

# Chapter 93

## Experiences of nutrition education by Nursing, remotely, in times of pandemic COVID-19

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### ABSTRACT

Nutrition education provides basic requirements for health promotion and protection; moreover, it enhances human growth and development with quality of life and citizenship. In this sense, the objective of this work was to guide students and the academic community - among other audiences - about proper nutrition in times of pandemic through social media and teleconsultation. To this end, an Instagram profile and a website called "nutrition in action" were created, in which several posts with various topics about food and health were made available. To enable nutritional guidance through teleconsultations, a material was built by the project team to guide nurses, nursing students, and nutritionists regarding the care provided in the nursing office. Given the amount of fake news and orientations diverging from the appropriate scientific literature, it was concluded that it is extremely relevant to guide the non-academic population about proper nutrition through digital media and teleconsultations.

**Keywords:** Nutrition, Communication, Telemedicine, Teaching, Chronic Diseases.

### 1 INTRODUCTION

The health, social, economic, and political impacts caused by the COVID-19 pandemic generated necessary social isolation measures. In this context, our way of living, relationships, and the set of everyday practices in general — including food — have been re-signified (Alves & Antunes, 2021). Verthein and Gaspar (2021) noted in a review article that the concern with “healthy” eating has intensified: either because of preventive aspects, related to strengthening the immune system or because of concerns associated with

body shape; by weight gain; or even beliefs about the existence of contamination through food consumption.

Malnutrition resulting from inadequate nutrition — whether in quantity or quality — and insufficient physical activity are risk factors for the development of obesity and chronic noncommunicable diseases, which are considered the greatest challenges to public health in contemporary times, even before the pandemic (Verthein & Gaspar, 2021). For example, according to data from the study by the Ministry of Health, Vigitel (2020), there was an increase in the prevalence of obesity in the period between 2006 and 2019, when in Brazil, the rates of the disease jumped from 11, 8% to 20.3%, respectively. In 2019, more than half of the Brazilian population (55.4%) was already overweight, with a tendency to increase to 30.4% among young people aged 18 to 24 and 59.8% among individuals aged 65 years or more (Ministry of Health, 2020).

Several public policies in the field of nutrition have been developed to promote greater knowledge about aspects of healthy and adequate food, aiming to reinforce the fight against poor diet, obesity, and overweight (Vasconcelos et al., 2019; Bortolini et al., 2020). Among these policies, the Food Guide for the Brazilian Population stands out, the first official document that defined dietary guidelines to guide healthy choices for the Brazilian population. The first Guide was published in 2008 and revised in 2014, emphasizing the importance of food and nutrition security — that is, emphasizing that adequate and healthy food is a basic human right and involves ensuring permanent and regular access to adequate food practices, in a socially fair manner (Ministério da Saúde, 2014).

Access to quality information about food is essential for the development, promotion, and maintenance of a healthy lifestyle, and therefore its dissemination to the population is relevant. Educating individuals about their food culture and about appropriate practices — that respect their identity — helps to increase people's autonomy and their food choices. Such knowledge enables them to fight to guarantee food security (Ministério da Saúde, 2016), and, in this sense, technological progress and the availability of Internet access have allowed the community to come into contact with knowledge. In addition, social networks have become a strategy used for sharing content and building very interesting skills (Araújo & Pedroso, 2010; Musse et al., 2021).

Recently, due to the need for social distancing during the COVID-19 pandemic, remote communication has been adopted in many health education interventions, which is an alternative modality that seeks solutions through digital technologies (Soares et al., 2020). The fact is that, in the current scenario of pandemic and social isolation, digital platforms facilitate the spread of information, and can even promote health, albeit remotely. In this way, it is possible to educate the population regarding food and nutrition through social media (Arruda, 2020).

Nutrition education can also benefit from remote teaching, as it provides educational content that can be accessed from any geographic location using a device connected to the Internet (Soares et al., 2020). Whether through social media or online nutritional guidance targeted at individual needs, remote nutritional

education actions try to minimize the damage suffered concerning teaching and nutritional guidance (Musse, 2021).

Nutritional guidance is a method in which individuals are helped to select and implement appropriate eating and lifestyle behaviors at any stage of their lives, as it plays a decisive role in the process of human growth and development (Simões et al., 2019). According to Callejon and Paternez (2008), through nutritional intervention changes are suggested in the sense of disease prevention, as well as the protection and promotion of a healthy life, which leads to a state of the general well-being of the individual.

Thus, because of the pandemic condition, this project is justified by considering the need for health promotion and prevention. Addressing issues related to nutrition and information to the community took place through remote and digital teaching and learning, which led us to think about how, in times of a pandemic, we could spread information about proper nutrition, through remote meetings and social networks.

Faced with the need to avoid crowds, it is extremely important to disseminate this information through social networks — and, remotely, through nutritional counseling services, given that many people still need dietary advice and guidance on how to properly nourish themselves. to preserve your health, especially amid the COVID-19 pandemic.

Therefore, the general objective of this article is to describe the procedures on proper nutrition adopted to guide students and the academic community, as well as the non-academic community — that formed by family and friends, by individuals who knew and followed the profile of this project in the social networks, and by anyone who expresses an interest in learning about food and nutrition education actions through social media and teleconsultations. In this sense, the specific objectives of this research were: a) to disseminate information through the social media Instagram and the nutrition in action project website; b) promote consultations on nutritional guidelines and educational materials for nurses, nutritionists, and nursing students.

## **2 METHODOLOGY**

This is a descriptive experience report on the use of active methodologies in remote nutritional education actions, through the dissemination of information about adequate food and human nutrition.

The experience report allows practical and theoretical evaluation. The studies of this process describe and analyze the use of procedures, methods, or tools, aligning experiences and showing the results obtained and the lessons learned. Its purpose is to register all the methods developed by the researcher in his scientific research experience (Barros & Lehfeld, 1990).

The use of active methodologies is characterized by teaching techniques focused on the concrete participation of students in the elaboration of the learning process in a flexible, connected, and hybrid way (Bacich & Moran, 2018). The use of technologies in conjunction with this methodology can facilitate the

teaching process more effectively and autonomously, focusing on all aspects of human development and focusing mainly on the realities of the current experience (Cordeiro, 2020).

For the present work, an Instagram profile called *Nutrição em Ação* was created, with the locator name “@nutri.acao.uff”, in which several posts are available with varied subjects on food and health, intending to provide the population with information about Adequate food in affordable way. In addition, there were interactions with followers based on published stories and comments.

In addition, Instagram was organized to publish weekly. To elaborate the art of the posted contents, a creation program called Canva was used, which allowed the construction of authorial material. Learning about health and nutrition, as well as the elaboration of contents, was carried out through the appropriation, by the project team, of scientific articles and other materials such as Guidelines, and guides prepared by the Ministry of Health and Guidelines of the Brazilian Society of various pathologies.

For the discussion of scientific studies and the appropriation of materials related to digital media, among other topics, meetings were held between professors and undergraduate Nursing students, students who are participants in the present work — which comes from an extension project at the Federal University Fluminense called *Nutrição em Ação*, under the coordination of professor Kamile Santos Siqueira Gevú. The execution of this work is related to the graduation discipline of the Nursing Course called “Nutritional and dietary fundamentals for health care”, offered remotely by the Fluminense Federal University of the Rio das Ostras Campus.

In the posts on Instagram, topics related to the discipline were addressed — in addition to informing the lay population — to train Nursing students in terms of nutrition in a dynamic and participatory way, thus complementing the content of the discipline and providing interaction between students on the content. The students of that discipline created digital books, informing about the concept and importance of healthy eating in certain pathologies, such as kidney disease, cancer, obesity, diabetes mellitus, dyslipidemia, and HIV/AIDS, among others, books published in digital media and used as educational material to assist in teleconsultations.

From the production of these contents, consultations were carried out associated with the practice of the undergraduate discipline. Additionally, fortnightly consultations for nutritional guidance are carried out by the “Nutrition in action” project by the nursing office, which has a schedule for these periodic and remote consultations.

The material that served as the basis for the teleconsultations addressed issues related to nutritional guidelines such as: improving the quality of food in the community; weight loss; how to have a good vegetarian diet; and nutritional therapy directed at pathologies: diabetes, hypertension, dyslipidemia, cancer, human immunodeficiency virus (HIV), iron deficiency anemia, heart disease, chronic kidney disease, hypovitaminosis A, hyperthyroidism, hypothyroidism, and COVID-19.

To achieve the purpose of carrying out nutritional guidance teleconsultations and to obtain a first contact with the patient before the consultation — as well as analyzing what would be the best conduct to

be conducted at that moment — an anamnesis questionnaire was created through the platform “Google Forms”.

Through the disclosure of the opening of the teleconsultation agenda carried out by Instagram and by WhatsApp groups of the academic community of the Universidade Federal Fluminense, interested parties contacted the project e-mail (nutricao.consulta@gmail.com), performed the anamnesis and participated in the online service. As a prerequisite, the following criteria were established: being a woman between 18 and 35 years old and having a body mass index (BMI) above 25kg/m<sup>2</sup>.

The virtual consultations were carried out by undergraduate nursing students on the Google Meet platform, guided by the project's scholarship student, and coordinated by the Professor and Coordinator of the Extension Project through pre-prepared scripts and each consultation lasting one hour.

A website was created to expose more extensive and informative content — often inappropriate for the format of social networks — as well as those that Instagram does not transmit in full. For its creation, the WIX program was used. The disclosure took place through the website link (<https://nutricaoemacaouff.wixsite.com/nutricaoemacaouff>), on the project page on Instagram, by email, and through the WhatsApp groups of the academic community of the Universidade Federal Fluminense — namely, students and workers.

### **3 RESULTS**

The guidance work on proper nutrition, carried out through Instagram, has so far reached 136 followers, with many reports on the pertinence of the content disclosed about the practice of healthy eating. The subjects addressed during this work were: infant feeding for children under two years of age; proper nutrition for adults and pregnant women; and food characteristics. Among the 50 contents generated, we can mention: “Seven practices of conscious eating”; “Tips on how to prepare a practical and healthy lunch box”; “Why avoid industrialized baby food?”; “Why offer fruits instead of juices?”; “Food introduction for breastfed children” and “Feeding for vegetarian children” (Figure 1).

In addition to these, the following topics were also addressed: “Healthy eating habits”; “Understand the difference between in natura, processed and ultra-processed foods”; “After exclusive breastfeeding, what to do?”; “Healthy ideas for meals”; “The secret of fruits”; “Vegetables”; “What to do when the child has difficulty eating?”; “Do you know which foods are in each food group?”; and “Tips for starting your nutritional education”.



Figure 1: Illustrative images of 07 of the 50 posts made on Instagram, @nutri.acao.uff, extension project nutrition in action, Fluminense Federal University, 2020-2021.



Source: Own authorship, based on what was prepared by the Nutrição em Ação project team.

A total of 11 digital books were prepared based on the Brazilian Guidelines, Primary Care Notebooks, and Nutrition Manuals, and, among them, we can mention: Primary Care Notebooks. Clinical prevention of cardiovascular, cerebrovascular and chronic renal disease; Nutrition and Kidney Disease Handbook; Nutrition guide for patients and caregivers; Notebooks of Primary Care -, Strategies for the care of people with chronic diseases: diabetes mellitus; and, National Iron Supplementation Program; in addition to COVID-19 feeding recommendations (Figure 2). In addition, other e-books were prepared from the following sources: V Brazilian Guideline for Dyslipidemia and Atherosclerosis Prevention; Primary Care Notebooks – Obesity; Clinical Protocol and Therapeutic Guidelines for the Management of HIV Infection in Adults; General conduct manual of the National Vitamin A Supplementation Program; and, used as support for nutritional education carried out in the six teleservices offered by this extension project until December 2021.

Figure 2: Illustrative images of 8 of the 11 ebooks, prepared by students of the subject Nutritional and Dietetic Fundamentals for Health Care, from the Nursing course at the Universidade Federal Fluminense, Campus Rio das Ostras. Extension project “Nutrition in Action”, Fluminense Federal University, 2020-2021.



Source: Own authorship, based on what was prepared by the Nutrição em Ação project team.

All patients who participated in the call center completed an authorial anamnesis form prepared before the implementation of the project and which served as the basis for the call, in which there were questions about: a) marital status, level of education, number of people residing in the same home and self-reported weight and height; b) motivation for seeking consultation, greater difficulty about food, vegetarian or vegan, water intake, appetite, chewing, characteristics and weekly evacuation frequencies, quality of food, the person responsible for doing the household shopping, the habit of cooking; c) diagnosis of pathology/intolerance or food allergy; ongoing use of medication or dietary supplements and family history of chronic illnesses; d) practice of physical activity, quality, and duration of habitual sleep, smoking, and alcohol consumption; in addition to questions about self-assessment regarding their quality of life.

For metabolic tracking of signs and symptoms, a questionnaire was constructed with scalar responses from zero to four, as follows: 0 – never or rarely had the symptom; 1 – occasionally had, not severe effect; 2 – occasionally had, the effect was severe; 3 – often had, the effect was not severe; 4 – often had, the effect was severe.

Questions about the symptoms included: investigation of dizziness, headaches, fainting sensations, watery and itchy eyes, blurred vision, dark circles, purulent discharge from the ear, ear pain, frequent tinnitus, stuffy nose, runny nose, sneezing, coughing chronic pain, sore throat, canker sores, swollen or abnormally colored tongue and gums, acne, hair loss, rashes, redness of the skin, rapid or irregular heartbeat, chest pain, shortness of breath, asthma or bronchitis, diarrhea or constipation, swollen or distended abdomen; heartburn, muscle aches, arthritis/osteoarthritis.



Additionally, 10 nutritional guidelines sheets were prepared to assess: food quality; weight loss; vegetarian food; food replacement list, uric acid, and COVID-19, among other assessments that have been performed. All materials produced were archived to profile the population that was assisted in the future.

Figure 3: Illustrative images of 8 of the 10 nutritional guidance sheets, all from the Nutrition in Action extension project, Fluminense Federal University, 2020-2021.



Source: Own authorship, based on what was prepared by the Nutrição em Ação project team.

The main objectives of the teleservice were aimed at improving eating habits and weight loss, taking into account individual difficulties such as reports of binge eating, difficulty adhering to guidelines for healthy eating, presence of chronic non-communicable diseases, and pathologies related to food.

Figure 4: Illustrative images of 4 of the 6 online nutritional counseling sessions carried out on the “google meet” platform of the extension project Nutrição em Ação, Universidade Federal Fluminense, 2020-2021.



Source: Own authorship, based on what was prepared by the Nutrição em Ação project team.



The website developed for this project made it possible to disseminate nutritional guidelines and information on proper nutrition for all ages, digital books for download, attachment of dietary guides released by the Ministry of Health, healthy recipes, appointment scheduling, presentation of team members and, in addition, the explanation as to the ways to make contact with the project team.

Figure 5: Illustrative image of the homepage of the website developed for the Nutrition in Action extension project, Fluminense Federal University, 2020-2021.



Source: Own authorship, based on what was prepared by the Nutrição em Ação project team.

#### 4 DISCUSSION

Social networks and the encouragement of remote work made it possible to carry out this extension project because of the need for social isolation during the COVID-19 pandemic, making it possible to obtain relevant and innovative results in the field of nutritional education, both for the academic community and for the non-academic population.

Results similar to those found in this study were observed in the article by Silva et al. (2021), who showed the possibility of expanding, through social media, the dissemination of information for nutritional education, and highlighted the need to increasingly discuss issues related to the theme of adequate nutrition. The authors described that the use of social networks can and should serve to discuss different topics due to the reach that can be achieved with users, thus amplifying in a very satisfactory way the transmission of knowledge generated in universities; in addition, when analyzing the interactions that took place through likes, comments, and shares in each content, they concluded that the results were very useful, having reached 392 followers on Instagram and 389 on Facebook on their profile, “@entendendoaobesidade”. It should be noted that the social networks used by the project — Instagram and Facebook — were of fundamental importance since these tools allowed the availability of content to the public in general and the possibility of interaction with this public through posts and messages. stories (Silva et al. 2021).

However, the study carried out by Silva (2016) observed that social networks in the health area have a smaller number of followers compared to Fast Food companies. This fact corroborates the relevance of this article, since, according to the literature, adequate nutritional guidance must be propagated more intensely since the media and digital platforms are no longer just mediators or spaces apart from everyday life: they are part of life and have important social actors, who actively participate in day-to-day actions (França & Magnago, 2019).

It is noteworthy that the population in Brazil is integrated into the use of social networks as a source of information. According to the IBGE, from 2018 to 2019, the Internet was used by 82.7% of Brazilian households (Brazilian Institute of Geography and Statistics, 2021). Given these data, certain authors report the necessary concern regarding the quality of information conveyed in this form of teaching-learning, especially on social networks (Çetinkaia & Sert, 2021). In this sense, the “Nutrição em Ação” project, by the Fluminense Federal University (UFF), emerges as a tool for disseminating grounded, safe, and accessible scientific knowledge, highlighting its importance in the current pandemic context.

In our extension action, posts were developed with different themes, informing about the diet of adults, children, and pregnant women, and the characteristics of foods, with Instagram being used as a tool for the dissemination of information, with a reach of 136 followers, from April to September 2021 at @nutricao.acao.uff. Faced with Instagram profiles that can disseminate fake news and guidelines without scientific basis, the dissemination of reliable information about nutritional guidance by the project in the media is a useful attitude to promote knowledge and offer autonomy to the individual to encourage him to be active and protagonist of its food quality.

The study by Gomes et al. (2017), who analyzed profiles on Instagram and addressed content on sports nutrition, concluded that most pages do not report information about the professional qualification of their creators and that profiles created by professionals trained to carry out nutritional education were a minority. Thus, these profiles may pose a danger in terms of conveying misleading information to the non-academic public, which may be negatively influenced, even developing eating disorders (Gomes et al., 2017).

Santos et al. (2016) point out that universities have a responsibility to society, and that extension actions reinforce the engagement in the exchange of knowledge between higher education institutions and the population, thus providing more qualified training for students who teach and transmit knowledge from the classroom. In this context, as a university extension project, the posts on the digital media of this extension activity seem to have achieved the main objective of the work, as they disseminated knowledge about nutritional health to the population and, also, possibly helped in promoting health during the period of the pandemic, perceived through the interactions that occurred in the contents.

Additionally, considering the particularities of different pathologies, the materials presented in the nutritional guidelines intended for healthy eating may also have been a beneficial action for prevention and treatment, in addition to having contributed to the physical and mental well-being of followers and non-

academics, the public who participated in the teleconsultations, students, and others involved in this project, as food is a modifiable risk factor, and practicing a healthy eating pattern can promote improvements in quality of life (Ministry of Health, 2020).

In addition, the development of an anamnesis form for teleconsultations, carried out by the team of this project, contributed to directing the nutritional guidance of the individual with more security and clarity, prioritizing their needs, difficulties, and illnesses, as it allowed a prior clinical evaluation. As Callejon and Paternez (2008) state, the adoption of an individualized balanced diet for the needs of each patient is one of the main measures to be recommended for individuals with chronic diseases.

We understand that dietary guidelines should always meet the individual, socioeconomic, and cultural characteristics of each person. And, along these lines, telecare with nutritional counseling can be useful to offer better dietary planning and greater adherence to the proposed guidelines.

## **5 FINAL CONSIDERATIONS**

In times of social isolation, due to COVID-19, health extension actions carried out through the dissemination of information through social media can be considered a useful, safe, and accessible strategy for the population. In this sense, this university extension project was socially relevant, since, through the transmission of knowledge on such an important subject, it benefited a significant portion of the academic community — including nursing students — and non-academic ones, reaching more than a hundred followers, without infringing the protective measures recommended by health and government authorities. Thus, we consider undeniable the inclusion of universities in social networks through extension and teaching projects.

After months of postings on various contents involving the theme “food quality”, there was a need to expand the information covered and discuss more and more issues related to this theme. We suggest that similar projects be carried out so that there is greater dissemination of reliable and reliable content. We also encourage online counseling on health and nutrition education for communities, as was done in the present study, bearing in mind the need to provide and receive reliable information.

Guidance actions in the area of nutrition enable knowledge about the value of healthy eating, achieved with few resources; raise awareness about the nutritional value of food, which must be eaten daily and can be easily purchased and handled; and enables the consumption of a varied, tasty, nutritious and pleasurable menu. Therefore, we consider that guidance on proper nutrition, through Instagram, and perhaps through other digital means of communication, in addition to teleconsultations, can compose the scope of university extension actions, being extremely relevant also given the amount of fake news and guidelines that, in these media, diverge from the appropriate and current scientific literature.

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