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Evaluation of Brazilian nutritionists' knowledge of two chapters of the profession's new Code of Ethics

Avaliação do conhecimento de nutricionistas brasileiros sobre dois capítulos do novo Código de Ética da profissão

Abstract

Introduction. The most recent code of ethics for nutritionists was published in 2018, and research on this topic is scarce. **Objective.** This work aims to evaluate the knowledge of nutritionists on ethical conduct associated with chapters IV and V of the Brazilian Code of Ethics and Conduct of Nutritionists. **Methods.** The study was approved by the Research Ethics Committee of Iguazu University (CAAE:18920719.3.0000.8044). It is quantitative and exploratory research, in which we applied an on line 34-objective questions questionnaire to nutritionists from all over the country. The survey was developed on the Google Forms platform and the link was shared with nutritionists present in groups on WhatsApp, Facebook, and Instagram accounts. **Results and Conclusion.** Our data showed that most professionals have already read the Code of Ethics (81%), but partial knowledge was observed concerning articles 54, 58, 60, 61, 63, and 64. It was found that the profile of nutritionists is composed mostly of white women, aged between 30 and 39 years, married or in a consensual union, without children, with a maximum degree of specialization, having individual monthly income of 3 to 6 minimum wages, monthly family income of up to 6 minimum wages, and with their main area of activity in clinical nutrition. It was observed that some factors influence the reading of the code and the amount of correctness of the questions: color, maximum title, family, and individual income, area of activity, and marital status.

Keywords: Code of Ethics. Nutritionist. Professional Ethics.

Resumo

Introdução. O mais recente Código de Ética do nutricionista foi publicado em 2018, sendo escassas as pesquisas neste tema. **Objetivo.** Este trabalho tem como objetivo avaliar o conhecimento de nutricionistas sobre condutas éticas associadas aos capítulos IV e V do Código de Ética e Conduta do Nutricionista. **Método.** O estudo foi aprovado pelo Comitê de Ética em Pesquisa da Universidade Iguazu (CAAE:18920719.3.0000.8044). Trata-se de uma pesquisa quantitativa e exploratória, na qual foi aplicado um questionário *on line* de 34 questões objetivas a nutricionistas de todo o país. A pesquisa foi desenvolvida na plataforma do Google Forms e o *link* foi compartilhado com nutricionistas

presentes em grupos no WhastApp, Facebook e com contas no Instagram. **Resultados e Conclusão.** Nossos dados mostram que a maior parte dos profissionais já leu o Código de Ética (81%), porém foi observado um conhecimento parcial em relação aos artigos 54, 58, 60, 61, 63, 64. Constatou-se que o perfil dos nutricionistas é composto principalmente por mulheres, brancas, com idade entre 30 a 39 anos, casadas ou em união consensual, sem filhos, com titulação máxima a especialização, tendo renda individual mensal de 3 a 6 salários mínimos, renda familiar mensal de até 6 salários-mínimos, e com área de atuação principal a nutrição clínica. Foi observado que alguns fatores influenciam a leitura do código e a quantidade de acerto das questões: cor, titulação máxima, renda familiar e individual, área de atuação e estado civil.

Palavras-chave: Código de Ética. Nutricionista. Ética Profissional.

INTRODUCTION

Nutritionists work with food and with the relationship that people have with it. They act on disease prevention and health promotion, mainly by stimulating healthy eating behavior.¹

In Brazil, the first Nutrition course emerged in 1939 due to the influence of a group of medical doctors from São Paulo University and Getúlio Vargas government's project for public health improvement.² Since then, many other Brazilian universities started to offer the course, which altogether with the Brazilian Association of Nutritionists, contributed to the recognition of the profession in 1967.³

In 1978, a Brazilian federal law (6583/78) created the Nutritionists' Federal and Regional Councils. These organs should inspect and guide the exercise of the profession. For this reason, it was necessary to prepare the first nutritionist's Code of Ethics, released in 1981.⁴ This document contained a somewhat flexible speech, filled with definitions, principles, prohibitions, and obligations, which mirrored Brazilians' constitution and the historical moment.⁵

After a significant political and social transformation (including a new constitution), a new code of ethics became necessary. The second version, published in 1993, invited nutritionists to reflect on their actions, highlighted the social compromise, stimulated autonomy and critical sense, and established the duties of nutritionists to their professional class, as well as to other people.⁶

In the following years, advances in science and changes in the population's feeding profile allowed nutrition to incorporate other fields of acting, which should be ethically regulated. So, in 2004, the third Code of Ethics amplified the topics of discussion, without relevant changes in the previous versions' structure.⁷

For the same reason, in 2014, the Federal Council of Nutritionists required the construction of an updated code to cover the new habilitations. Around one hundred thousand professionals contributed for the fourth edition, an important differential from the preceding ones. The final text, delivered in 2018, had two significant newness: chapter IV (deals with the relationship of the nutritionist with media and information), and chapter V (that rules the association of professionals to products, brands, services, companies, and industries).⁸

Given the recentness of this publication, there are few pieces of research works on this topic. For this reason, this study aims to evaluate the knowledge of Brazilian nutritionists about chapters IV and V from the fourth edition of the Code of Ethics and Conduct of the Nutritionist and factors that could influence this outcome.

METHODS

Ethical Aspects

The research was approved by the Ethics Committee of the Universidade Iguazu by means of the Certificate of Presentation for Ethical Appreciation (CAAE: 18920719.3.0000.8044).

Study design and data collection

The current research is a sectional observational study, in which our group collected all data through an on line questionnaire built on the Google Forms platform. Researchers have been increasingly using this tool due to its safety, efficiency, practicality, ease of data organization, low cost, low environmental impact, and extensive geographic coverage. It also allows collaborative work, obeying the social distancing protocols in the Covid-19 pandemic.

The participants answered 35 questions, divided into two modules: I. Sociodemographic aspects (19/35); II. Knowledge of chapters four and five of the new code of ethics (16/35). In this second part, participants received one point for each correct answer.

Participant's invitation and selection

Participants were recruited in groups related to nutrition on Facebook and WhatsApp. On Instagram, the invitation occurred via direct with professionals that followed the official nutrition federal or regional's council profile account. Everyone who volunteered for this research received an explanation about the project and its purposes. Then, they received a link to the on line questionnaire form.

As inclusion criteria, participants should be registered with a Regional Nutrition Council. Questionnaires with confusing, incomplete, or contradictory answers were excluded. In total, 203 nutritionists met these criteria and made up the study sample.

Graphical representation and statistical analysis

We used Microsoft Excel software to create all charts and tables, and the BioEstat 5.0 software for statistical analyses.

For all frequency comparisons, the chi-square test was used for contingency tables which had a maximum 5x5 size, and none of the values was equal to zero. Cases that did not fit in this profile were analyzed by Fisher's exact test.

For the comparison of individual measures between the two groups, the first step was to perform the Shapiro-Wilk test to discover whether our data had a normal distribution. As all groups had an asymmetric profile, the Mann-Whitney test was used for these analyses.

In all cases, the difference between groups must have $p < 0,05$ to be considered statistically relevant.

RESULTS

Table 1 shows the profile of the 203 participants of this study. They were predominantly women, 30 to 39 years old, white skin, married or in a consensual union, with a *lato sensu* post-graduation course as a maximum academic degree, individual monthly income from 3 to 6 minimum salaries, monthly family income of up to 6 minimum salaries, and acting mainly in the clinical area.

Table 1. Profile of participants who answered the questionnaire in 2021. Rio de Janeiro-RJ, 2021

VARIABLES	N	%	VARIABLES	N	%
Gender			Individual monthly income (in minimum salaries)		
Male	16	7.88	Up to one	39	19.21
Female	187	92.12	From 1.1 to 3	60	29.56
Age			From 3.1 to 6	66	32.51
20 to 29 years old	77	37.93	From 6.1 to 9	25	12.32
30 to 39 years old	90	44.33	From 9.1 to 15	10	4.93
40 to 49 years old	22	10.84	From 15.1 to 20	2	0.99
≥ 50 years old	14	6.897	More than 20	1	0,49
Race			Monthly family income (in minimum salaries)		
White	134	66.01	Up to one	10	4.93
Brown	57	28.08	From 1.1 to 3	35	17.24
Black	9	4.43	From 3.1 to 6	59	29.06
Yellow	2	0.99	From 6.1 to 9	45	22,17
Indigenous	1	0.49	From 9.1 to 15	31	15.27
Marriage status			From 15.1 to 20	14	6.90
Single	97	47.78	More than 20	9	4.43
Married / Consensual union	18	8.87	Field of acting		
Divorced / Separated	87	42.86	Clinical nutrition	86	42,36
Widow(er)	1	0.49	Collective feeding	35	17.24
Number of children			Sports nutrition	8	3.94
None	129	63.55	Collective health nutrition	22	10.84
One	36	17.73	Food production chain	4	1.97
Two	30	14.78	Teaching, extension, and research	48	23.65
Three	7	3.448	Professional experience (time)		
Four or more	1	0.493	Do not have	12	5.91
Educational degree			Up to 4.9 years	88	43.35
Graduation	59	29.06	From 5 to 9.9 years	56	27.59
Specialization course	87	42.86	From 10 to 19.9 years	31	15.27
Master's degree	33	16.26	20 years or more	16	7.88
Doctoral degree	22	10.84			
Postdoctoral degree	2	0.99			

Statistical analysis revealed that skin color, academic degree, individual monthly income, and area of acting were variables that could influence professionals to read or not the code of ethics (Table 2).

Table 2. Factors that may influence (or not) the reading of the code of ethics in 2021. Rio de Janeiro-RJ, 2021

	Nutritionists who read the code		Those who did not read the code		<i>p</i> *
	N	%	N	%	
Gender					
Male	13	6.40	3	1.48	0.9610
Female	151	74.38	36	17.73	
Age					
20 to 29 years old	59	30.73	9	4.69	0.4432
30 to 39 years old	68	35.42	20	10.42	
40 to 49 years old	17	8.85	5	2.60	
50 years or more	12	6.25	2	1.04	
Not informed / Invalid answer	8		3		

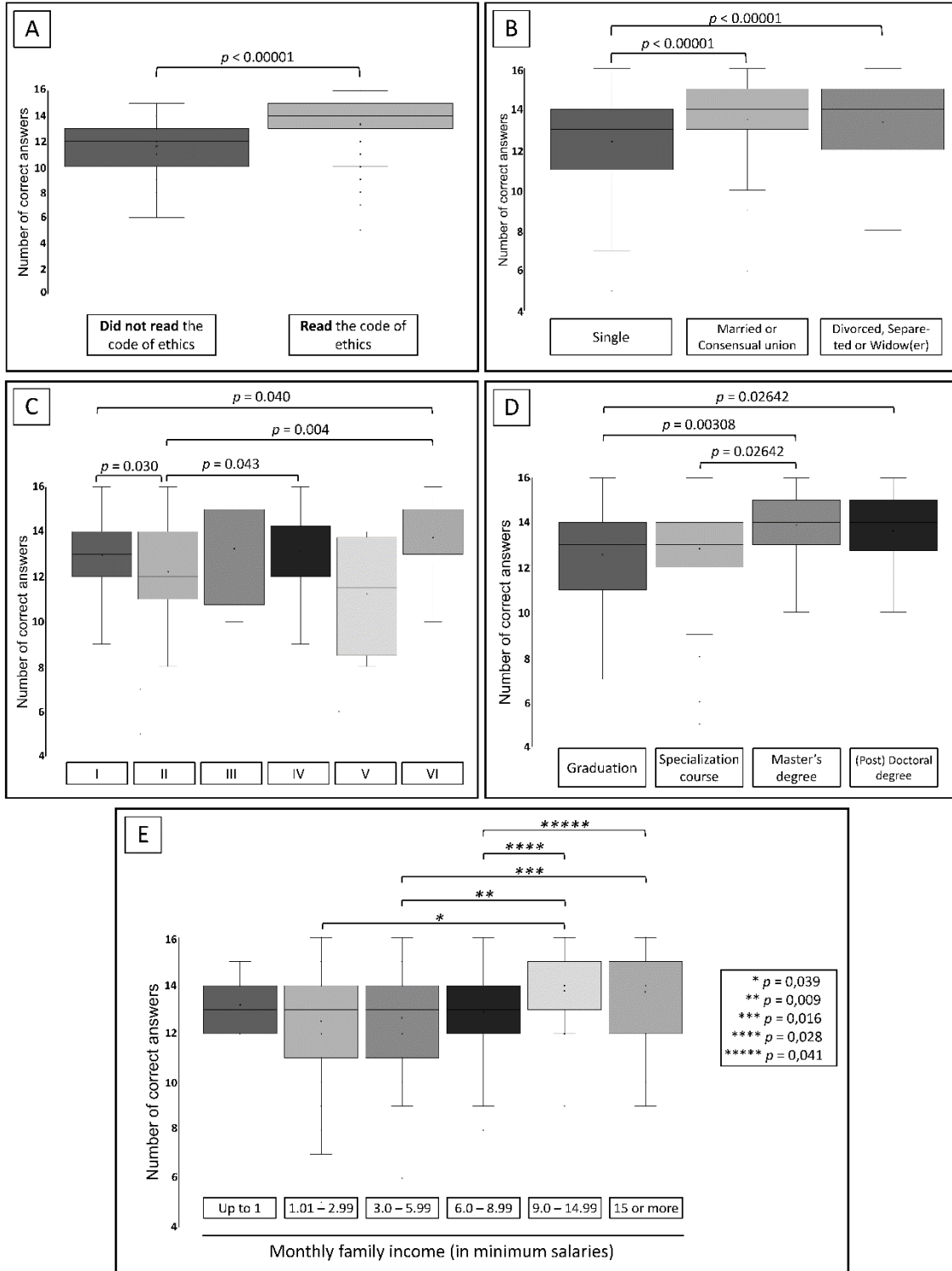
Table 2. Factors that may influence (or not) the reading of the code of ethics in 2021. Rio de Janeiro-RJ, 2021

(Continues)

	Nutritionists who read the code		Those who did not read the code		<i>p</i> [*]
	N	%	N	%	
Race					
White	111	54.68	23	11.33	0.0366
Brown	47	23.15	10	4.93	
Black	4	1.97	5	2.46	
Other	2	0.99	1	0.49	
Educational degree					
Graduation	52	25.62	7	3.45	0.0266
Specialization course	61	30.05	26	12.81	
Master's degree	30	14.78	3	1.48	
Doctoral degree	19	9.36	3	1.48	
Postdoctoral degree	2	0.99	0	0.00	
Individual monthly income (in minimum salaries)					
No income	12	5.91	3	1.48	0.0395
Up to one	23	11.33	1	0.49	
From 1.1 to 3	42	20.69	18	8.87	
From 3.1 to 6	53	26.11	13	6.40	
More than 6	34	16.75	4	1.97	
Field of acting					
Clinical nutrition	76	37.44	10	4.93	0.0023
Collective feeding	23	11.33	12	5.91	
Collective health nutrition	17	8.37	5	2.46	
Teaching, extension and research	42	20.69	6	2.96	
Others	6	2.96	6	2.96	
Professional experience (time)					
Do not have	12	5.91	0	0.00	0.2810
Up to 4.9 years	71	34.98	17	8.37	
From 5 to 9.9 years	45	22.17	11	5.42	
From 10 to 19.9 years	22	10.84	9	4.43	
20 years or more	14	6.90	2	0.99	

Considering the knowledge about the code of ethics' content, married people (or in a consensual union), those who work in the education and extension area, with master's or doctoral degree, and with family monthly income superior to 9 minimum salaries reached higher scores when answered the second part of the questionnaire (Figure 1).

Figure 1. Analysis of variables with statistical significance in relation to the number of correct answers. A. Reading the code of ethics; B. Marital status; C. Practice area (I. Clinical nutrition; II. Collective food; III. Sports nutrition; IV. Collective health; V. Production chain; VI. Teaching, research and extension); D. Maximum degree obtained; E. Monthly family income.



DISCUSSION

The profile of nutritionists outlined by this research proved to be compatible with the 2017 CFN booklet.⁹ A similar pattern is also observed among nutritionists from Australia¹⁰ and the United States.¹¹ The only exception was the average family income, which in our study was 6 minimum salaries (R\$ 6,270.00) or less, while in Brazil, in general, it is R\$ 10,472.30.⁹ It was a predictable variation, given the difference in the sample size: CFN's research interviewed 1,104 nutritionists (number 5.4 times greater than the present study).⁹

Our data also showed the low representativeness of some social groups among nutritionists. The Brazilian population is made up of 48.2% of men, and 56.2% is black.¹² Meanwhile, in our sample, women are 92% of the participants, and black people represent only 32% of the survey respondents. The female predominance in this profession may be linked to the fact that nutrition emerged from the nursing course, also predominantly female.¹³ Regarding the low number of black nutritionists, CFN's research found the same pattern: only 26.8% of their respondents.⁹ Unfortunately, Brazil has a marked inequality of access to education. In 2015, for example, the black population reached a general educational level that white Brazilians already had thirteen years before.¹⁴ And, despite the predominance of black people in Brazil, the rate of young black people between 18 and 24 years old who attend higher education is half the percentage attributed to white young people in the same age group.¹⁴

Concerning social media, changes in the new code of ethics accompany social trends and it aims to regular this field, which can be used by nutritionists to both disseminate information and attract customers, exposing them to a wide range of ethical dangers.¹⁵ These limitations imposed on the nutritionist's performance in social media are already observed in the codes of ethics of nutritionists from other countries, such as India, The United States, Canada, Portugal, Peru and Argentina.¹⁶⁻²¹ In Brazil, rules regarding the professional use of social media are also found in other professions, such as Medicine, Physical Therapy, and Dentistry.²²⁻²⁴

And although the first article of the nutritionist's Code of Ethics states that "The nutritionist is committed to knowing and guiding his performance [...] in the ethical precepts contained in this Code",⁸ 19% of the respondents of the research claimed to have not read the document. Besides, the topics covered in the code go beyond common sense, requiring study and awareness to be properly implemented in practice. Participants who do not read the code of ethics score significantly less than those who read.

Furthermore, the race also influences the reading. More than half of black nutritionists did not read the code (55.6%), while more than 82% of white nutritionists have already read it. The reasons behind this phenomenon are not fully understood. However, it is known that the black population in Brazil suffers significant impacts on their quality of life, such as greater exposure to poverty, violence, unemployment, and fewer opportunities for social advancement.²⁵ This social and economic inequality can harm productivity and professional capacitation.²⁶⁻²⁷

Finally, another interesting point was that the reading of the code of ethics is more frequent depending on the area of activity and educational level. Nutritionists with master's degrees, or doctorates, and who work in research, teaching, and extension read the code of ethics more often and, consequently, perform better when answering the ethical questions in the questionnaire. A possible explanation for this fact is that these professionals are inserted in an environment in which this subject is constantly highlighted, either to transmit it to other people or for their ethics related to work and research. Besides, the higher level of education is directly related to greater moral and ethical development.²⁸

CONCLUSION

This study showed that 81% of the participants read the nutritionists' new Code of Ethics. However, it is notable a superficial knowledge concerning some articles from chapter IV e V. It proves that previous contact with this document did not guarantee a good performance in all the topics covered by it. Even so, nutritionists that read the code had superior results compared to the group of professionals who did not read.

People who are married or in a consensual union, with a primary role in the area of education and extension, who hold a master's or doctoral degree, and with a family income of more than 9 minimum wages, answered questions related to the code more correctly often. In addition, the variables race, maximum titration, monthly family and individual income, and main area of activity have a significant influence on the reading of the code by professionals.

Our observations point to the need of stimulating greater reading of the code and generation of debates on professional ethics, especially within universities, guiding future nutritionists.

The main limitation of this research was the lack of guarantee about the authenticity of the answers obtained, which commonly occurs in research that uses electronic questionnaires. In addition, the scarcity of data on ethics in Nutrition in Brazil made it difficult to pair some of our results with the literature and deepen the discussions. The evidence shared here shows the great relevance of this topic and contributes to improving the debate on professional ethics and the nutritionist's attributions.

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Contributors

Francisco JLF participated in data collection and paper writing; Bandeira DM participated in data analysis, interpretation and manuscript's translation to English; Costa CFS participated in study conception and design, article review and approval of final version

Conflict of Interest: The authors declare that there is no conflict of interest.

Received: May 6, 2022

Accepted: December 1, 2022