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RISK FACTORS FOR CARDIOVASCULAR DISEASES AMONG NURSING STUDENTS: A CROSS-SECTIONAL STUDY

FATORES DE RISCO PARA DOENÇAS CARDIOVASCULARES ENTRE ACADÊMICOS DE ENFERMAGEM: ESTUDO TRANSVERSAL

FACTORES DE RIESGO DE ENFERMEDADES CARDIOVASCULARES EN ESTUDIANTES DE ENFERMERÍA: UN ESTUDIO TRANSVERSAL

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ABSTRACT
Objective: to analyze risk factors for cardiovascular diseases among nursing students. **Method:** a cross-sectional study carried out with 76 nursing students from a public university in Belém, Pará, Brazil. Data were collected from August/2017 to July/2018, in three stages: filling out a questionnaire, physical examination and collecting fasting peripheral blood for biochemical analysis. In data analysis, descriptive statistics, and the Kruskall-Wallis and Mann-Whitney tests were used, with a significance of 5% ($p<0.05$). **Results:** the female sex predominated (n=59/77.6%) and the age group from 17 to 20 years old (n=54/71.0%). Normality status prevailed in the classification of body mass index and lipid profile data, with no significant changes in blood pressure being identified. However, the set of other cardiovascular risk factors proved to be relevant. **Conclusion:** there is a need to think about health promotion and disease prevention strategies in higher education.
Descriptors: Risk Factors; Cardiovascular Diseases; Noncommunicable Diseases; Students, Nursing; Health Profile.

RESUMO
Objetivo: analisar os fatores de risco para doenças cardiovasculares entre acadêmicos de enfermagem. **Método:** estudo transversal, realizado com 76 acadêmicos de enfermagem de uma universidade pública em Belém, Pará, Brasil. Os dados foram coletados de agosto/2017 a julho/2018, em três etapas: preenchimento de questionário, exame físico e coleta de sangue periférico em jejum para análise bioquímica. Na análise dos dados, utilizaram-se a estatística descritiva e os testes de Kruskall-Wallis e Mann-Whitney, com significância de 5% ($p<0,05$). **Resultados:** predominaram o sexo feminino (n=59/77,6%) e a faixa etária de 17 a 20 anos (n=54/71,0%). Prevaleceu o *status* de normalidade na classificação do índice de massa corporal e nos dados do perfil lipídico, não sendo identificadas alterações significativas da pressão arterial. Todavia, o conjunto dos demais fatores de risco cardiovascular se mostrou relevante. **Conclusão:** aponta-se a necessidade de pensar em estratégias de promoção da saúde e prevenção do adoecimento na educação superior.
Descritores: Fatores de Risco; Doenças Cardiovasculares; Doenças não Transmissíveis; Estudantes de Enfermagem; Perfil de Saúde.

RESUMEN
Objetivo: analizar factores de riesgo para enfermedades cardiovasculares entre estudiantes de enfermería. **Método:** estudio transversal, realizado con 76 estudiantes de enfermería de una universidad pública en Belém, Pará, Brasil. Los datos fueron recolectados de agosto/2017 a julio/2018, en tres etapas: llenado de cuestionario, examen físico y recolección de sangre periférica en ayunas para análisis bioquímico. En el análisis de datos se utilizaron estadística descriptiva y las pruebas de Kruskall-Wallis y Mann-Whitney, con una significancia del 5% ($p<0,05$). **Resultados:** predominó el sexo femenino (n=59/77,6%) y el grupo etario de 17 a 20 años (n=54/71,0%). Predominó el estado de normalidad en la clasificación del índice de masa corporal y en los datos del perfil lipídico, no identificándose cambios significativos en la presión arterial. Sin embargo, el conjunto de otros factores de riesgo cardiovascular resultó ser relevante. **Conclusión:** existe la necesidad de pensar estrategias de promoción de la salud y prevención de enfermedades en la educación superior.
Descriptores: Factores de Riesgo; Enfermedades Cardiovasculares; Enfermedades no Transmisibles; Estudiantes de Enfermería; Perfil de Salud.

INTRODUCTION

Considering that, due to their social particularities, undergraduate nursing students are a group exposed to the occurrence of various pathological processes, it is understood that it is necessary to investigate the risk factors for cardiovascular diseases in this public. Such factors are characterized, among other aspects, by lipid profile, blood pressure, body mass index (BMI) and life habits that influence the expression of the previous ones.[1-2]

The human lipid profile consists of fatty acids, cholesterol, phospholipids and triglycerides, which are important for the formation of lipoproteins and cell membranes. The measurement of the lipid profile consists of the values of total cholesterol, cholesterol contained in lipoproteins, such as high density lipoprotein (HDL) and low density lipoprotein (LDL), as well as triglycerides, as recommended by the Brazilian Society of Cardiology (SBC).[1]

In turn, blood pressure is defined as the pressure exerted by blood as it passes through blood vessels, resulting from cardiac output multiplied by peripheral vascular resistance. Thus, when the heart contracts, the systolic blood pressure (SBP) is recorded, and when it dilates, the diastolic blood pressure (DBP) can be measured, with an optimal value being classified as that lower than 120x80 mmHg.[1]

BMI is characterized as an international anthropometric measure, and its measurement has been among the main recommendations of the World Health Organization (WHO) for nutritional assessment since 1980. This measure expresses the relationship between ideal weight and height for the body, being obtained by mathematically dividing the value of weight (in kilograms) by the value of height squared (in meters). Thus, based on the result, a status that fits into one of four classes is obtained: low weight, normal weight, overweight and obesity.[2]

Altered values of lipid profile, blood pressure and/or BMI, especially when associated with conditions such as stress, genetic factors and sedentary lifestyle, can determine the occurrence of cardiovascular diseases, such as atherosclerosis and acute myocardial infarction, as well as the development or worsening of several comorbidities.[3]

Therefore, dyslipidemias are among the main risk factors for cardiovascular diseases, as it has been observed that, in recent years, the prevalence of these diseases in the general population has increased, associated with high blood levels of LDL and low levels of HDL. The

increase in sedentary lifestyle and excessive intake of carbohydrates and fats, with consequent overweight and obesity, are aspects that contribute to this increase.[4]

It is known that the proposition and improvement of public policies that strengthen actions for the prevention and control of cardiovascular diseases are fundamental measures to expand the possibilities of guaranteeing quality of life for different social groups, including people who are part of the academic community and experience the demands that arise from it. Consequently, in the medium or long term, these actions can contribute to reducing morbidity and mortality associated with such pathologies, as well as public spending on hospitalizations and pharmacological treatments, which are increasingly costly for society, especially for the Unified Health System (SUS).[5]

In this way, the need and feasibility of the research were considered through two aspects: the first refers to the routine of academics, largely shaped by their attributions and responsibilities and by the adversities of university life, which expose them to the risk of becoming ill due to inadequate or unhealthy lifestyle habits; and the second, to the fact that the university is constituted as a democratic space, where it is possible to access information on different objects of study, such as those that point to life habits and/or health maintenance, prevention and control of diseases within the academic community.

Faced with the scientific and social relevance of the theme, the research question was formulated: what is the profile of risk factors for cardiovascular diseases among nursing students? Based on this question, the following objective was defined: to analyze the risk factors for cardiovascular diseases among nursing students.

METHOD

Descriptive, cross-sectional study with a quantitative approach, carried out in the undergraduate nursing course at a public university in Belém, Pará, Brazil. 76 nursing students participated, representing 23.75% of the total of 320 students enrolled at the time of data collection. A sample calculation was performed with a confidence interval of 95% and a sampling error of 5%, resulting in a minimum number of 70 participants as statistically representative for the study.

The following inclusion criteria were considered: being regularly enrolled in any grade and/or academic semester, regardless of sex and age. The following exclusion criteria were defined: academics who presented emotional instability at the time of data collection, regardless of the cause;

and academics who did not fully participate in the stages of this collection.

Taking the necessary precautions not to interfere with teaching activities, the academics were approached individually on the Campus premises, invited to learn about the project and to participate in the research. After expressing their interest in participating, the academics signed the Free and Informed Consent Form (TCLE), formally declaring their interest.

Data were collected from August 2017 to July 2018, following three stages: questionnaire completion, physical examination and peripheral blood collection for fasting biochemical analysis, all individually, maintaining the privacy and comfort of the participant. In the first stage, the academic was conducted to a teaching laboratory of the Campus, previously reserved for the research activities, in order to fill a questionnaire with closed and objective questions about the sociodemographic and epidemiological profile of the participants, which were read and the responses recorded by the researcher. Considering the particularities of the study scenario, this instrument was developed by the researchers, based on official SBC guidelines on sociodemographic and behavioral factors related to cardiovascular diseases.[6]

In the same environment, the second stage was carried out, with weight and height measured to calculate the BMI. A measuring tape and a digital anthropometric scale with a measurement capacity from 2 kg to 150 kg were used, positioning the participant in the longitudinal axis with the arms close to the body. Then, blood pressure was checked using a stethoscope and manual sphygmomanometer. The first two steps occurred immediately after the participant accepted or were scheduled according to their availability and that of the researcher.

At the end, a day and time were scheduled to collect a fasting peripheral blood sample, initiating the third stage. This procedure also took place in a duly equipped and organized laboratory environment, being performed on the premises of the Campus by a qualified nursing professional, using aseptic technique and materials provided by the university, observing the biosafety norms. In view of the need for fasting, all collections took place in the morning shift, according to the participants' schedule.

Each sample consisted of 5 ml of blood, packed in a test tube and stored in a thermal box. After each case, the samples were transported by the researchers to the university’s clinical analysis laboratory, located in the research municipality. Through an agreement with the SUS, the samples were analyzed, obtaining the values of total cholesterol, their fractions

HDL and LDL and triglycerides, so that they were classified according to the criteria proposed in the Brazilian Guideline of Dyslipidemia and Prevention of Atherosclerosis of SBC.[6] To gather all the data in an instrument and avoid possible losses, the values of weight, height, BMI, blood pressure and lipid profile were recorded in specific spaces of the questionnaire.

As study variables, the following were considered: sociodemographic data; epidemiological data on the practice of physical activities, eating habits, alcoholism and smoking, and family history of cardiovascular and/or metabolic disease(s); biochemical data from the lipid profile; blood pressure values; and BMI. For statistical analysis, Microsoft Office Excel® 2010 software spreadsheets were used in order to organize and create the database. Subsequently, the data were exported to the Bioestat 5.3 program, enabling descriptive statistical analysis and the application of the Kruskall-Wallis and Mann-Whitney tests, with a significance level of 5% ($p<0.05$).

The recommendations of Resolution nº 466/2012 of the National Health Council were followed, with approval by the Research Ethics Committee of the Graduate Nursing Course at the State University of Pará, on April 17, 2017, under CAAE: 65791417.1.0000.5170 and opinion number: 2.019.011.

RESULTS

Among the 76 participants, the majority (n=59, 77.6%) were female, aged between 17 and 20 years (n=54, 71.0%). In the BMI classification, the status of normality prevailed (n=52, 68.4%), as shown in Table 1.

Table 1– Classification of participants by gender, age group and BMI (n=76). Belem, PA, Brazil, 2018.

Variable	No	%
Gender		
Masculine	17	22.4
Feminine	59	77.6
Age range		
17-20 years	54	71.0
21-24 years	16	21.1
Greater than 24 years	6	7.9
BMI classification		
Low weight	5	6.6
Normality	52	68.4
Overweight	16	21.1
Grade I obesity	3	3.9

Source: authors.

Table 2 displays data on the practice of physical activities, eating habits, alcohol and tobacco consumption, and family history of cardiovascular and/or metabolic disease(s). It was found that all students reported not being smokers, although the majority consumed fried foods (n=68, 89.5%), a portion consumed alcoholic beverages (n=27, 35.5%) and/or had a sedentary lifestyle (n=49, 64.5%).

Table 2– Practice of physical activity, eating habits, alcoholism and smoking, and family history of cardiovascular and/or metabolic disease(s) among participants (n=76). Belem, PA, Brazil, 2018.

Variables	No	%
Practice of physical activities		
Yes	27	35.5
No	49	64.5
Most consumed food group		
Carbohydrates	43	56.6
Lipids	23	30.3
Proteins	10	13.1
Consumption of fried foods		
Yes	68	89.5
No	8	10.5
Diet accompanied by a health professional		
Yes	4	5.3
No	72	94.7
Number of daily meals		
1 to 2	6	7.9
3 to 4	54	71.0
5 or more	16	21.1
Alcoholism		
Yes	27	35.5
No	49	64.5
Smoking		
Yes	0	0.0
No	76	100.0
Family history of disease(s) such as heart disease, dyslipidemia, diabetes mellitus and systemic arterial hypertension		
Yes	9	11.8
No	67	88.2

Source: authors.

In Table 3, which shows the distribution of the lipid profile, it is noted that the serum levels of total cholesterol, HDL, LDL and triglycerides showed

changes in a small number of students. However, considering the reference values, the arithmetic means remained within the normal range. In this context, it is noteworthy that, to define the values of the lipid profile, there was no differentiation between male and female genders.

Table 3– Distribution of participants' lipid profile results after laboratory analysis of peripheral blood samples (n=76). Belem, PA, Brazil, 2018.

Variables	Results			Average †	Reference values‡
	Normal N (%)	Changed N (%)	Min./Max.*		
Total cholesterol (mg/dL)	64 (84.2%)	12 (15.8%)	53/227	151.0	< 190 mg/dL
HDL cholesterol mg/dL)	69 (90.8%)	7 (9.2%)	28/118	56.9	> 40 mg/dL
LDL cholesterol (mg/dL)	70 (92.1%)	6 (7.9%)	17/155	82.7	< 130 mg/dL
Triglycerides (mg/dL)	50 (65.8%)	26 (34.2%)	24/311	93.2	< 150 mg/dL

Notes: *Min./Max. = minimum and maximum values of each variable, found after laboratory analysis. †Arithmetic means of variables. ‡Reference values classified as desirable, according to the Brazilian Guideline for Dyslipidemia and Atherosclerosis Prevention.[6]
Source: prepared by the authors.

In Table 4, it is evident that there were no significant changes in blood pressure values, either SBP or DBP.

Table 4– Distribution of SBP and DBP values among participants (n=76). Belem, PA, Brazil, 2018.

Variables	Values			Average †	Reference values‡
	Normal N (%)	Changed N (%)	Min./Max.*		
SBP (mmHg)	73 (96.1%)	3 (3.9%)	90/150	110.0	< 120 mmHg
DBP (mmHg)	73 (96.1%)	3 (3.9%)	60/100	70.0	< 80 mmHg

Notes: *Min./Max. = minimum and maximum values of each variable. †Arithmetic means of variables. ‡Reference values classified as optimal, according to the Brazilian Guidelines on Arterial Hypertension.[1]
Source: prepared by the authors.

Correlating different variables with the lipid profile, statistically significant results were identified ($p<0.05$)aboutage range from 21 to 24 years, for HDL cholesterol ($p=0.0131$), and family history of cardiovascular and/or metabolic disease(s), for total cholesterol ($p=0.0472$) and for LDL cholesterol ($p=0.0453$), as shown in Table 5.It is noteworthy that both factors are considered non-modifiable.

Table 5– Correlation between different variables and the lipid profile of the participants. Belem, PA, Brazil, 2018.

Variables	Total cholesterol			HDL cholesterol			LDL cholesterol			Triglycerides		
	Median	± SD*	p-value	Median	± SD*	p-value	Median	± SD*	p-value	Median	± SD*	p-value
Age range												
17 to 20 years	151.0	24.7	0.1846 †	56.0	19.7		74.5	29.5	0.441†	76.0	44.2	0.1818 †
21 to 24 years old	166.0	46.5		55.5	16.0	**0.0131**†	91.0	51.7		98.0	83.5	
25 to 30 years	144.0	63.2		51.5	13.0		82.2	50.0		97.5	52.0	
Practice of physical activities												
Yes	152.5	40.2	0.826‡	58.0	13.0	0.3076 ‡	72.0	45.5	0.5986 ‡	70.5	45.0	0.1949 ‡
No	152.0	24.0		53.0	20.0		80.0	29.0		94.0	60.5	
Consumption of fried foods												
Yes	152.0	31.0	0.2686 ‡	55.5	20.2	0.4214 ‡	73.5	32.2	0.2043 ‡	89.0	60.0	0.1041 ‡
No	162.5	49.2		58.0	5.7		96.0	44.5		51.0	48.2	
Alcoholism												
Yes	156.5	21.7	0.3435 ‡	58.0	26.0	0.3942 ‡	72.0	40.0	0.7736 ‡	86.0	63.5	0.8685 ‡
No	151.0	29.5		56.0	17.0		79.0	29.0		86.0	52.5	
Family history of disease(s) such as heart disease, dyslipidemia, diabetes mellitus and systemic arterial hypertension												
Yes	154.0	25.5	**0.0472** ‡	57.5	20.2	0.3849 ‡	80.0	35.0	**0.0453** ‡	83.0	59.0	0.8543 ‡
No	141.5	22.7		52.5	8.2		64.0	12.2		92.0	47.7	

Notes: *SD = standard deviation. †Kruskall-Wallis test. ‡Mann-Whitney test.
Source: prepared by the authors.

DISCUSSION

The characteristics of the lipid profile, blood pressure and BMI revealed changes in a small number of students. However, the results pointed to a set of other risk factors inherent to the daily lives of academics, which deserve to be highlighted, as they can influence the development of diseases and injuries.

As for lifestyle, it was identified that most students are sedentary, allowing to infer that they were not willing or not encouraged to practice physical activities, even being part of an undergraduate nursing course, which expresses its

theoretical-practical essence as an aspect based on the ways of caring and educating in/for health, in the context of different human groups.[7]

In its practice and in the training of its professionals, it is understood that nursing can encourage people to adopt a lifestyle capable of maintaining, strengthening or recovering health with quality of life, given the set of technical-scientific knowledge and technologies that circulate in its scope on ways to prevent and control chronic noncommunicable diseases (NCDs), such as cardiovascular and metabolic diseases, and the importance of these measures to avoid complications, as reinforced by the WHO.[8]

However, despite the availability of this knowledge, it appears that the adoption of a healthy lifestyle is still not a priority among the participants in this study, either due to possible negligence or due to social issues that, in part, go beyond the limits of their individual and collective governance, preventing or hindering changes in lifestyle.

In line with this result, a survey conducted with 76 nursing students from the University of Franca, São Paulo, identified that 75.0% did not practice physical showing the need to reflect on strategies that allow transforming this reality.[9] In the face of the aspects associated with sedentary the authors stressed the importance of encouraging academics to develop life habits that contribute satisfactorily to their state of health.[9]

From a nutritional point of view, the percentage of consumption of fried foods (89.5%) stands out, as it is a risk factor strongly associated with cardiovascular diseases, as reiterated in the literature.[10] When analyzing the food group most consumed by the participants, carbohydrates (56.6%) stand out, followed by lipids (30.3%) and proteins (13.1%). It was also found that the majority (94.7%) reported not following a diet accompanied by a health professional.

Despite the fact that the highest percentage of students had a BMI within the normal range (68.4%), another portion was overweight (21.1%) or classified as grade I obesity (3.9%). Considering the findings of this study in the light of scientific evidence, it is understood that the analysis of BMI is not the best parameter to identify possible nutritional disorders, although diet is a factor capable of influencing the expression of this index.[11]

Therefore, when isolated, BMI does not provide a good health indicator, and it needs to be associated with other measures. In addition, in the reality of academics, it is identified that everyday stress can lead to the consumption of foods rich in fats of low nutritional value, a fact that may, in

certain cases, not culminate in an increase in BMI, but implies a risk for cardiovascular diseases.[11]

Another data refers to the consumption of alcoholic beverages (35.5%); however, no smokers were identified, differing from another survey involving 281 medical students from a private university in Aracajú, Sergipe, which revealed that 32.0% of participants reported having consumed tobacco products.[12] This differential is positive, since smoking is a factor associated with the development of various pathologies, such as cardiovascular diseases.

For the purposes of this study, it is emphasized that there was no separation between genders in the definition of lipid profile values. However, research carried out with 116 college students pointed out that women were the ones who most presented hypercholesterolemia, with occurrence of 27.5% against 19.1% in men, and concluded that the cardiovascular risk for these people was lower when compared to other results available in the literature.[13]

In this study, it was found that 65.8% of students had serum levels of triglycerides within the normal range, although the highest value identified was 311 mg/dL. In this context, it is worth noting that most participants consumed fried foods and mentioned carbohydrates as the predominant food group. These habits can increase serum levels of triglycerides, a situation considered a risk factor for developing new-onset coronary artery disease and for recurrent coronary events.[14]

There were no significant changes in blood pressure values, and the highest recorded value was 150x100 mmHg and the lowest, 90x60 mmHg. On the other hand, a cross-sectional study conducted with 270 academics, 14 teachers and 14 technical-administrative staff, linked to the undergraduate nursing course of a public university in the interior of Minas Gerais, demonstrated that 28.0% and 2,0% of the participants were in the condition of pre-hypertension and hypertension, respectively.[15] Still in this perspective, in a sample of 112 nursing and agronomy students, another study found the occurrence of pre-hypertension in 12.4% of participants and systemic arterial hypertension in stages 1 and 2 in 12.5%.[16]

By correlating different variables with the lipid profile, it was found that most students had a sedentary lifestyle combined with inadequate nutrition, with a significant association for the age group 21 to 24 years (p=0.0131), considering HDL cholesterol. Dialoguing with this result, research with academics from a public institution in São Luis, Maranhão, identified that, in the age group between 22 and 23 years old, for both genders, there

was a high percentage of biochemical markers, considering variables similar to those established in this study, characterizing the occurrence of cardiovascular risk factors.[17]

Thus, it is clear that an inadequate lifestyle constitutes a factor that favors the development of atherosclerotic disease and other conditions in the short, medium or long term.[18] Additionally, it is opportune to reiterate that certain conditions, such as excess body weight and/or other inadequacy, point to the need for correction and adherence to a balanced lifestyle, which includes nutritional education combined with the practice of physical activities.[6] However, as a positive finding of this research, considering the results of the lipid profile, it is worth noting that the participants had arithmetic means classified within the normal range.

For several students, the entry into higher education implies significant changes, which result from the new social relations woven in the university environment and the changes in routine, context in which differentiated lifestyle due to the new daily life makes the academic consumers of foods with inadequate nutritional properties and a group susceptible to the adoption of other unhealthy habits, which are related to the high prevalence of CNCD.[19] Thus, studies such as this are fundamental for academics to know their health profile and adopt corrective measures, whenever necessary.

Still regarding the correlation of variables with the lipid profile, there was a significant association between family history of disease(s) only with total cholesterol ($p=0.0472$) and LDL cholesterol ($p=0.0453$), showing that the lipid profile may be related to the illness, if not controlled and monitored. Dialoguing with this result, research carried out in Viçosa, Minas Gerais, showed that cases of dyslipidemia were identified mainly among individuals with excess weight, high waist circumference and aged between 40 and 59 years, reinforcing that this public is more predisposed to the involvement of cardiovascular diseases, such as atherosclerosis; metabolic diseases, such as diabetes mellitus; and for various clinical complications.[20]

In general, it is understood that the health status of the academics, inherent only to the variables analyzed, proved to be satisfactory, since changes in serum lipid levels were identified in a smaller portion of the sample and it cannot be concluded, with precision, that these changes were directly related to the lack or lack of physical activity or excessive carbohydrate intake. It should also be considered that the genetic predisposition influences the development of changes in serum cholesterol levels.[21]

However, it cannot be ignored that several risk factors have been identified, including a sedentary lifestyle and the consumption of fried foods, which can lead to future health problems if not controlled. In this sense, a study reflected on the fact that some people, even when obtaining a diagnosis possibly related to inappropriate habits, may not adhere to lifestyle changes and tend to seek professional help only when complications occur.[20]

In view of this, the improvement of public policies aimed at the prevention and control of NCDs, such as cardiovascular diseases, is a decisive measure to promote thequality of life of different human groups, among which nursing students stand out.[22]

CONCLUSION

This study identified that a small number of academics showed changes in lipid profile, blood pressure and BMI values. However, the set of other risk factors to which academics are exposed proved to be relevant, allowing to infer that this exposure can facilitate the development of cardiovascular diseases and other conditions associated with such factors, if not controlled. In this context, based on data analysis, it was possible to correlate the lipid profile with different variables.

As a limitation, we mention the recruitment of participants to carry out the study, a fact that resulted in a relatively small sample. This may have contributed to obtaining results with a wide range of normality, considering the investigated variables. Nevertheless, it is understood that the study has the potential to foster discussions on the subject and support the planning of health education actions to sensitize the academic community, especially academics of undergraduate courses in the area of health, about the need to implement changes in lifestyle that contribute to maintaining, strengthening or recovering satisfactory health conditions in the individual and collective spheres.

Thus, society and the competent administrative bodies should take a closer look at health promotion and illness prevention practices in higher education. Furthermore, it is important to emphasize that othereducational, care and/or managerial research that follows on from this, in order to cover a larger population of participants and intervene assertively in their daily lives, encouraging them to adopt a healthier lifestyle.

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