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# Contributions of the health-promoting universities' movement: An integrative literature review

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## Abstract:

The objective was to identify the existing links between the conceptual proposal of the movement of health-promoting universities (HPU) and the activities carried out to increase the health of workers in higher education institutions. An integrative literature review was conducted in October 2020 in the following databases: LILACS, Scientific Electronic Library Online, Web of Science, and CINAHL and with the Boolean phrase citing, University AND "health promotion." In the initial review, 5351 studies were found, and after removing the repetitions, applying the inclusion criteria, and making the qualitative analysis, a sample of 9 articles was obtained. For the construction of the flowchart with the representation of the eligibility and inclusion of the articles, the PRISMA model was used. The findings were analyzed with the theoretical and conceptual support of the movement of HPU, which made it possible to establish the construction of three categories, to quote: full provision of social, medical, and health services; creating a favorable health environment on campus; and development of health education actions. The movement of HPU is relevant to the contemporary world; however, initiatives to incorporate these practices are still scarce, creating a gap between expectations and reality.

## Keywords:

Health, health promotion, occupational, occupational health, universities

## Introduction

The expanded perspective of health refers to the need to monitor the subject beyond his/her physical body, understanding his/her health situation as resulting from social determinants that are articulated in a complex way, which is necessary interdisciplinary and intersectoral policies and actions to provide better quality of life.<sup>[1,2]</sup> In Brazil, discussions about this concept have become densified from the end of the last century, and today, the perspective of health promotion (HP) is observed as essential for the operationalization of the expanded concept of health.<sup>[3]</sup>

HP practices permeate many areas of public health, such as workers' health, whose main

objective is the maintenance of healthy and sustainable relationships between working life and the disease health process,<sup>[4]</sup> including strategies not only to promote health surveillance, but also to reduce workers' morbidity and mortality.<sup>[5]</sup>

Nevertheless, it is emphasized that the world of contemporary work is influenced by a neoliberal macrostructural context, which perceives the devaluation of the working class, from the intensification of work, precariousization, outsourcing, and reduction of wages, among others.<sup>[6,7]</sup> In addition, it is observed that, contrary to the concept of workers' health itself, several sectors and work environments still focus on activities aimed at workers only from the perspective of surveillance and curative actions, generating a real gap between the

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needs and actions offered to workers. To this example, we have the university academic scenario, a space in which proposals promoting health and quality of life are not considered part of the institutional project.<sup>[8]</sup>

Based on this assumption, universities are considered as a propitious space for the development of healthy environments and HP activities in an institutional way. In addition, the principle of coresponsibility for health and the social commitment of other sectors of society in carrying out HP activities should be adopted, thus cooperating with the increase of workers' health within the university environment.<sup>[9]</sup>

This integration between the practice of HP in this specific locus originated the movement called health-promoting universities (HPU), which considers inseparable the offer of health-promoting activities to the institutional proposal. HPU's initiative is based on building healthy environments for the community at large. In these institutions, health has interdisciplinary and intersectoral support with the influence of public policies to rethink health in academia and establish policies that promote the health and quality of life of the academic community.<sup>[10]</sup>

In these institutions, HP acts in a transversal way ensuring the creation of healthy spaces and processes, generating social participation and commitment based on an active involvement, in which the development of sustainable and equitable health actions is presented as complementary to the creation of public policies.<sup>[11]</sup>

Thus, it is understood that the leading components of the HPU movement are possible contributions to the axes and objectives of HP in universities. In the organizational context, operational actions, such as promoting health defense actions and green campus initiatives, for example, can be analyzed by areas of action, which consequently include the transversal axes of HPU.<sup>[9,11]</sup>

In this perspective, this investigation aimed to identify the articulations between the conceptual proposal of the HPU movement and the activities performed to increase the health of workers in higher education institutions.

## Materials and Methods

This was an integrative literature review (ILR), a method that aims to gather and bring research results on a theme, in a systematic way to contribute to a comprehensive view of what is published on a given theme.<sup>[12]</sup>

Previously, the PICO strategy, Population, Intervention, Context, and Outcome, was used as the contribution of this study.<sup>[13]</sup> In the present study, the Population (P)

included workers from higher education institutions; an Intervention (I) was the identification of the contributions of the HPS movement; context (Co) was the scientific literature. Thus, as the first step of the RIL, the research-guide question was raised: What are the contributions of the UPS movement to the health of workers in higher education institutions according to scientific literature?

In the second stage of the ILR, some inclusion criteria were selected: (1) publications in the Portuguese, Spanish, and English; (2) publications in article format; (3) publications with full texts, available online; and (4) publications from 2003, the year that the UPS Movement emerged. In addition, the following exclusion criteria were established: (1) publications that did not answer the right question; (2) duplicate publications; (3) publications such as literature reviews, editorials, and theoretical essays.

In the third stage of the ILR, the information to be selected was defined, aiming to contribute to the categorization of the studies, for this, an instrument with the following variables was used: Title, country of origin, year, database, objective, and prevalent themes.

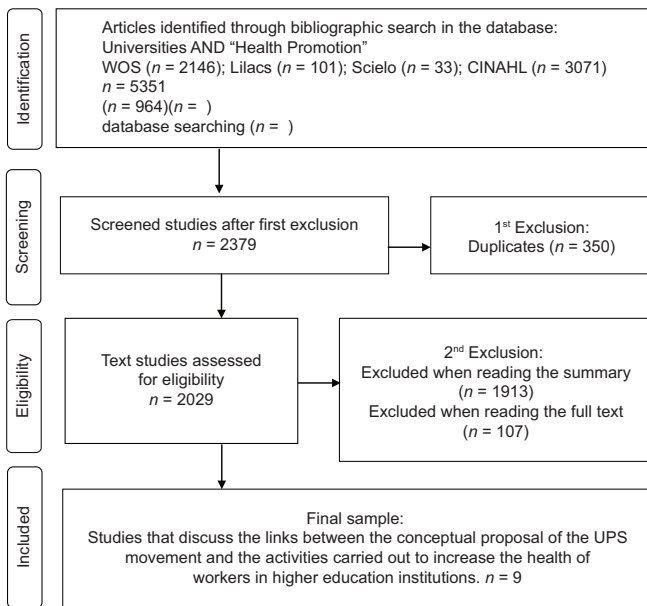
The study was conducted in October 2020 and was supported by the following databases: Latin American and Caribbean Health Sciences Literature (LILACS), Scientific Electronic Library Online and the main collection of the Web of Science and Cumulative Index to Nursing and Allied Health Literature (CINAHL) through the Capes Journal Portal. The academic-scientific relevance contributed to the choice of these bases.

The Descriptors in Boolean phrase format were also used, to mention: Universities AND "health promotion," together with their respective synonyms in English arranged in the Medical Subject Headings, to mention: Universities AND "Health promotion." The terms were selected after analysis of synonyms and combinations that expressed the content of the search.

The fourth part of the ILR was the construction of a flowchart with the representation of eligibility and inclusion of the articles that are shown in Figure 1.

In the fifth part of this integrative review, a descriptive and interpretative analysis of the research was performed, respecting the ethical aspects, ideas, concepts, and definitions pointed out by the authors. It is note point that the eligibility of the corpus of analysis was based on the blind evaluation of three researchers.

The sixth part of the ILR is configured by means of a synoptic painting, to synthesize in an organized way,



**Figure 1:** Flowchart with representation of eligibility and inclusion of articles in the selection of studies, 2020 Source: To the authors, Model adapted from the PRISMA flowchart

the most relevant findings. The table, besides being integrated by variables used in the third stage of the ILR title, year, country of origin, database, objective, and prevalent themes, was used to contribute to the results of this study.

### Development

After the analysis and exclusion of studies as shown in Figure 1, we obtained a sample of 9 articles from the following countries: China ( $n = 1$ ); Spain ( $n = 2$ ); USA ( $n = 2$ ); South Korea ( $n = 1$ ); Germany ( $n = 1$ ); Malaysia ( $n = 1$ ) and Chile ( $n = 1$ ). The articles were organized and analyzed guided by elements that constitute Table 1 through reading to identify each study.

For the categorization of the articles, the theoretical and conceptual framework of the movement of HPU in the following areas of activity was used: Development of regulations and institutional policies to promote a university culture and a favorable environment for health; Development of health education actions; Full provision of social, medical, and health services; Training and academic training in HP; Development of associations, alliances and health networks to university students; Favorable environment for health on campus and Development of health research.<sup>[11]</sup>

### Comprehensive provision of social, medical, and health services

In this category, 3 articles were included,<sup>[14,16,17]</sup> which corresponds to 33% of the number of articles analyzed. In this category, it was noticed that the integral provision of social, medical, and health services are considered

enhancers for improvement in quality of life, since they act as interdisciplinary proposals of care and HP. Nevertheless, the association of initiatives emphasizes changes in lifestyle.<sup>[11]</sup>

The main lifestyle modification observed in the studies is the incentive to combat sedentary lifestyle through walking in the. Their association was observed with a pleasant scenario for participants, such as forests and forests in China<sup>[14]</sup> and South Korea.<sup>[17]</sup> In this sense, the following benefits were evidenced: reduction of heart rate and blood pressure, increase in oxygen saturation, management of situations of coping with stress, reduction of depressive signs.

Despite the scenario of walking, there was a significant improvement in the quality of life of professionals from an American university, from the stimulus and follow-up to changes in lifestyle; It was observed in this case that after 4 weeks of stimulation to walking, the professionals have already increased the number of daily steps by 30%, reaching a 40% increase in this value after 8 weeks, which contributed to a reduction in metabolic rates and body mass index.<sup>[16]</sup>

It is worth mentioning that stimulating physical activity programs at work is already a reality observed in many scenarios whose results point to the positive impact on quality of life, decreased absenteeism and increased productivity.<sup>[23]</sup> Even simple actions such as walking to work can be determinant for the beginning of a healthier life, since the habit can represent an increase of 45% in relation to physical activities developed by individuals who go by car to work.<sup>[24]</sup>

### Creating a favorable health environment on campus

In this category, only 1 article<sup>[15]</sup> was included, which corresponds to 11% of the number of articles analyzed. This classification corresponds to actions that promote sustainable practices and approaches with the use or not of technologies, which stimulate the modification of habits in search of a healthier lifestyle.<sup>[11]</sup>

In this context, it was observed the creation of a public bicycle-sharing program whose effects after 8 months of cycling analyzed at the university, which proved to be a useful institutional program in the fight against sedentary lifestyle, besides being a viable strategy in the presentation of positive impacts necessary for the creation of public policies.<sup>[15]</sup>

The use and bicycles as a means of transport and stimulation of physical activity, is already a worldwide trend whose benefits are presented by users not only as a strategy to improve physical capacity. A study conducted in Spain

**Table 1: Articles selected for the study-Rio de Janeiro, Brazil, 2020**

Goal, Country, Year	Achievements	Category
Explore the benefits of bamboo forest therapy in the physiological responses of university students in stress management (China, 2020) <sup>[14]</sup>	Forest therapies consisted of 15 min walks in bamboo forests and was considered successful, as it improved well-being, reduced blood pressure rates and heart rate	Full provision of social, medical, and health services
Evaluate the effects of a public bike sharing program and promotion of cycling at a university (Spain, 2015) <sup>[15]</sup>	The public bicycle sharing program proved useful in stimulating physical activity and reducing the BMI of students	Favorable environment for health on campus
Evaluate the effectiveness of exercises among university employees linked to a workplace well-being program on physical activity (USA, 2015) <sup>[16]</sup>	After 8 weeks of activities, it was possible to observe a 40% increase in the number of steps counted in the pedometer of the participants, in addition, a significant reduction in metabolic rates and BMI was identified	Full provision of social, medical, and health services
Identify the effects of a forest walking program on the university campus (South Korea, 2017) <sup>[17]</sup>	After 6 weeks of walking, there was an increase in the behavior of health promotion activities and a noticeable decrease in depression rates	Full provision of social, medical, and health services
Stimulating healthy lifestyle habits in university students through an educational intervention based on gamification (Spain, 2017) <sup>[18]</sup>	After 4 months of intervention, nutritional improvement was observed, through the reduction of soft drinks intake and the adoption of a balanced diet and increased practice of physical activities	Development of health education actions
Identify the determinants of health and well-being in the work and life environment of students and develop targeted health interventions (Germany, 2007) <sup>[19]</sup>	Discussion in health proved to be a useful instrument for student participation in health promotion at the university. The major challenges are related to the resistance of students to participate in the formulation of institutional proposals	Development of health education actions
The objectives of the study were: to determine the feasibility of a sleep health promotion program among university students and to examine the changes in knowledge about daily sleep parameters (USA, 2016) <sup>[20]</sup>	It is feasible and acceptable to disseminate sleep health information to college students through individualized reports of sleep diary data and attendance at a 1 h personal presentation on sleep health	Development of health education actions
Evaluating the impact of a 6-year work health promotion program whose activities focused on the blood pressure of officials of a public university (Malaysia, 2016) <sup>[21]</sup>	Health education activities and laboratory and clinical follow-up were also carried out. There was a significant decrease in systolic blood pressure among hypertensive participants and at risk of hypertension	Development of health education actions
To evaluate the effect of a lifestyle-based intervention on the reduction of cardiovascular risk factors in university students (Chile, 2015) <sup>[22]</sup>	After 17 weeks of intervention, a significant reduction in hyperglycemia (-10%), hypertension (-16%) was observed and sedentary lifestyle (-26%)	Development of health education actions

found that performing this exercise improved the emotional health of the participants, thus increasing the level of well-being.<sup>[25]</sup> In Argentina, the participants indicated the health benefits as the last favorable point for the use of shared bicycles, with ease of travel and financial economy being the main reasons for entering the program.<sup>[26]</sup>

It is worth mentioning that policies of this nature are associated not only with the UPS movement but also with the achievement of two of the sustainable development goals to be achieved by the participating nations by 2030, these are: Health and well-being and sustainable cities and communities.<sup>[27]</sup>

### Development of health education actions

In this category, 5 articles were included,<sup>[18-22]</sup> which correspond to 55% of the number of articles analyzed. From this perspective, it was perceived that health education is a cross-cutting aspect to all interventions, being considered one of the main pillars for HP in higher education institutions and above all, for student protagonism either as a leader of interventions or as a multiplier.<sup>[11]</sup>

It is possible to observe the use of active methodologies for carrying out educational activities, such as gamification. This concept is related to the presentation of interactive elements in the format of games to stimulate the construction and acquisition of knowledge on a given subject.<sup>[28]</sup> A study from Spain was observed in which gamification was used as a strategy to stimulate healthy habits, in which participants addressed the theme of physical activity and health. The RPG game is the basis of the intervention proposal, which is configured by developing adventures in parallel with a fictional world, in which each student should aim to be a health warrior with individual training, battle between two armies and overcoming levels and at the end of the intervention, there was an improvement in healthy habits of life.<sup>[18]</sup>

Nevertheless, health education was also observed as a mechanism of social protagonism. In Germany, this strategy was used as a way of inserting students in the construction of an institutional project to promote the health of a university, in which the demands of the academic community were observed, and solutions were designed that could meet these needs.<sup>[19]</sup>



Health education also helped to understand questions about behaviors and lifestyle habits, such as sleep patterns. In the United States of America, the pilot project of a sleep HP program for university students outlined its activities as follows: (1) didactic presentation on sleep health; (2) Feedback from program participants regarding their sleep through a journal. After a few weeks of admission to the project, the participants reported improvement regarding knowledge and sleep parameters, in addition to the increase in sleep duration by 30 min.<sup>[20]</sup> The relevance of this type of activity is based on the association between sleep quality and the emergence of metabolic diseases, in addition to changes in mood and fitness to perform daily activities.<sup>[29]</sup>

Another HP program developed in Malaysia and conducted in the workplace includes monitoring and presentation of educational seminars on health aimed primarily at healthy eating, physical activity, smoking cessation and stress control. Educational strategies were used, in addition to annual health monitoring over 6 years. As results, it was observed that participants with hypertension had systolic pressure reduced by about 2.36 mmhg, employees at risk of hypertension also had a significant improvement in blood pressure.<sup>[21]</sup>

In this same perspective and with the objective of reducing obesity and sedentary behaviors from health education activities over 17 weeks, participants in a study from a Chilean university showed a significant decrease in the prevalence of hyperglycemia, hypertension and sedentary lifestyle.<sup>[22]</sup>

Educational activities are relevant for lifestyle changes in all population groups, be it high school students,<sup>[30]</sup> health workers<sup>[31]</sup> or even other sectors. It is important to emphasize health education is a public health practice that should be carried out responsibly and preferably, with multiprofessional support with a view to HP.<sup>[32,33]</sup>

The effectiveness of HP programs has already been proven by the international scientific literature and when it comes to university scenarios, community participation in the planning and implementation of actions is seen as an important issue for the success of the activity.<sup>[34,35]</sup> This perspective should be taken into account in programs of this nature.

## Conclusion

The concept and practice proposal presented by the HPU movement is extremely relevant to the contemporary world, in which professionals and students spend more and more time in the work environment. However, initiatives to incorporate these practices are still scarce, creating a gap between expectations and reality. The need

to evaluate existing practices is emphasized in order to reinforce their relevance and ensure that they are in fact spaces for building knowledge and also promoting health.

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## Conflicts of interest

There are no conflicts of interest.

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