



Original article

Changes in the lifestyle of nutritionists arising from social isolation during the pandemic

Alterações no estilo de vida de nutricionistas decorrentes do isolamento social durante a pandemia

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Abstract

Objective: to analyze changes in the lifestyle of nutritionists during the Coronavirus (COVID-19) pandemic.

Materials and Methods: this is a quantitative cross-sectional study carried out through a questionnaire via the Google forms platform with questions related to food, physical activity, body weight, alcohol intake, tobacco use and symptoms of anxiety or depression. **Results:** 101 forms were answered, 90.1% of the participants were female and 53.0% were aged between 20-30 years, 11.9% lost their jobs and 29.7% got a new opportunity during the pandemic, only 11.9% assumed they had strictly complied with social distancing, 44.6% reported weight gain and 6.9% increased their alcohol consumption and only 1.0% started smoking. Free time was spent watching movies and series (23.8%), using computers and/or cell phones (20.8%), doing physical activity (14.9%) and reading (9.9%). **Conclusion:** the concern to maintain a good diet, with healthy habits, without the consumption of alcohol or tobacco was maintained during the pandemic.

Keywords: Nutrition Science. COVID-19. Feeding behavior. Social distancing.

Resumo

Objetivo: analisar as alterações no estilo de vida dos profissionais nutricionistas durante a pandemia do Coronavírus (Covid-19). **Materiais e Métodos:** trata-se de um estudo transversal quantitativo realizado por intermédio de um questionário via plataforma do *Google forms* com perguntas relacionadas à alimentação, atividade física, peso corporal, ingestão de álcool, uso de tabaco e sintomas de ansiedade ou depressão.

Resultados: foram respondidos 101 formulários, sendo 90,1% dos participantes do sexo feminino e 53,0% tinham idade entre 20 e 30 anos, 11,9% perderam o trabalho e 29,7% conseguiram nova oportunidade durante a pandemia; apenas 11,9% assumiram ter cumprido rigorosamente o distanciamento social, 44,6% relataram ganho de peso e 6,9% aumentaram o consumo de bebida alcoólica. Somente 1,0% começou a fumar. O tempo livre foi destinado a assistir a filmes e séries (23,8%), uso de computadores e/ou celulares (20,8%), fazer atividade física (14,9%) e ler (9,9%). **Conclusão:** a preocupação em manter uma boa alimentação, com hábitos saudáveis, sem o consumo de álcool ou fumo, foi mantida durante a pandemia.

Palavras-chave: Ciência da Nutrição. COVID-19. Comportamento alimentar. Distanciamento Social.

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Introduction

In November 2019, a new virus (SARS-CoV-2), responsible for affecting the respiratory system, emerged in the city of Wuhan, China, causing numerous confirmed cases of contamination and deaths. Due to the speed and severity with which the virus has spread, the World Health Organization (WHO) declared, in early 2020, a state of pandemic. The virus, classified with a high level of transmissibility, has an incubation period of 14 days, during which the symptoms of the pathology are initially: cough, fatigue, fever, body pain, dyspnea and diarrhea¹.

With the absence of a specific treatment, protocols were enacted due to the pandemic of this virus in Brazil. The country accounted for 22,204,941 cases and 617,395 deaths from COVID-19 from the beginning of the pandemic until December 2021¹. In order to reduce contagion, the measures adopted to contain the disease were: use of face masks, use of alcohol for hand hygiene and shared objects, social isolation, in which the population is instructed to stay at home and Lockdown, which is mandatory isolation, deliberated by governmental entities¹.

Recent scientific studies suggest that obese people are more prone to severe forms of COVID-19, in addition to being more likely to require mechanical ventilation and higher mortality rates due to the disease². Conditions related to pregnancy, advanced age and chronic diseases, such as hypertension, diabetes, smoking, Chronic Obstructive Pulmonary Disease (COPD), among others, are risk factors for possible complications of COVID-19³.

Professional attention is essential for this pandemic period in which professionals are susceptible to contamination by the disease and problems arising from psychological overload. This fact can trigger habits that are harmful to the body, such as smoking, alcohol intake, lack of physical activity, among other actions that negatively interfere with health⁴.

As a way to assist in this issue, there are recommendations for support and guidance for health professionals who are at the forefront of the fight against the pandemic. Recognizing and valuing these professionals is essential for them to be able to face the task to which they were destined to engage on a daily basis. And the area of nutrition should be recognized as the other actors in the pandemic, because even if doctors and nurses are the professionals considered as the most influential in the pandemic, there should also be projects related to the other areas working on the prevention and treatment of COVID-19⁴.

Within this logic, the Federal and Regional Councils of Nutritionists (CFN and CRN) established the recommendations for the action of the nutritionist and the technician in nutrition and dietetics during the COVID-19 pandemic. The recommendations presented are aimed at protecting

the health of professionals in the region and the general population, creating working conditions for those involved in activities essential to combating the pandemic, contributing to the safety measures established by health authorities and providing excellent nutrition and dietary services⁵.

Due to this context, we sought, through this study, to analyze the changes in the lifestyle of professional nutritionists during the COVID-19 pandemic, establishing the relationship between social isolation, lifestyle, eating habits and physical activity and prevalence of addictions related to alcohol and tobacco.

Materials and Methods

This is a cross-sectional, descriptive, quantitative analysis study, conducted by sending a digital questionnaire directed to nutritionists selected in a simple and random way. This study was conducted in 2021, adopted a convenience sampling of Bachelors in Nutritionists of Minas Gerais and also of those enrolled in the State Regional Nutrition Council, from the sample calculation of 101 individuals, 5% margin of error and 95% confidence level. The inclusion criteria adopted considered professionals with a bachelor's degree and practice in Nutrition who accepted to participate in the research voluntarily, duly completing the Informed Consent Form.

After validation and approval by the Research Ethics Committee, data collection was carried out through an electronic questionnaire adapted from the model of the COVID-19⁶ observatory, carried out anonymously by the Google Forms digital platform, with questions distributed in nine sections: identification; working and health conditions; lifestyle; COVID-19 Fear scale; use of vitamin supplements; mental health, quality of life and eating behavior.

The questionnaire was released as an invitation letter through social networks such as Instagram, Whatsapp and emails, for example, Microsoft Outlook and Google Gmail.

The collected data were computed and released in a Microsoft Excel® 2007 spreadsheet and transported to the Statistical Package for the Social Sciences (SPSS) software to generate graphs and obtain results.

Ethical care

This study was submitted and approved by the Research Ethics Committee (REC) of the Brazilian Educational Association (SOEBRAS) by the REC opinion N. 4,899,853, respecting the ethical precepts, according to the National Health Council⁷.



Results

The participants were 101 individuals. In the identification of nutrition professionals who answered the form, 90.1% (n=91) were female; 53.5% (n=54) were between 20 and 30 years old, 35.6% (n=36) between 31 and 40 and 10.9% (n=11) above 41 years; 96.0% (n=97) were enrolled in the CRN and 62.0% (n=63) completed higher education in the years from 2015 to 2021; 27.7% (n=28) had only the graduation, 56.4% (n=57) post-graduation, 11.9% (n=12) MSc and 4.0% (n=4) PhD. Regarding skin color, 45.5% (n=46) considered themselves white, 42.6% (n=43) brown, 6.9% black (n=7) and 5.0% (n=5) identified themselves as yellow or indigenous. Regarding family income, 59.4% (n=60) are in the range from 1 to 4 minimum wages and 40.6% (n=41) from 5 to 10 minimum wages.

Of the total number of participants, 90.1% (n=91) were working in the area and, of these, 56.4% (n=57) worked in clinical nutrition, with 16.8% (n=17) working for less of one year, 40.6% (n=41) from 1 to 5 years, 16.8% (n=17) from 6 to 10, 17.8% (n=18) from 11 to 15 and 4.0% (n=5) more than 16 years of work.

Of the professionals working in the area, 15.8% (n=16) had a workload of 2 to 5 hours per week, 50.5% (n=51) worked from 6 to 10 hours, 30.7% (n=31) more than 10 hours and 3.0% (n=4) had an indefinite workload because they worked on demand. Around 24.8% (n=25) of these professionals worked directly on the frontline of the pandemic. Regarding the impacts of the pandemic on professional life, 11.9% (n=12) lost their work and 29.7% (n=30) obtained a new opportunity as shown in Table 1.

Table 1 – Pandemic and the employment relationship of the Nutrition professional. Minas Gerais (MG), Brazil, 2021. (n=101)

Employment	n	%
There were no changes in the employment relationship during the pandemic period	48	47.5
Got a new job opportunity during the pandemic period	30	29.7
Lost work during the pandemic period	12	11.9
Changed jobs during the pandemic period	11	10.9

Among the professionals participating in the study, 39.6% (n=40) reported that their family income had slightly decreased, whereas 13.9% (n=14) decreased significantly. Regarding working



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hours, 31.7% (n=32) had income reduction and 25.7% (n=26) increased. Situation that contributed to work satisfaction fell 11.0% (n=12) and dissatisfaction increased 13.9% (n=14).

Regarding the lifestyle adopted in the pandemic, the interviewees were asked about the restriction of contact with people and, according to Table 2, only 11.9% (n=12) assumed to have strictly complied with social distancing.

Table 2 – Restriction of nutritionists' contact with people during the COVID-19 pandemic. Minas Gerais, Brazil, 2021 (n=101).

Tipo de restrição	n	%
I stayed at home most days, going out to close family members, shopping at the supermarket and pharmacy	50	49.5
I tried to be careful, stay away from people, reduce contact with friends a little, not to visit the elderly, but I kept going out.	35	34.6
I stayed strictly at home, going out strictly for health needs	12	11.9
I didn't do anything, I led a normal life	02	2.0
I started working online, but I kept my other activities normally	02	2.0

Free time was spent watching movies and series (23.8%; n=24), using computers and/or cell phones (20.8%; n=21), doing physical activity (14.9; n=15) and reading (9.9%; n=10). About 46.5% (n=47) reported feeling isolated and/or alone at times. According to Table 3, regarding the frequency of exercise practice, 25.7% (n=26) answered frequently and 20.8% (n=21) always.

Table 3 – Frequency of physical exercise practices by nutritionists during the COVID-19 pandemic period. Minas Gerais, Brazil, 2021 (n=101).

Variables	n	%
Never exercise	02	2.0
Rarely exercise	14	13.9
Sometimes exercise	24	23.9
Often	26	25.7
Almost always exercise	14	13.9
Always exercise	21	20.8

When assessing their health, 65.3% (n=66) considered good, 17.8% (n=18) moderate and 16.8% (n=17) excellent. They showed that, even during the pandemic, they maintained a healthy diet, as shown in Table 4, consuming, for more than five days a week, vegetables (73.3%; n=74);

fruits (62.4%; n=63); beans (63.4%; n=64); without consuming sausages (30.7%; n=31) pizza, lasagna or other frozen ready-made dish (59.4%; n=69) and without eating “packaged” snacks (75.2%; n=76).

Table 4 – Dietary habits of nutritionists during the COVID-19 pandemic. Minas Gerais, Brazil, 2021 (n=101).

	No consumption		1 day or less		2 – 4 days		5 days or more	
	n	%	n	%	n	%	n	%
Vegetable	0	0	0	0	27	26.7	74	73.3
Fruits	01	1.0	02	2.0	35	34.7	63	62.4
Bean	05	5.0	06	5.9	26	25.7	64	63.4
Ham, salami, bologna, sausage or hamburger	31	30.7	61	60.4	08	7.9	01	1.0
Pizza, lasagna or other frozen dish	60	59.4	38	37.6	02	2.0	01	1.0
“Packaged” snacks	76	75.21	22	21.8	02	2.0	01	1.0

Respondents reported that the pandemic contributed to worsening tension and worry (52.5%; n=53), loss of interest in the same things as before (46.5%; n=47), increase the feeling of fear (57.4%; n=58) and panic (34.7%; n=35), decrease joy (22.8%; n=23). However, these aspects did not cause major changes in alcohol use and tobacco consumption. In this study, 6.9% (n=7) increased alcohol consumption; 5.9% (n=6) started consuming alcohol during the pandemic and only 1.0% (n=1) started smoking. Regarding body weight, 44.6% (n=45) reported weight gain during the pandemic. Concerning the changes in the state of health caused by the pandemic, 50.5% (n=51) reported that it worsened a little, 37.7% (n=38) was the same, 6.9% (n=7) worsened a lot and 5.9% (n=6) improved.

Discussion

This study showed that professionals had changes in their work environment, employment relationship, financial income and social behavior during the pandemic. There are still few studies that address the effect of social isolation generated by the pandemic on the lifestyle and food health of professional nutritionists. Health professionals, because they are linked to the reception and treatment of COVID-19 cases, are presenting health complications and changes in emotional state, such as stress, mental, physical fatigue and despair⁸.



In Brazil, the virtual health survey “ConVid”⁹, which included 45,161 participants, conducted with people aged 18 years or older, found that 30.1% of participants met the recommendation of moderate to vigorous physical activity (exercised or practiced sports) before the pandemic, during the pandemic this percentage fell to 12%⁹. The poor adherence of nutrition professionals to the recommendations for physical activity can be seen in the occupation of free time that was intended, mostly, to watch movies and series and use computers and/or cell phones as a form of leisure. Few have devoted this time to physical activity.

In a study conducted by Malta, on changes in lifestyles regarding food, tobacco consumption, alcoholic beverages and physical activity, in the period of social restriction for the prevention and control of the COVID-19 pandemic increased consumption of alcohol and tobacco¹⁰. Thus, such increase may be related to the stressors of the pandemic, such as sadness and anxiety, fear of the future, job insecurity and risk of death¹⁰.

It is remarkable that the COVID-19 pandemic brought with it several changes in people’s behavior and lifestyle when social isolation ended up reflecting inadequate eating habits, reduced physical activity, high rate of consumption of industrialized and ultra-processed foods and increased consumption of alcohol and smoke¹¹. This study, however, pointed out that, in general, there were few changes presented by nutrition professionals regarding healthy and balanced eating with the consumption of *in natura* foods, physical exercise and consumption of alcohol and tobacco.

The professionals participating in this study, despite claiming the contribution of the pandemic in increasing tension, worry, sense of fear and panic, few were those who increased consumption or started to consume alcohol. As for smoking, only one person began to smoke.

As for the increased weight of the Brazilian population due to the measures adopted to contain the virus, such as social distancing and Lockdown, decreed by the State or Government Agencies, 52% reported having increased weight during social isolation, with an average of 6.5 kg more weight⁹. This fact is also reported by the nutritionists who participated in this research.

It is possible to observe that even in a period of intense changes and uncertainties, the emotional factors arising did not prevent to worry about a conscious eating behavior with regard to lifestyle and healthy eating in the professional sphere, the importance of preventive care, related to health and the guarantee of Brazilian food security during and after the COVID-19 pandemic¹⁰.

The results of this study showed to be in accordance with the recommendation of the Food Guide for the Brazilian population that establishes the need to prioritize the consumption of fresh or minimally processed foods. National studies conducted on eating habits during the pandemic

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concluded that social isolation had a great influence on the change in the eating habits of participants, with increased consumption of non-alcoholic beverages, fast food and ultra-processed products and the increase in the volume of the meal, causing body changes, such as weight gain^{11,12}.

The limitations imposed by the choice of the online questionnaire are related to the impediment of the aid to the participant regarding the incomprehension of some question and/or the impossibility of knowing the circumstances in which the questionnaire was answered. Such limitations do not make it impossible to point out that health policies still lack the discussion of the role of health professionals as a multidisciplinary team in which nutritionists, despite recognizing the importance of their work for the quality of life of their patients, still feel little recognized.

Moreover, as nutrition has become an essential factor in the recovery and treatment of many patients during the COVID-19 pandemic, professionals in this area deserve to be the targets of studies that, in addition to knowing the effects of the pandemic on their lifestyle, can put them in evidence, along with other health professionals.

Conclusion

The COVID-19 pandemic has left negative results in several areas and, more severely, in the health system, affecting its professionals. Due to the reality of the data obtained with this study, this scenario brought low impact on the lifestyle of nutritionists related to diet, physical activity, weight change, alcohol intake, tobacco use and symptoms of anxiety or depression.

It is important to highlight the demand for more studies and debates on the areas of well-being and quality of life at work of health professionals, as well as a clear understanding of the factors that influenced them before and during the SARS-CoV-2 pandemic; studies that may lead to the search for new strategies to improve the conditions of health professionals in hospitals and clinics. In the case of nutritionists, it is also necessary that different sectors recognize the relevance of this professional group for the public health of the country.

Authors' contributions

All authors approved the final version of the manuscript and declared themselves responsible for all aspects of the work, including ensuring its accuracy and completeness.

Conflict of interest

The authors declare that there are no conflicts of interest.

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