



NUTRITION EDUCATION FOR UNIVERSITY STUDENTS AND STRATEGIES FOR INSTITUTIONAL HEALTH PROMOTION: AN INTEGRATIVE REVIEW

Educação nutricional em universitários e estratégias para promoção de saúde institucional: revisão integrativa

Educación nutricional de universitarios y estrategias de promoción de la salud institucional: revisión integrativa

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ABSTRACT

Objective: To reflect on the university environment as a nutritional health promoting space with a focus on the strategies used. **Methods:** An integrative review of articles published in SCOPUS, MEDLINE (PubMed), LILACS and SciELO databases under the following descriptors: Nutrition Education, University Students, College Students, and Health Promotion. The review included original studies published between 2010 and 2015 in Portuguese, English or Spanish that reported a nutritional intervention strategy carried out with well-defined population of university students. Only 18 articles out of the 649 studies reviewed were included after the analysis of titles, abstracts and full text. All the studies were conducted outside Brazil. **Results:** The university environment was found to be a potential health promoting space in the international context that is still incipient in the national context. Positive changes in dietary behaviors were reported, although there were no long-term assessments. The main strategies identified were practical and theoretical interventions based on the social cognitive theory and motivation theory. **Conclusion:** The university environment has great potential for the promotion of nutritional health and the most effective strategies were those based on the social cognitive theory. However, this environment has been little explored in the national context. Changing this reality requires the redefinition of the strategies used and of the public policies and intersectoral actions that support such a practice so that it can be inserted in the social identity of higher education in Brazil.

Descriptors: Food and Nutrition Education; Universities; Education; Health Promotion.

RESUMO

Objetivo: Refletir sobre o ambiente universitário como espaço promotor de saúde nutricional enfatizando as estratégias utilizadas. **Métodos:** Realizou-se uma revisão integrativa de literatura nas bases eletrônicas Scopus, MEDLINE, LILACS e SciELO utilizando os descritores: Nutrition Education, University Students, College Students e Health Promotion. Incluíram-se os estudos publicados entre os anos de 2010 e 2015, originais, em língua portuguesa, inglesa ou espanhola, e que tivessem estratégia de intervenção nutricional em população de estudantes universitários bem definida. Dos 649 estudos revisados, após análise de títulos, resumos e texto integral, foram incluídos 18 artigos, todos realizados fora do Brasil. **Resultados:** Observou-se o ambiente universitário como potencial promotor de saúde no que tange ao contexto internacional, porém ainda incipiente no contexto nacional. Resultados positivos de mudança de comportamento alimentar após intervenções foram observados, embora sem avaliações a longo prazo. As principais abordagens identificadas foram intervenções práticas e teóricas com base na teoria social cognitiva e na motivacional. **Conclusão:** O ambiente universitário possui grande potencial para promoção de saúde nutricional e as estratégias mais efetivas foram as que apresentaram uma condução baseada na teoria social cognitiva. No entanto, esse ambiente tem sido pouco explorado em nível nacional, e, para mudar essa realidade, faz-se necessária uma ressignificação das estratégias utilizadas e das políticas públicas e ações intersetoriais que sustentem essa prática, inserindo-a na identidade social do ensino superior no Brasil.

Descritores: Educação Alimentar e Nutricional; Universidades; Educação; Promoção da Saúde.



RESUMEN

Objetivo: Reflexionar sobre el ambiente de la universidad como espacio de promoción de salud nutricional con énfasis para las estrategias utilizadas. **Métodos:** Se realizó una revisión integrativa de la literatura en las bases de datos electrónicas Scopus, MEDLINE, LILACS y SciELO con los descriptores: Nutrition Education, University Students, College Studens y Health Promotion. Se incluyó los estudios publicados entre 2010 y 2015, originales, en el idioma portugués, inglés o español y que hubieran utilizado una estrategia de intervención nutricional en una población de estudiantes universitarios bien definida. Tras el análisis de los títulos, resúmenes y texto completo de los 649 estudios revisados, 18 artículos fueron incluidos y todos internacionales. **Resultados:** Se observó el ambiente de la universidad como un potencial promotor de la salud respecto el contexto internacional, aunque incipiente en el contexto nacional. Fueron observados resultados positivos de cambio de conducta alimentaria después de las intervenciones aunque sin evaluaciones a largo plazo. Los principales abordajes identificados fueron las intervenciones prácticas y teóricas basadas en la teoría social cognitiva y emocional. **Conclusión:** El ambiente de la universidad tiene gran potencial para la promoción de la salud nutricional y las estrategias más efectivas fueron las que presentaron una conducción basada en la teoría social cognitiva. Sin embargo, ese ambiente ha sido poco explorado a nivel nacional. Para cambiar esa realidad es necesario otra significación de las estrategias utilizadas y de las políticas públicas y acciones intersectoriales que sostengan esa práctica, incluyéndola en la identidad social de la educación superior de Brasil.

Descriptores: Educación Alimentaria y Nutricional; Universidades; Educación; Promoción de la Salud.

INTRODUCTION

Health behaviors established throughout life have a major impact on an individual's health-disease process. The World Health Organization (WHO) defines health as a complex interaction between physical, mental, spiritual and social well-being. In this context, several already consolidated factors are included, with eating behavior standing out as a modifiable determinant⁽¹⁾.

The current scenario presents changes in health behavior and habits in young adults, the age range of most university students, with an important tendency towards a less healthy lifestyle, which is strengthened by a significant panorama of stress, sedentarism and inadequate eating⁽²⁻⁹⁾. It is known that the epidemiological transition in Brazil, associated with the nutritional transition, has caused a significant increase in noncommunicable diseases and obesity, which are important public health problems that lead to an increased cardiovascular risk, poor quality of life and early onset of cancer^(10,11). Although this phenomenon is observed in all age groups, the high rates in young people cause greater concern regarding the impact of morbidity and mortality in Brazil and the world^(1,12,13).

Collective spaces, such as higher education institutions, can be important health promoters, with the adequacy of food as one of the fundamental aspects to be encouraged by policies and guidelines, such as those proposed through the National Food and Nutrition Policy (*Política Nacional de Alimentação e Nutrição – PNaN*)⁽¹⁴⁾ and corroborated by programs such as the National School Meal Program (*Programa Nacional de Alimentação do Escolar – PNAE*)^(15,16), which for years has been in constant evolution and contributed significantly to the development of children and adolescents of school age. Even though higher education is not part of the PNAE, the Health Promoting Schools (HPS)⁽¹⁷⁻¹⁹⁾ take responsibility over these spaces with the aim of promoting health in any collective teaching environment, whether formal or not, fostering nutrition education and health promotion that lead to the problematization and modification of these environments in favor of improvements for the academic community, thus building a local nucleus of collective health promotion.

However, in the Brazilian context, most of the studies on the strategies for modifying eating behaviors in the teaching environment depict the basic education phases⁽²⁰⁻²³⁾, which is justified by the fact that higher education is not part of the PNAE.

However, as PNaN encourages the promotion of nutrition education in all collective spaces, university students should be included as well. In addition, the status of health problems related to eating habits in this population group makes it necessary to know the nutrition education strategies that are already used with undergraduate students and their effectiveness in establishing this environment as a promoter of nutritional health. Therefore, this study aimed to reflect on the university environment as a nutritional health promoting space with a focus on the strategies used.

METHODS

This study consists of an integrative review of the literature, a method that allows a systematic analysis and synthesis of results. The preparation of this review respected all the pre-established phases for its accomplishment, covering the following stages: formulation of guiding questions; selection and obtaining of articles according to inclusion and exclusion criteria; data collection; evaluation of selected studies; discussion and interpretation of the results, and presentation of the review⁽²⁴⁾.

The main guiding question for the review was: Is the university environment a nutritional health promoting space? It should be noted that the objectives of the review suggested the need for other questions to support the main one. They were: What nutrition education strategies are used in a university environment? Which professionals are responsible for nutritional

health promotion strategies in a university environment? What are the results of nutrition education strategies in a university environment?

The research was carried out in October and November 2015 and included full peer-reviewed original articles published between 2010 and 2015 in Portuguese, English or Spanish indexed in the following electronic databases: the US National Library of Medicine (MEDLINE), Scopus, the Scientific Electronic Library Online (SciELO) and the Latin American and Caribbean Health Sciences Literature (LILACS). The following descriptors were used: Nutrition education, University students, College students and Health Promotion. Combinations were: Nutrition education AND (University Students OR college students); Nutrition Education AND University Students and Nutrition Education AND Health Promotion AND University Students.

In order to be included in the integrative review, the studies should describe the nutrition education strategy used and the population should include healthy university students with different diagnoses of nutritional status. The evaluations of the strategies could be qualitative and/or quantitative, using statistical analysis. Studies that did not meet these criteria were excluded. The process of selecting articles for full analysis is described in Figure 1.

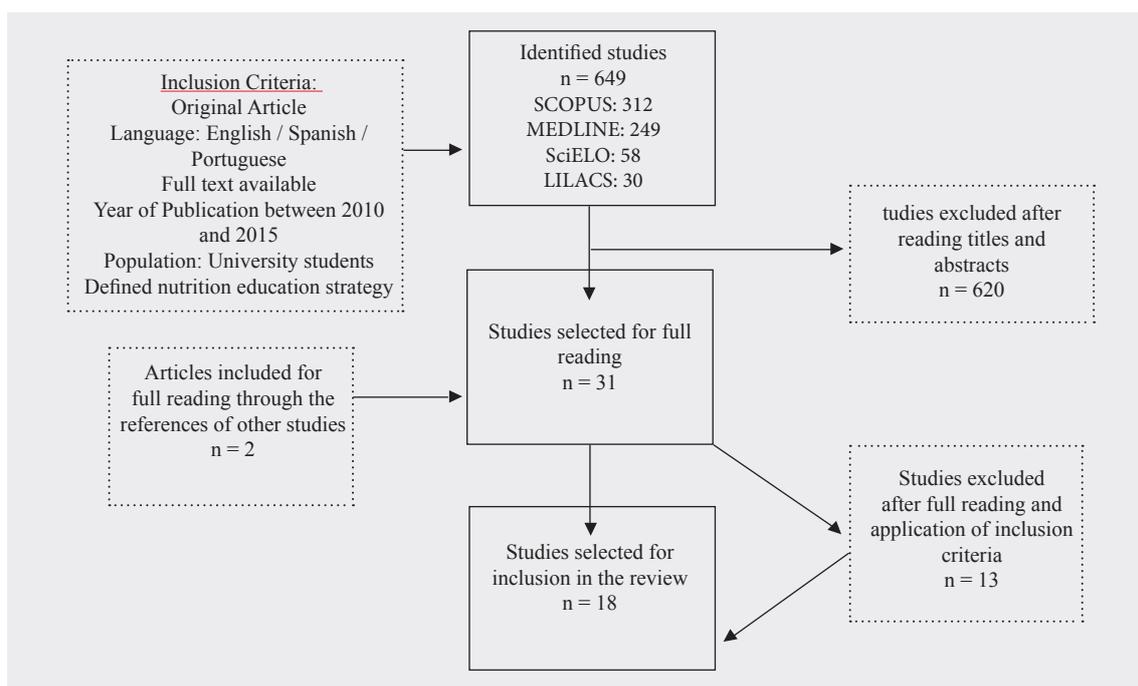


Figure 1 - Flow chart of articles included in the study.

RESULTS

Of the studies (n=18) that met the inclusion criteria, the majority was conducted in the United States (7 studies), followed by Canada (3 studies), accounting for 55.5% of the sample. However, there were studies in 9 different countries (USA, Canada, Argentina, Colombia, India, Malaysia, Nigeria, Germany and Spain), covering 5 continents (South America, North America, Europe, Africa and Asia). All the studies were carried out in higher education institutions, with 3 publications in Spanish and 15 in English. The analysis of the articles shows that the university environment is an important health promoter. However, the strategies are still incipient in Brazil, as it was not possible to include any study developed at the national level, mainly due to the lack of well described intervention strategies.

The studies presented one or more intervention strategies aimed at nutrition education – twelve (66.6%) of them carried out a single and/or main strategy and six (33.3%) carried out mixed strategies. In order to analyze the strategies found, the studies were divided into 6 different approaches, presented and distributed as follows: 1) Workshops/lectures/conferences/exhibitions/meetings using printed and/or illustrative information material (61.1% of the studies, n=11); 2) Long-term on-site courses with more than 8 meetings (22.2% of the studies, n=4); 3) Online courses or programs (33.3% of the studies, n=6); 4) Motivational programs through telephone messages (11.1% of the studies, n=2); 5) Labeling of foods sold in the university environment with risk signaling (11.1% of the studies, n=2); and 6) practical cookery classes (5.5% of the studies, n = 1).

Different approaches were used in the strategies: motivational approaches and approaches based on the Cognitive Social Theory, focusing on self-efficacy and self-regulation in health, and approaches based only on content transmission, in which only the information itself was provided to the participant.

Most of the studies presented mixed approaches in their strategies, that is, they used more than one intervention strategy in their programs. The main actors identified as proponents of these strategies were nutritionists and health team professionals working in the university, undergraduate and graduate students in the same fields and professionals supporting the institutions.

Regarding the results obtained, special attention was given to the discussion on the network of events that sustain inadequate eating habits by the study population, which allows for possible timely interventions to meet the main needs of the participants. The main reasons for the lifestyle that put these young individuals at risk for the development of metabolic diseases were: excessive academic demand, (resulting in little time for physical activity and adequate eating), increased personal responsibilities (many students leave their parents' home at the time they enter university), lack of healthy choices available at universities, lack of knowledge about nutrition for better choices, inability to cook, financial constraints, lifestyle (increased consumption of alcohol and other drugs and reduced hours of sleep), embarrassment in making healthy choices and being considered an exception within the group.

The results of the interventions show that the university environment has a great potential for the development of these actions, with positive changes in the eating habits, anthropometric profile and lifestyle of the participants after intervention; however, only one study presented an evaluation of the strategies in the long term, which indicates that there is still a need for more evaluations to corroborate these actions definitively.

The objectives, strategies and main results of the studies included in the review are described in Chart I.

Chart I - Presentation of the main results of the studies included in the integrative review.

Author, year	Objective	Sample / Population	Strategy Used	Synthesis of Results
Socarrás et al., 2015 ⁽³⁹⁾	To assess the level of knowledge regarding eating disorders (ED) in healthy young individuals and to evaluate the effectiveness of the educational intervention.	50 University students	- Workshop on eating disorders - Activities using audiovisual material	The recognition of concepts and definitions of ED changed; however, there is a need for more interventions to deepen the knowledge about the symptoms and characteristics.
Jiménez et al., 2010 ⁽³⁴⁾	To evaluate the knowledge and perception of functional foods (FF) in university students before and after educational interventions.	554 University students 101 Teachers 45 Supporting professionals	- 2-year intervention program with multiple strategies: 3 academic days, 5 courses, leaflets, educational material and campaigns with stands	The study demonstrated a significant change in the knowledge and applicability of FF after the interventions. Knowledge was assessed through familiarity with the term, knowledge of the concept and perception through taste, intent to purchase and benefits.
Matthews et al., 2014 ⁽³⁵⁾	To implement the FRESH (Food Resources and Health Education for College Students) program, which aims to improve nutrition on campus and promote healthy behaviors among students.	5000 Undergraduate and graduate students	- 60 interactive displays - Informative Website - Social Media - Hands-on cooking demonstration - Food labeling	The strategies reached the population, with improvements in conscious consumption and knowledge about rational nutrition and food.
Becerra-Bulla et al., 2011 ⁽⁴⁰⁾	Implementation of the Health Promoting University program.	Not informed. University students and academic community	- Expository educational strategies for healthy eating - Individualized nutritional guidance	Project Expansion to the Teaching, Research and Extension departments. Teaching: to improve nutrition educators' training with the reformulation of school curricula. Research: to continuously monitor and evaluate the program at the university. Extension: Creation of the Healthy environments project

Lhakhang et al., 2014 ⁽³⁶⁾	To compare two strategies to increase fruit and vegetable intake in university students.	224 University students living on the campus	- Motivational intervention followed by self-regulatory intervention - Self-regulatory intervention followed by motivational intervention	- The intervention that started with self-regulatory strategies was more effective to change food behavior when compared to the intervention that started with a motivational strategy.
Shahril et al., 2013 ⁽³²⁾	To evaluate an intervention with a multimodal method to improve the quality of food consumption in the university.	417 University students	Multimodal - Lecture - Brochures - Motivational text messages via mobile phone	Significant improvement of dietary habits and intake of specific macro and micronutrients.
Feldman et al., 2013 ⁽³⁷⁾	To evaluate and design a way to promote healthy food selection from university foodservices menu.	39 University students	- Focus groups - Interactive material with different semiological prompts based on nutrition labeling schemes	Menu icons for food offered at the university helped students make better food choices.
O'Donnell et al., 2014 ⁽⁴⁴⁾	To explore the relationship between goal setting on fruit and vegetable consumption as well as physical activity and consumption in a web-based educational intervention.	665 University students	- 10 online lessons on healthy eating and physical activity - Determination of weekly goals and consumption by students themselves	- Growing increase in consumption targets for fruits and vegetables and actual consumption over the weeks. Deciding on the individual goal helped the participants to achieve the goal.
Dour et al., 2013 ⁽⁴⁵⁾	To determine the overall impact of the Webhealth program after 3 months of completion and evaluate the motivational components of the interventions in relation to the participants' behavioral and body weight changes.	653 University students	- Web-based Nutrition Education	- Men maintained higher consumption of fruits and vegetables, but also higher BMI. Participants who maintained healthier food choices were those who were most motivated to take the course.
Harvey-Berino et al., 2012 ⁽⁴⁶⁾	To explore the feasibility of an online weight management program for university students.	336 University students	- Online Nutrition Education course - Chat meeting with a Nutritionist and a Psychologist -Supplementary educational material - Individualized diet and guidance - Recipes and menu - Daily food logs	All weight changes were significant in relation to the goal. An online course for nutritional support and weight management is effective and feasible for this population.
Poddar et al., 2012 ⁽⁴⁷⁾	To change behaviors related to dairy intake through social cognitive theory in university students	211 University students of the Personal Health and Drug Education course	- 8-week online course - events Themes: - Social Cognitive Theory - Intake of dairy products	Students increased self-regulation and intake of dairy products

Pearson et al., 2013 ⁽⁴⁸⁾	To compare two obesity control strategies using a telephone-based intervention: 1) motivational strategy 2) LEARN program	78 University students with BMI of 30kg/m ² or above, without comorbidities	- Telephone-based intervention on lifestyle. 1) Motivational group: open conversation 2) LEARN group: pre-established content	The participants in the LEARN group lost more weight, but participants in the motivational group consumed fewer calories. Regarding the experience, the motivational group reported openness for optimal reflection to set their goals, but missed specific instructions while the LEARN group emphasized the importance of specific lessons but felt a lack of flexibility and individualization of actions. Both strategies provided good results.
Eun-Jeong Ha et al., 2011 ⁽⁵⁰⁾	To estimate the consumption of whole grains, its sources and determine whether consumption by university students increases after a nutrition course.	90 University students	- Introductory course on healthy eating, physical activity and whole-grain consumption based on the social cognitive theory	The course was established as an effective strategy for increasing the consumption of whole grains in the university students.
Anetor et al., 2012 ⁽⁴¹⁾	To examine the effect of nutritional education on the eating habits of undergraduate students for the prevention of stomach cancer.	436 University students	- 8-week expository course on healthy eating and risk for stomach cancer	Significant difference was observed in protective eating habits in the participants who received the intervention.
Higgins et al., 2010 ⁽⁴²⁾	To describe wellness practices in college students, develop an education course on good health practices, and evaluate the impact of the course on student practice and learning.	1855 University students	- Health education course	The analysis of the results of the course shows improvement in the levels of consciousness to make better choices on the part of the participants. Including nutrition and other wellness and health indicators.
Vijayapushpam et al., 2010 ⁽⁴³⁾	To evaluate the impact of a classroom-based health education intervention in university students from 7 institutions in India.	687 University students	- Lectures on health and nutrition	Significant improvement in the understanding of education and health.
Ungar et al., 2013 ⁽⁵²⁾	To identify which intervention is most effective to increase consumption of fruits and vegetables in university students: the “5 a day” or “just one more” programs.	135 University students	- Motivational program based on the “5 a day” and “just one more” strategies	The motivational program “5 a day” obtained better results as regards the increase in consumption of fruits and vegetables.
Poddar et al., 2010 ⁽⁴⁹⁾	To improve expectations and results of self-efficacy and self-regulation related to the behavior and consumption of dairy products in university students through the Social Cognitive Theory (SCT).	294 University students enrolled in the personal health course	- 5-week web-based course on Nutrition and Social Cognitive Theory	The participants who received the intervention had an increase in self-regulation for dairy consumption, but not in actual consumption, which indicates that the SCT should be further analyzed.

DISCUSSION

By observing the studies included in the present review, it is possible to note that all the studies were carried out outside Brazil, which shows that nutrition education strategies targeted at university students are still incipient.

In the Brazilian context, even though there are many well-established strategies targeted at basic education students^(20, 21, 25) reinforced by the PNAE, which is the oldest public policy on nutritional safety in the country, and by PNAN, which provides for the need to carry out nutritional health promotion in all collective educational spaces^(14, 26), it is observed that this reality has not effectively reached higher education.

In a multicenter study of 1,689 participants with a mean age of 19 years conducted in American universities, high body mass index (BMI) and waist circumference (WC) were identified as indicators of high health risk and excess weight in more than 20% of the population⁽⁵⁾. Similar studies carried out in Greece (with 390 medical students), the United Kingdom (with 524 students from 37 different universities), Chile (with 799 students from 4 universities) and France (with 3457 students from 8 universities) presented equally worrisome findings, such as: 30% of the male population with excess weight and low nutrition knowledge; overall 24% rate of excess weight and diet poor in nutrients; low mean adherence to the Mediterranean diet and weekly physical activity frequency (less than twice); and high prevalence of eating disorders associated with other behavioral risks, such as stress and depression, respectively^(6-8, 27).

In Brazil, the rates are not different. A study carried out with 1,503 university students in the northeast region found low rates of physical activity⁽²⁸⁾. Another similar study carried out in the same region found a high frequency of cardiovascular risk factors, such as smoking, sedentary lifestyle, excess weight, inadequate caloric intake and diabetes in students of the same age group⁽³⁾.

These findings in young adults between 18 and 24 years of age corroborate the current epidemic of cardiovascular⁽²⁹⁾ and metabolic diseases^(30, 31). It should be emphasized that by launching the 2011-2012 Strategic Action Plan to Tackle Noncommunicable Diseases Brazil has undertaken a commitment to disease prevention and health promotion in all ages and spaces, with a focus on modifiable risk factors (smoking, drinking, diet, physical inactivity, and obesity) associated with predisposition to these diseases⁽³²⁾. The sum of these factors gives rise to studies intended to develop this field.

Many reasons have already been searched to justify the negative change in eating habits among university students. Financial issues related to leaving the family home to study, stress about academic activities, lack of time for a greater dedication to the production of their own food and/or attention to schedules, lack of cooking skills and of nutrition knowledge to make healthier choices, as presented previously, have been reported⁽³³⁻³⁵⁾.

The strategies that presented the best results for behavior change in this population and their main limitations were observed in the studies selected for the present article.

Studies carried out in North America found that the identification of the nutritional composition of the foods offered on the campus of the universities could change the food choices made by students during meals. However, they pointed out that information about the nutritional characteristics of certain foods alone was not an effective action, because the lack of knowledge to interpret them and of self-regulation to sediment these changes limited the success of the strategies. It was possible to observe that ludic approaches such as those performed with labels in the colors of traffic lights and/or self-explanatory symbols, which indicated more the overall quality of the food, achieved more definitive results^(34,36,37).

This characteristic was also observed in the studies that used objective transmission of information as the main strategy of intervention carried out through academic days, workshops, seminars, posters and brochures^(33,38-42). The knowledge on the necessity of consumption of healthier foods and on which food groups they belonged to was not enough because on campus there were no choices for a more conscious consumption and/or these foods were not affordable⁽³⁶⁾.

The results of these studies confirm the need for awareness and comprehensiveness of the strategies, which should be intersectoral and multifaceted and include the provision of nutritional education to students and policy and management regarding food availability at the university^(26,36). This conclusion can be corroborated by the history of the construction of the Food and Nutrition Security Policy discussed in the light of intersectorality in government, which poses the challenge and the centrality of the different institutional mechanisms, instruments and processes for the confluence and promotion of these actions^(26,39).

Regarding the tools used, most of the studies analyzed used the internet (through computers and/or mobile devices) as the main or auxiliary tool to involve students in actions^(31,39, 43-48). This strategic pattern became interesting and achieved positive results, since the university population, comprised mostly of young adults between 18 and 24 years of age, has a great affinity with technologies and reports being good to be able to access the content available and to have interactivity in any place and time without the need of routine adaptation to that⁽⁴⁴⁾.

In the case of long-term courses⁽⁴⁹⁾, telephone activities with simultaneous advice feedback⁽⁴⁷⁾ and strategies with practical activities⁽³⁹⁾, such as cookery workshops, have shown positive results, but with limited quantitative aspects. This is because these strategies require greater financial, human and infrastructure resources, which limits their action in higher education, even though it is quite relevant in basic education for the same purpose^(20,21,25,50).

It is necessary to discuss not only the tools and resources, but also the teaching approach used in the strategies, many of which used only information transmission and lacked a well-established theoretical construct^(33,34,36,38-42,45). Other strategies, which were more effective and have been conducted on the basis of the social cognitive theory (SCT)^(35,46-49), reinforced the development of self-efficacy and self-regulation by the participants. Finally, motivational strategies also presented promising results, particularly when associated with other approaches^(31,35,43,44,47,51).

In a study comparing an approach based on the development of self-regulation through SCT constructs and a motivational approach, the first one was more effective in changing eating behavior⁽³⁵⁾. However, in another large study that compared a

motivational strategy with a more determined strategy to quantitatively transmit the content, the first one obtained a better result related to the reduction of calorie intake by the participants; however, such reduction was lower than the weight loss, which suggests that both approaches would be important if used together⁽⁴⁷⁾. This shows that a combination of these approaches may be interesting for broad and perennial nutrition education strategies.

Most of the studies do not present those responsible for carrying out health promotion actions. In some of them, the actions were carried out by the nutritionist responsible for the university restaurant⁽⁵²⁾. In others, the health management team of the university did so in order to implement the Health Promoting Universities as management strategies⁽³⁹⁾, or in partnership with the university's sports department⁽⁵³⁾. However, most of them were developed by research groups of health professionals (nutritionists, psychologists and physical educators) and undergraduate and graduate students.

This fact reinforces an important observation regarding the articles included in the review: many of the strategies are evaluation interventions, objects of research that have not yet been implemented in the institutions – as part of the institutional programs – in a definitive way. Because of this, the lack of long-term evaluation of the results of the strategies and their maintenance for the benefit of the academic community, as well as the absence of studies carried out in Brazil, should be highlighted as limitations of the present study

Notwithstanding, it was possible to conclude that the strategies that focused on transmitting information to the participants were less effective when compared to those that set out to develop autonomy and health self-regulation and self-management mechanisms.

Given that, it is necessary to look for the development of effective and integrated food and nutrition education strategies that encompass the multiple facets of learning, fostering the discussion on the aspects that permeate not only the acquisition of information, but the determinants of the lifestyle of the subjects and of the society in which they are inserted. This will allow the development of autonomy for a practice of healthier and perennial food choices and their insertion in the cultural identity of higher education.

CONCLUSION

The university environment has great potential for promoting nutritional health and the most effective strategies were those that presented a course based on the social cognitive theory. However, this environment has been little explored at the national level and, in order to change this reality, it is necessary to redefine the strategies used and the public policies and intersectoral actions that support this practice, including it in the social identity of higher education in Brazil.

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