nutritionists in promoting community health in the dynamic, complex, and globalized scenario in which contemporary society is inserted

CONCLUSION

This study revealed that nutritionists graduating from IMS-CAT/UFBA who are professionally active in the area of Nutrition in Food Services perceive that the professional competencies acquired for practice are, in relation to those required by the workforce market, indicating that their highest levels of mastery are in

three dimensions of knowledge. The respective self-perceived competencies include: "assume responsibilities" (teamwork, professional ethics, respecting hierarchies), "knowing how to engage" (dedication and cooperation, commitment to the client/user), and "knowing how to communicate" (professional networking, socialization). In contrast, there is a perception of insufficient mastery in the dimensions of "know how to act," "knowing how to mobilize resources," and "having strategic vision," specifically in competencies of leadership, financial management, and adding value to the service.

The research highlighted that former students identify gaps in the competencies acquired during their undergraduate studies concerning the demands of the labour market in Nutrition in Food Services, particularly regarding the distance between theoretical and technical knowledge, indicating that several professional competencies are developed only during professional practice. It is suggested for future studies to expand the research to other educational institutions in order to obtain greater representativeness regarding the self-perception of competencies of Nutrition graduates in Brazil.

REFERENCES

1. Bezerra IN, Moreira TMV, Cavalcante JB, Souza AM, Sichieri R. Consumo de alimentos fora do lar no Brasil segundo locais de aquisição. Rev. Saúde Pública. 2017;51. https://doi.org/10.1590/s1518-8787.2017051006750

2. Associação Brasileira de Refeições Coletivas. Mercado Real- ABERC. [Boletim]. [Acesso em junho de 2022]. Disponível em: https://www.aberc.com.br/mercado-real/.

3. Castro IRR. Desafios e perspectivas para a promoção da alimentação adequada e saudável no Brasil. Cad Saúde Pública. 2015;31(1):7-9. https://doi.org/10.1590/0102-311XPE010115.

4. Conselho Federal de Nutricionistas. Resolução CFN no 600/2018. Dispõe sobre a definição das áreas de atuação do nutricionista e suas atribuições, indica parâmetros numéricos mínimos de referência, por área de atuação, para a efetividade dos serviços prestados à sociedade e dá outras providências. Diário Oficial da União. 2018. [acesso em 31 mar 2021]. Disponível em: https://www.cfn.org.br/wpcontent/uploads/resolucoes/Res_600_2018.htm

5. Conselho Federal de Nutricionistas (Brasil). Perfil do nutricionista no Brasil [Internet]. 2021 [acesso em 31 mar 2021]. Disponível em: http://pesquisa.cfn.org.br/

6. Prazeres AF, Luz TR, Paiva KCM. Formação de Competências Profissionais Em Alunos de Curso de Nutrição: Comparando Percepções de Docentes e Discentes em Programa de Estágio. Rev Tempus Actas Saúde Col. 2013 [acesso em 15 abr 2021];7 (3):165-178. https://doi.org/10.18569/tempus.v7i3.1402

7. Suárez C, Echegoyen A, Sastre M, Toledo A. Identificação das necessidades formativas dos licenciados em nutrição para construção de um curso de especialização na área da alimentação coletiva. Rev da AssocBrasNutr. 2016 [acesso em 31 mar 2021];7(2):24-30. Disponível em: https://rasbran.com.br/rasbran/article/view/246/148

8. Ministério da Educação e Cultura (Brasil). Resolução CNE/CES n°5, de 7 de novembro de 2001. Institui Diretrizes Curriculares Nacionais do Curso de Graduação em Nutrição. [Acesso em 14 out 2021]. Disponível em: http://portal.mec.gov.br/cne/arquivos/pdf/CES05.pdf

9. Vieira VL, Utikava N, Cervato-Mancuso AM. Atuação profissional no âmbito da segurança alimentar e nutricional na perspectiva de coordenadores de cursos de graduação em Nutrição. Interface-Comum saúde, Educ. 2013;17(44). https://doi.org/10.1590/S1414-32832013000100013

10. Soares NT, Aguiar Adriana C. Diretrizes curriculares nacionais para os cursos de nutrição: avanços, lacunas, ambiguidades e perspectivas. Revista de Nutrição, 2010;23(5):895-905. https://doi.org/10.1590/S1415-52732010000500019

11. Domene SMA, Pezzato LM, JuzwiakCR, Zangirolani LTO. Avaliação dos egressos do curso de nutrição da UNIFESP: subsídios para a reforma da matriz curricular. Demetra, 2017;12(3);593-610. https://doi.org/10.12957/demetra.2017.28726

12. Brasil. Conselho Nacional de Saúde (CNS). Resolução nº 703, de 20 de outubro de 2022. *Aprova as contribuições do Conselho Nacional de Saúde à proposta de Diretrizes Curriculares Nacionais do Curso de Graduação em Nutrição.* [Acesso em 30 out 2022]. *Disponível em:* http://www.conselho.saude.gov.br/resolucoes-cns/2686-resolucao-n-703-de-20-de-outubro-de-2022.

13. Fleury MTL, Fleury A. Construindo o conceito de competência. ver Adm Contemp. 2001;5(spe):183-96. https://doi.org/10.1590/S1415-65552001000500010

14. Freitas JF, Calazans DLMS, Medeiros ACQ, Alchieri JC. Professional Competencies and Performance of Dietitians in Food Services: An Integrative Literature Review. Journal of Education and Human Development. 2019;8(4):54-62. https://doi.org/10.15640/jehd.v8n4a8

15. Vasconcelos FC, Moia LJMP, Martens IBG. Competências e habilidades dos discentes do curso de nutrição para aplicar a avaliação subjetiva global para fins de diagnóstico nutricional. Revista Sustinere. 2020;8(2);338-356. https://doi.org/10.12957/sustinere.2020.39228

16. Soar C, Silva CAM. Perfil e carreira de egressos de Nutrição da região do Vale do Paraíba – SP. Demetra. 2017;12(4):1013-1029. https://doi.org/10.12957/demetra.2017.28644

17. Carneiro ACLL, Mendes LL, Gazzinelli MF. Avaliação curricular: a perspectiva de egressos de um curso de Nutrição. RECOM. 2018;8:1-5. https://doi.org/10.19175/recom.v8i0.2629.

18. Projeto Pedagógico do Curso (PPC). Curso de Nutrição. Reestruturação do Projeto Pedagógico do Curso de Nutrição IMS-CAT/UBFA.2018. Vitória da Conquista/BA, 2018. [Acesso em 20 set 2022]. Disponível em: https://ims.ufba.br/sites/ims.ufba.br/files/documentos/cursos/projetopedagogiconutricao.pdf.

19. Freitas, J.F. Evidências de validade em um instrumento de avaliação de competências profissionais na prática do nutricionista na gestão da alimentação coletiva Tese. [Doutorado em Ciências da Saúde]. Universidade Federal do Rio Grande do Norte, 2020.

20. Ratinaud P. Iramuteq: Interface de R pour lês Analyses Multidimensionnelles de Textes et de Questionnaires [Computer software]. 2009 [acesso em 15 abr 2021]. Disponível em: http://www.iramuteq.org

21. Camargo BV, Justo AM. Iramuteq: um software gratuito para análise de dados textuais. Temas psicol. 2013;21(2):513-518. http://dx.doi.org/10.9788/TP2013.2-16

22. Souza LKCS, Campos FM, Kraemer FB, Machado PAN, Carvalho MCVS, Prado SD. Gênero e formação profissional: considerações acerca do papel feminino na construção da carreira de nutricionista. Demetra. 2016;11(3):773-788. https://doi.org/10.12957/demetra.2016.23426

23. Campos FM, Prado SD, Ferreira FR, Kraemer FB. Food service in the scientific field of Food and Nutrition: Reflection sab out scientific conceptions and research. Rev Nutr. 2016;29(3):425-33. https://doi.org/10.1590/1678-98652016000300012

24. Cardoso CIXS; Feitosa MGG, Calazans DLMS. Reflective practice as a resource in the management of outsourced university restaurants. Demetra. 2018;13(1);275-292. http://dx.doi.org/10.12957/demetra.2018.30779

25. Gaba A, Shrivastava A, Amadi C, Joshi A. The Nutrition and Dietetics Workforce Needs Skills and Expertise in the New York Metropolitan Area. Glob J Health Sci. 2016;8(6):14-24. https://doi.org/10.5539/gjhs.v8n6p14

26. Brasil. Lei n° 11.947, de 16 de junho de 2009. Dispõe sobre o atendimento da alimentação escolar e do Programa Dinheiro Direto na Escola aos alunos da educação básica; altera as Leis nos 10.880, de 9 de junho de 2004, 11.273, de 6 de fevereiro de 2006, 11.507, de 20 de julho de 2007; revoga dispositivos da Medida Provisória no 2.178-36, de 24 de agosto de 2001, e a Lei no 8.913, de 12 de julho de 1994; e dá outras providências. Diário Oficial da República Federativa do Brasil, Brasília, DF, Seção 1, P. 2-4, 17jun. 2009, [acesso 30 ago 2021]. Disponível em: http://www.planalto.gov.br/ccivil_03/_Ato2007-2010/2009/Lei/L11947.htm

27. Corrêa RS, Rockett FB, Rocha PB, Silva VL, Oliveira VR. Atuação do Nutricionista no Programa Nacional de Alimentação Escolar na Região Sul do Brasil. Ciênc. saúde coletiva. 2017;22(2):563-574. https://doi.org/10.1590/1413-81232017222.09622016

28. Triches. R.M e Brito, AC.Conhecimento e atuação de nutricionistas da alimentação escolar sobre dietas sustentáveis. 2021. Demetra. 2021;16:e60571. https://doi.org/10.12957/demetra.2021.60571

29. Colares LGT, Freitas CM. Processo de trabalho e saúde de trabalhadores de uma unidade de alimentação e nutrição: entre a prescrição e o real do trabalho. Cad. Saúde Pública. 2007;23(12):3011-3020. https://doi.org/10.1590/S0102-311X2007001200022

30. Ansaloni JA. Situação de trabalho dos nutricionistas em empresas de refeições coletivas de Minas Gerais: trabalho técnico, supervisão ou gerência? Rev. Nutr. 1999;12(3):241-260. https://doi.org/10.1590/S1415-52731999000300005.

31. Ko WH, Hsiao IF. Development the Food Safety and Sanitation Competences Indicators for Foodservice Employees. Management and Organizational Studies. 2017;4(2). https://doi.org/10.5430/mos.v4n2p1

32. Conselho Federal de Nutricionistas. Resolução CFN no 599/2018. Aprova o código de ética e de conduta do nutricionista e dá outras providências. [Internet]. [acesso 05 maio 2021]. Disponível em: http://www.cfn.org.br/wp-content/uploads/resolucoes/Res_599_2018.htm

33. Godoy MTT, Mendonça H. Inventário de Competências Adaptativas: adaptação e evidências de validade junto a trabalhadores brasileiros. Revista de psicologia: Organizações e Trabalho. PEPSIC. 2020;20(1). ISSN 1984-6657. [Acesso 03 jun 2022]. Disponível em: http://pepsic.bvsalud.org/scielo.php?script=sci_abstract&pid=S1984-66572020000100007&lng=pt&nrm=iso

Contributors

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