



BODY MASS INDEX ASSOCIATED WITH QUALITY OF LIFE OF STUDENTS OF THE FACULTY OF ECONOMICS AND ADMINISTRATION OF THE PONTIFICAL CATHOLIC OF SÃO PAULO

ÍNDICE DE MASSA CORPORAL ASSOCIADO A QUALIDADE DE VIDA DE ESTUDANTES DA FACULDADE DE ECONOMIA E ADMINISTRAÇÃO DA PONTIFÍCIA CATÓLICA DE SÃO PAULO

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Abstract: This work aims to identify how body mass index, eating habits and level of physical activity impact on academic productivity and quality of life of students from the Faculty of Economics, Administration, Accounting and Actuary of Pontifical Catholic University of São Paulo. Methodology: This is a cross-sectional study consisting of 75 students from the course of administration, the results were collected through a questionnaire which constituted questions regarding food, level of physical activity, life habits and

weight and height for the calculation of body mass index and with this, profiles were traced with the use of descriptive statistics. The theoretical discussion was based on books and scientific articles that relate the level of physical activity, stimulated by the university, habits such as smoking, alcohol consumption and food and outline how these issues affect productivity and quality life. The research problem was: How does BMI affect the quality of life of college students? The hypothesis is that the lack of physical activity and inadequate eating habits impair the quality of life of students. Final considerations: Quality of life is a subject discussed today, since we constantly seek to obtain good physical and mental health. Although BMI is the most widely used anthropometric indicator, it should not be used alone, but tracing with other indexes. The University plays an important role in the quality of life of students. Further studies should be carried out, such as the possibility of inserting full-time universities; and the need for young people to enter the labor market early, while still attending university and for this reason do not depose from a timely time to the practice of physical activities.

Keywords: Body Mass Index, quality of life, eating habits, physical activity, university students

Resumo: Este trabalho tem por objetivo identificar como o Índice de Massa Corporal, os hábitos alimentares e o nível de atividade física impactam na produtividade acadêmica e na qualidade de vida de alunos da Faculdade de Economia, Administração, Contabilidade e Atuária da Pontifícia Universidade Católica de São Paulo. Metodologia: Trata-se de um estudo transversal constituído por 75 alunos do curso de administração, os resultados foram coletados por meio de um questionário o qual constituía perguntas referentes à alimentação, nível de atividade física, hábitos de vida e alimentares, peso e altura para o cálculo do Índice de Massa Corporal e com isso, foram traçados perfis com a utilização da estatística descritiva. A discussão teórica foi embasada em livros e artigos científicos que relacionam o nível de atividade física, estímulo pela universidade, hábitos como tabagismo, etilismo e alimentares e traçam como essas questões afetam a produtividade e a qualidade vida. O problema de pesquisa foi: Como o IMC afeta a qualidade de vida dos estudantes universitários? A hipótese é que a falta de atividade física e hábitos alimentares inadequados prejudicam a qualidade de vida dos estudantes. Considerações finais: A qualidade de vida é um assunto discutido nos dias de hoje, visto que buscamos constantemente obter uma boa saúde física e mental. Embora o IMC ser o indicador antropométrico mais utilizado, não deve ser utilizado sozinho, e sim traçado com outros índices. A Universidade tem o papel importante na qualidade de vida dos alunos. Novos estudos devem ser realizados, como a possibilidade de inserção de universidades em período integral; e a necessidade dos jovens a ingressarem cedo no mercado de trabalho, enquanto ainda cursam a universidade e por esse motivo não despõem de tempo hábil para a prática de atividades físicas.

Palavras-chaves: Índice de Massa Corporal, qualidade de vida, hábitos alimentares, atividade física, universitários

Introduction

The expression quality of life was first employed by U.S. President Lyndon Johnson in 1964, declaring that "goals cannot be measured through the balance sheet of banks. They can only be measured through the quality of life they provide to people." Interest in concepts such as "standard of living" and "quality of life" was initially shared by social scientists, philosophers and politicians. Thus, the concern with the concept of "quality of life" refers to a movement within the human and biological sciences in order to value broader parameters than symptom control, decreased mortality or increased life expectancy. (WHOQOL Group, 1998)

After World War II, the expression was used in order to describe the acquisition of material goods, such as: home, car, investments, money, travel, among others. Subsequently, the concept was expanded with the purpose of measuring the economic development of a society, comparing different cities and regions through economic indicators, such as: gross domestic product (GDP) and income per Capita. He later measured social development, through health, housing education, transportation, among others. (KAWAKAME; MIYADAHIRA, 2205)

According to the World Health Organization (WHO) the definition of quality of life refers to "the individual perception of its position in life in the context of the culture and value systems in which it is inserted and in relation to its objectives, expectations, standards and concerns." (WHOQOL Group, 1997)

The search for an instrument that evaluated quality of life within a genuinely international perspective caused the World Health Organization to develop a multicenter collaborative project. The result of this project was the elaboration of THE WHOQOL-100, an instrument for assessing quality of life, composed of 100 items. (WHOQOL Group, 1997)

Determined by the World Health Organization is recommended as a practice of moderate and vigorous physical activity for adults a total of 150 minutes or more per week and preferably divided on all days of the week. (WHO, 2000)

Currently, the subject quality of life has been much discussed, having received increasing attention, not only from scientific literature, but also from advertising campaigns, in the media and political platforms. In addition to being considered as a powerful phrase in popular discourse, becoming even a cliché, it is also a source of interest in research from various specialized areas such as: Sociology, Medicine, Nursing, Psychology, Economics, Geography, Social History and Philosophy. (KAWAKAME; MIYADAHIRA, 2205)

It should be noted that, in social research, the first concepts of quality of life were confused with the idea of social indicator, since they were described by environmental and social factors such as air quality, socioeconomic and educational level, addressing objective aspects concerning the quality of life that can be measured. However, it was verified, later, that not only the presence of objective aspects meant well-being or happiness. (KAWAKAME; MIYADAHIRA, 2205)

It was then noticed the existence of subjective aspects that also permeate the quality of life, and the only ones that characterize it were not objective. Many researchers have been trying to identify subjective indicators related to quality of life in order to better describe this concept. These indicators refer to personal satisfaction in relation to the objective aspects of quality of life such as: income, employment, housing, physical function, among others. (KAWAKAME; MIYADAHIRA, 2205)

Following this line of reasoning, researchers say it is clear that the quality of life, as well as happiness, depends on the expectations and life plan of each individual. That way, what a good quality life is for one person may not be for another. The authors also point out that a good quality of life with a comfortable life from a material point of view is confused. (KAWAKAME; MIYADAHIRA, 2205)

This work aims to identify the quality of life of university students at FEA-PUC. Specifically, analyze the Body Mass Index (BMI) of students, analyze the eating habits of students and how they feed, analyze the development of diseases arising from inadequate feeding, identify the level of activity stimulated by the university, and identify how smoking and alcohol influence quality of life. So, the research problems and hypotheses are:

Problem 1: How does BMI affect the quality of life of college students?

Hypothesis 1: Lack of physical activity and eating habits impair students' quality of life.

Problem 2: Does smoking affect the frequency of physical activity?

Hypothesis 2: Smoking has an impact on students' physical activity.

Problem 3: Does the habit of drinking alcohol affect the frequency of physical activity?

Hypothesis 3 The habit of drinking alcohol affects the physical activity of students

Trace the level of physical activity, living and eating habits of university students from the Faculty of Economics, Administration, Accounting and Actuary of the Pontifical Catholic University of São Paulo and identify how important the Body Mass Index is, because may affect the academic productivity and quality of life of these students.

1. Body Mass Index (BMI)

Body mass index (BMI) is one of the most used anthropometric indicators in the identification of individuals at nutritional risk. This occurs due to its ease of application, its low cost and small intra or intermeter variation (PERISSINOTTO, 2002). Studies conducted in developed countries, with representative samples of adult individuals of both sexes, have shown that BMI correlates well with anthropometric indicators of non-visceral, abdominal or visceral fat, besides having a relationship with the total body fat mass (NAVARRO, 2000). According to Gardner (1996). Body image is an important component of the complex mechanism of personal identity and defines it as the mental figure we have of the measurements, contours and shape of our body; and the feelings concerning these characteristics and parts of our bodies.

Nutritional status expresses the degree by which physiological nutrient needs are being met. An assessment of nutritional status should be routine, as part of primary health care in order to prevent the development of various morbid conditions, as well as an important indicator in the establishment of educational and intervention activities. Body Mass Index (BMI) is the most commonly used measure in population group studies for primary

classification of nutritional status. Similarly, studies on body image perception measures have used BMI as an indicator of nutritional status by associating them as determining factors of conducts related to body weight. (KAKESHITA; ALMEIDA, 2006)

While some studies suggest that overweight people have greater dissatisfaction with body image, others show that even in those with adequate body mass, the prevalence of dissatisfaction is quite high, that is, the relationship between state dissatisfaction with body image remains unresolved. The studies that aimed to verify this relationship used only body mass index (BMI) as a measure of nutritional status. The most used explanation for these divergences in relation to nutritional status is that there seems to be an exaggerated concern with body aesthetics, and beauty patterns generally do not correspond to the patterns considered adequate for health.

However, it can be attributed as another possible cause the fact that BMI is not an accurate indicator of body adiposity. In this sense, it is necessary to verify the association between body image dissatisfaction and other nutritional status measures, such as the sum of skinfold thicknesses, which, in addition to maintaining practicality and low cost, reflects with better accuracy of individuals' body adiposity. The results showed that a large number of university students are dissatisfied with their own body image. In studies conducted in Brazil, the prevalence of body image dissatisfaction was similar to that of the present study, with prevalence of 82% in schoolchildren and 76% and 82% in physically active women and men, respectively. (COQUEIRO et al., 2008)

2. Level of Physical Activity and Stimulation by the University

The relationship between physical activity and diet with health has been studied for many years, and the results confirm that the practice of regular physical activity and a balanced diet act directly in the prevention of chronic noncommunicable diseases. (MARCONDELLI; COSTA; SCHMITZ, 2008)

The university period is a moment of great importance with regard to the health of the individual, because the need for insertion in a new environment and inclusion to a group, feeling of freedom and independence, in addition to the longer time spent on

academic activities may also provide greater exposure to an environment that favors unhealthy practices. Thus, lifestyle can undergo marked changes, leading to a decrease in the level of physical activity and increased exposure to health risk factors, such as smoking, consuming alcoholic beverages and eating in an unhealthy way. (GASPAROTTO, 2012)

According to some studies, we found health problems and risk factors acquired during the university period, may run for older ages. As well, the university environment can influence the level of physical activity of students, due to the extensive workloads with academic activities and the provision of extracurricular activities can hinder the practice of regular physical activities (GASPAROTTO, 2012).

The regular practice of physical activity and conceived as a fundamental component for the development of positive aspects related to health. In view of this, researchers from all over the world have shown concern about people's level of physical activity. (MINISTRY OF HEALTH, 2002)

Despite the documented benefits on regular physical activity in improving health and preventing chronic noncommunicable diseases, few adult individuals are physically active. Even if leisure-time physical activity has increased in recent years, it is estimated that the proportion of sedentary individuals or who do not comply with the minimum recommendation of 30 minutes of moderate intensity physical activity is estimated to be around 60% of the population (MARCONDELLI; COSTA; SCHMITZ, 2008).

In Brazil, a recent study by Monteiro et al evaluated the frequency of physical activity in the adult population, having found a low prevalence of leisure ly physical activity (namely 13.0%), and only 3.3% of the studied population accumulated 30 daily minutes of physical activity on five or more days of the week. Some factors influence the practice of physical activity; among them, they observed that physical inactivity is more prevalent in women, blacks and Hispanics, in people with lower education, located below the level of poverty and in retirees. Low levels of leisure-time physical activity have also been strongly associated with low socioeconomic status. Another factor that influences the practice of physical activity is age. The decline in physical activity occurs during adolescence (approximately 15 to 18 years

of age) and in young adults (20 to 25 years), when the tendency to obesity typically appears. The hypothesis for this fact would be a change in the lifestyle of young people, with greater independence in their choices. Therefore, it is important to study the new habits of this population to favor a better diagnosis and the direction of effective actions (MARCONDELLI; COSTA; SCHMITZ, 2008).

Have a low level of physical activity and a condition that is associated with the development of diseases such as: diabetes, myocardial infarction, coronary artery disease, cancer and obesity. And also one of the factors that contributes to raising mortality rates, increasing the risks of hospitalizations and psychosocial problems, resulting in high costs for public health in general. (PITANGA, 2005)

Study the level of physical activity of university students and important for the description of health-related aspects of this group and that can serve for the adoption of health strategies and programs at the university as a preventive measure for the adoption of life habits improve the quality of life in adulthood and old age. The University should serve to disseminate knowledge, culture and values, among which physical activities cannot be excluded. (FONTES; VIANNA, 2009)

3. Smoking and Alcoholism

Studies on the consumption of alcohol, tobacco and illicit drugs among university students have increased in recent years in an accelerated way, in an attempt to understand the characteristics of consumption and the profile of the population of interest, aiming to extrapolate data to the general population and improve existing prevention programs in higher education institutions (WAGNER; ANDRADE, 2008).

Smoking and alcohol consumption are widely studied aspects among university students. The feeling of the need for social inclusion and autonomy in decision-making, encouraged by the opportunities generated in living with other young people, could increase the frequency of these habits. Smoking, together with alcohol consumption, is part of the student's routine, due most of the time, due to exposure, related to frequent events promoted by students, to the feeling of need for inclusion

in the social environment in which. The proportions of cigarette consumption by university students are varied among studies conducted in different countries and regions of Brazil. Moran et al. (2004) verified tobacco consumption in a sample of 10,904 students at North American universities and showed that of these 2,736 were smokers. Among Brazilian students, the results indicate values from 7.1% to 23.1% of regular smokers (GASPAROTTO, 2012).

Sedentary lifestyle and smoking have high prevalence worldwide. Both are risk factors for increased morbidity and mortality, and increase health spending. Some studies report an association between sedentary lifestyle and smoking. Adolescent smokers have lower levels of physical activity, and physical activity in adolescence interferes in the beginning of smoking in this period and in its maintenance in adulthood. (RODRIGUES; CHEIK; MAYER, 2008)

Cross-sectional epidemiological studies have been the methodology of choice for the survey of drug use among elementary, high school and higher education students in Brazil. Information on drug use in a given population assists and defines the type of intervention that should be performed. For this to occur, there is a need for specific knowledge of the evolution of the use of certain substances in certain environments and how existing prevention programs. According to data published in the 2007 World Drug Report of the United Nations (UN) in Brazil, the increase in cocaine use, from 0.4% (in 2001) to 0.7% (in 2005), is considered an important data, as well as the increase in marijuana use. Marijuana was the illicit drug that had the largest increase in use in recent years, with its percentage of use increased from 1% in 2001 to 2.6% in 2005. The UN considers that this increase is a reflection of the ease of obtaining drugs in the country. Amphetamines also showed an increase in use among the Brazilian population, presenting prevalence rates similar to those in North America and Africa. (WAGNER; ANDRADE, 2008).

As consequences of drug use among university students, we can mention: automobile accidents, violence, risky sexual behavior, academic impairments, decreased perception and stress. In another study it was described that alcohol abuse among university students is related to the decrease in life expectancy of this population. According to the authors, this is because risk behaviors associated with alcohol and drug consumption can affect the global sense of well-being. Surveys

conducted among Swedish university students found that the average between the volume of drink consumed and the frequency of binge drinking episodes is associated with the occurrence of negative events and dissatisfaction with consumption habits students (WAGNER; ANDRADE, 2008).

Some literature data suggest that the graduation period may negatively influence alcohol and tobacco consumption, showing differences in the proportions presented between students with shorter course time compared to those closest to graduation, between areas of study and genders. Among the risk behaviors that the young university students assume when they enter the academic routine, smoking has great attention on the part of the researchers, due to the impact that this habit promotes to health in the medium and long term (GASPAROTTO, 2012).

As for violence, it is known that it is present in illicit drug users and alcohol users. Among university students, aggressive behavior is not identified only among dependents, it can also be found in occasional alcoholic beverage consumers. According to the data shown, 16.5% of the students have already fought for being under the influence of some psychoactive substance and 21% have already threatened people with firearms (WAGNER; ANDRADE, 2008).

Socio-environmental factors associated with smoking in university students, studies point to socioeconomic status, age, gender and graduation period, as predictive of this habit (GASPAROTTO, 2012). Cigarette smoking increases the risk of cancer mortality, cardiovascular disease, cerebrovascular diseases and chronic respiratory diseases. On the other hand, physical exercise is considered a protective factor against the onset of smoking habits and the reduction of smoking decreases the incidence of diseases. In addition to the possible associations between the genesis of smoking and sedentary lifestyle, regular practice of physical exercises can contribute to the abandonment of smoking habit. (RODRIGUES; CHEIK; MAYER, 2008)

Due to the environmental and sociocultural changes of recent decades and its role in the current picture of obesity production, it is relevant to know the determinants of nutritional status, the symbolic universe and subjective aspects that permeate the style of life and food behavior. The detection and knowledge of the magnitude of distortions in body image perception would constitute important data for

the clinical evaluation of subjects at risk for the development of obesity (KAKESHITA; ALMEIDA, 2006).

Brazil has been going through a period of nutritional transition, characterized by the drop in malnutrition rates and increased rates of overweight and obesity. This is due to the influence of industrialization and import of Western eating habits, which are marked by the high consumption of processed foods, low nutritional and high energy value to the detriment of the intake of fruits, vegetables, vegetables and whole grains (FEITOSA et al., 2010).

The increase in the consumption of ready-made industrialized foods, produced from refined flour and sugar, with high concentrations of saturated fat, in addition to the decrease in fruit and vegetable consumption, characterizes a situation to increase problems hypercholesterolemic, hypertriglyceridemia, increased blood pressure among other metabolic problems (GASPAROTTO, 2012).

The eating habits of university students are strongly influenced by factors such as university admission, because for some university life implies leaving the parents' home and living in student housing, due to the location of the institution ; the lack of time to perform complete meals because of the academic activities that influence the choice of food, in the replacement of complete meals with practical and fast snacks, with high caloric value; and the establishment of new behaviors and social relations. In relation to eating behavior in student housing demonstrates that most university students related poor nutrition to the fact that they did not have a company at mealtime. For students to make the main meals accompanied by the family could improve in the choice of healthy foods (FEITOSA et al., 2010).

For the young adult, the new routine of life of the one who joins the university can favor considerable changes in eating habits. Although universities make some meal available to students at popular prices, most of the food routine is the responsibility of the individual himself, a situation that can still be aggravated by the need to leave the family home, change of lack of knowledge in food preparation, which would lead to demand for fast meals and low nutritional value (GASPAROTTO, 2012).

In addition, states Gasparotto (2012), health problems related to obesity are themes widely studied today. Obesity is treated as an epidemic by the World Health

Organization (2007) and shows worrying proportions in both developed and developing countries as studies that show increased prevalence of health problems arising from excess body weight and suggest that when acquired in youth they can remain until older ages, leading to acute and chronic metabolic complications (GASPAROTTO, 2012).

In a study conducted by Feitosa et al. (2010), the inadequacy of university students' eating habits in relation to the consumption of fruits, vegetables and vegetables, regardless of gender, was found. The low consumption of fruits, vegetables and vegetables by the Brazilian population is a phenomenon that has been identified in the latest Family Budget Surveys (FBS) conducted by IBGE between 1987 and 2003. It is added among university students factors such as the lack of time to perform a healthier diet, resulting from the university routine, which leads to the realization of practical snacks of high energy density and few nutritious. The daily and varied consumption of such foods helps in the prevention of some nutritional deficiencies, decreases the risk of developing chronic non-communicable diseases, such as: diabetes, some types of cancer, cardiovascular diseases and obesity; in addition to making the body more resistant against infections.

4. Procedures and Methods

Cross-sectional study with a sample of students from the FEA administration course of PUCSP, the results will be collected through a questionnaire where they will answer about diet, level of physical activity, weight, height and eating habits.

This is a descriptive research where its objective was to describe the characteristics of the students of the management course of FEA-PUC-SP, taking into account the aspects of the formulation of the questions that guide the research, besides establishing a relationship between the variables proposed in the object of study under analysis. A data collection procedure was used through a questionnaire applied online with qualitative-quantitative approach.

A pre-test was performed with students in order to verify that the questionnaire was fit to understand the total sample. The results were analyzed and related to

bibliographic research to verify the quality of life of the students.

4.1. Population and Sample

The Faculty of Economics and Administration of the Pontifical Catholic University of São Paulo has 1,395 students enrolled in the management course in 2018 (population). These students represent the number of individuals with the chance to enter the sample in relation to which the inferences will be performed in this study.

The number of completed responses received by your survey is the size of your sample. It is called "sample" because it represents only part of the group of people (or population) whose opinions or behaviors are of interest to you. For example, one way to get a show is randomly ("random sample"), in which respondents are chosen completely by chance among the population as a whole (SURVEYMONKEY, 2018).

The sample size, that is, the proportion of events of interest/responses expected in the population studied, was defined by 70 students from the administration course to confidence level of 95% and accuracy of 5%. 75 responses (n=75) were obtained.

In the case of a literal citation or transcript, the cited page (WEBER, 1958, p.27) should also be included.

4.2. Questionnaire

A questionnaire was elaborated with seventeen closed dichotomous questions and multiple type choice in order to describe the profile of the students (sample) and an open question which refers to the research problem. The table below presents the questions and typology and their objectives.

Table 1- Questions, Typology and Objectives

Question	Objective	Type
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Genre	Identify the gender of students for data analysis	Female Male Other
Age group	Identify age group of students for BMI analysis	18 to 25 years old 26 to 30 years old 31 to 35 years old 36 to 40 years old 41 to 45 years old Over 46 years old
Semester	Identify the semester that the student attends to compare profiles	1° Semester 2° Semester 3° Semester 4° Semester 5° Semester 6° Semester 7° Semester 8° Semester 9° Semester
Time attended	Identify what time the student attends the university for comparison of profiles	Morning Night
Weight	Identify student weight for BMI calculation	Open answer
Height	Identify student height for BMI calculation	Open answer
Area in which you work	Identify whether the student works as an intern, operational or management in order to make a comparison between the areas	Trainee Operational (coworkers) Tactic (middle management) Strategic (top management) Unemployment
Frequency practicing physical activity	Identify weekly frequency of physical activity practice to analyze students' quality of life	1 to 2 times a week 3 to 4 times a week More than 4 times a week Don't practice
You have a smoking habit	Identify if the student has a smoking habit in order to identify the habit of life.	Yes No
You have a habit of drinking alcoholic beverages	Identify if the student has a habit of ingesting alcoholic beverages.	Yes No
What are eating habits	Profile of university feeding habits	Worries a lot about food quality Cares little about quality Do not worry
Where you usually eat meals	Identify if the student is customary to perform meals at home or on the street	Street (restaurants, diners) Home (or take away from home)
Diseases	Identify if the university has diseases arising from inadequate diet	Diabetes Cardiovascular Hormones No
Physical activity in the course	Identify whether the student would enroll if the course offered physical activity as a complementary activity	Yes No

Locomotion	Identify how the student moves to university	Car/motorcycle Public transportation Bike On foot
Athlete scholarship	Identify if the student is interested and would find it relevant if the university offered an athlete's scholarship	Yes No
BMI as an interference in quality of life	Identifying whether the university believes interferes with their productivity and quality of life	Open answer

5. Results and Discussion

The profile of the respondents (n=75) of the research has the following characteristic: Female (61.3%) 18 to 25 years (70.7%), in the 8th and 9th period (18.7%) and works in the trainee and senior management area (34.7%), as we can see in Table 2.

Table 2 - Respondents profile

Questions	Type	Quantity	%
Genre	Female	46	61,3%
	Male	29	38,7%
	Other	0	0%
Age group	18 to 25 years old	53	70,7%
	26 to 30 years old	18	24,0%
	31 to 35 years old	2	2,7%
	36 to 40 years old	0	0%
	41 to 45 years old	2	2,7%
	Over 46 years old	0	0%
Semester	1° Semester	6	8,0%
	2° Semester	2	2,7%
	3° Semester	9	12,0%
	4° Semester	1	1,3%
	5° Semester	7	9,3%
	6° Semester	6	8,0%
	7° Semester	16	21,3%
	8° Semester	14	18,7%
	9° Semester	14	18,7%
Area in which you work	Trainee	26	34,7%
	Operational (coworkers)	1	1,3%
	Tactic (middle management)	12	16,0%
	Strategic (top management)	26	34,7%
	Unemployment	10	13,3%

Source: Research data

On the issues related to eating habits and level of physical activity associated with the quality of life of students, we can observe that 48% do not often practice physical activities, that 85.3% do not have the habit of smoking, 60% are somewhat concerned with quality and/or their eating habits, that 57.3% perform their meals at home or take their meals from home, that 90.7% do not have diseases such as diabetes, cardiovascular or hyperthyroidism, and 78.7% of respondents stated that if physical activity was offered in the programmatic content of the course as a complementary activity, it would, according to Table 3.

Table 3 - Respondents' Activity Profile

Frequency practicing physical activity	1 to 2 times a week	19	25,3%
	3 to 4 times a week	14	18,7%
	More than 4 times a week	6	8,0%
	Don't practice	36	48,0%
You have a smoking habit	Yes	11	14,7%
	No	64	85,3%
You have a habit of drinking alcoholic beverages	Yes	38	50,7%
	No	37	49,3%
What are eating habits	Worries a lot about food quality	14	18,7%
	Cares little about quality	45	60,0%
	Do not worry	16	21,3%
Where you usually eat meals	Street (restaurants, diners)	32	42,7%
	Home (or take away from home)	43	57,3%
Has Diseases	Cardiovascular	2	2,7%
	Diabetes	1	1,3%
	Hormones	3	4,0%
	Respiratory	1	1,3%
	No	68	90,7%
Physical activity in the course	Yes	59	78,7%
	No	16	21,3%

Source: Research data

Regarding Body Mass Index (BMI), table 4 presents the individual weight and height data that make up BMI calculation.

Table 4 - BMI Calculation and Classification

Student	Genre	Weight	Height	BMI	Classification
1	Female	65	1,64	24,17	Healthy
2	Female	69	1,65	25,34	Overweight
3	Female	95	1,68	33,66	Grade I Obesity

4	Male	73	1,71	24,96	Healthy
5	Male	87	1,83	25,98	Overweight
6	Female	80	1,65	29,38	Overweight
7	Male	90	1,77	28,73	Overweight
8	Male	78	1,78	24,62	Healthy
9	Male	77	1,79	24,03	Healthy
10	Female	68	1,59	26,90	Overweight
11	Female	60	1,65	22,04	Healthy
12	Female	49	1,67	17,57	Light thinness
13	Female	65	1,76	20,98	Healthy
14	Female	75	1,66	27,22	Overweight
15	Female	56	1,53	23,92	Healthy
16	Female	48	1,58	19,23	Healthy
17	Male	63	1,75	20,57	Healthy
18	Female	80	1,81	24,42	Healthy
19	Female	47	1,5	20,89	Healthy
20	Female	55	1,59	21,76	Healthy
21	Female	61	1,64	22,68	Healthy
22	Female	75	1,51	32,89	Grade I Obesity
23	Male	79	1,75	25,80	Overweight
24	Male	64	1,7	22,15	Healthy
25	Female	54	1,58	21,63	Healthy
26	Female	59	1,62	22,48	Healthy
27	Female	90	1,6	35,16	Grade II Obesity
28	Female	59	1,64	21,94	Healthy
29	Female	48	1,66	17,42	Light thinness
30	Male	84	1,85	24,54	Healthy
31	Female	55	1,6	21,48	Healthy
32	Female	51	1,56	20,96	Healthy
33	Female	61	1,66	22,14	Healthy
34	Female	62	1,68	21,97	Healthy
35	Female	62	1,67	22,23	Healthy
36	Male	89	1,79	27,78	Overweight
37	Female	85	1,67	30,48	Grade I Obesity
38	Male	65	1,7	22,49	Healthy
39	Male	70	1,74	23,12	Healthy
40	Female	60	1,7	20,76	Healthy
41	Female	60	1,59	23,73	Healthy
42	Female	61	1,62	23,24	Healthy
43	Male	76	1,81	23,20	Healthy
44	Female	54	1,73	18,04	Light thinness
45	Female	60	1,65	22,04	Healthy
46	Male	80	1,7	27,68	Overweight

47	Male	90	1,8	27,78	Overweight
48	Female	54	1,64	20,08	Healthy
49	Female	87	1,6	33,98	Grade I Obesity
50	Female	57	1,65	20,94	Healthy
51	Male	62	1,71	21,20	Healthy
52	Male	80	1,83	23,89	Healthy
53	Male	83	1,83	24,78	Healthy
54	Female	99	1,71	33,86	Grade I Obesity
55	Female	84	1,66	30,48	Grade I Obesity
56	Male	67	1,81	20,45	Healthy
57	Male	56	1,82	16,91	Moderate thinness
58	Female	57	1,66	20,69	Healthy
59	Female	64	1,62	24,39	Healthy
60	Female	57	1,63	21,45	Healthy
61	Male	69	1,7	23,88	Healthy
62	Male	64	1,76	20,66	Healthy
63	Female	70	1,5	31,11	Grade I Obesity
64	Female	68	1,58	27,24	Overweight
65	Female	67	1,67	24,02	Healthy
66	Male	115	1,83	34,34	Grade I Obesity
67	Male	107	1,76	34,54	Grade I Obesity
68	Male	120	1,9	33,24	Grade I Obesity
69	Male	74	1,7	25,61	Overweight
70	Female	47	1,56	19,31	Healthy
71	Male	74	1,77	23,62	Healthy
72	Male	75	1,73	25,06	Overweight
73	Male	85	1,75	27,76	Overweight
74	Female	70	1,66	25,40	Overweight
75	Female	70	1,67	25,10	Overweight

Source: Research data

Concerning body mass index (BMI) by gender, age group and work area, table 5 presented the grouped BMI classification according to "Severe Thinness" (St); "Moderate thinness" (Mt); "Light thinness" (Lt); "Healthy" (He); "Overweight" (Ov); "Grade I Obesity" (GO-I); "Grade II Obesity" (GO-II); and "Obesity grade III" (GO-III). We can observe that in relation to gender 60% of women are healthy against 55.2% of men. Regarding the age group, 39.4% of the students between 18 and 25 years are healthy, and 22.4% of the operational employees are healthy.

The results presented above demonstrate quality of life problems of students when we observed that 55.8% do not practice physical activities, 41.9% have the

habit of drinking alcohol, 25.6% do not care about the eating habits.

Table 5 - Classification (BMI) by Gender, Age and Work area

Variáveis	Classificação (IMC)							
	St	Mt	Lt	Sd	He	GO-I	GO-II	GO-III
Genre								
Female	0,0%	0,0%	6,5%	60,9%	15,2%	15,2%	2,2%	0,0%
Male	0,0%	3,4%	0,0%	55,2%	31,0%	10,3%	0,0%	0,0%
Age group								
18 to 25 years old	0,0%	1,1%	2,9%	39,4%	14,7%	9,7%	0,0%	0,0%
26 to 30 years old	0,0%	0,0%	0,0%	11,3%	6,2%	8,1%	1,7%	0,0%
31 to 35 years old	0,0%	0,0%	0,0%	2,3%	0,0%	0,0%	0,0%	0,0%
41 to 45 years old	0,0%	0,0%	0,0%	0,0%	2,8%	0,0%	0,0%	0,0%
Over 46 years old	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
Area in which you work								
Trainee	0,0%	0,0%	2,0%	11,4%	11,9%	10,0%	1,7%	0,0%
Strategic (top management)	0,0%	0,0%	0,0%	1,4%	0,0%	0,0%	0,0%	0,0%
Unemployment	0,0%	1,1%	0,9%	10,7%	1,4%	0,0%	0,0%	0,0%
Operational (coworkers)	0,0%	0,0%	0,0%	22,4%	8,7%	1,3%	0,0%	0,0%
Tactic (middle management)	0,0%	0,0%	0,0%	7,0%	1,6%	6,5%	0,0%	0,0%

n=75, St= Severe Thinness, Mt= Moderate thinness, Lt= Light thinness, He=Healthy,
 Ov= Overweight, GO-I= Grade I Obesity, GO-II= Grade II Obesity, GO-III= Grade III Obesity
 Source: Research data

When asked by the student if he believes that BMI interferes with their productivity and quality of life (Table 6), 64% of students believe so, but analyses of their habits indicate that students have information about health problems related to overweight, but continue to have harmful habits to health and quality of life.

Table 6 - BMI as an interference in quality of life

Resposta	Quantidade	%
Yes	48	64,0%
No	24	32,0%
I never thought about it	1	1,3%
Maybe	1	1,3%
I don't know	1	1,3%

Below, we describe some lines of students who highlighted the "yes" as an answer:

Yes. Healthy habits such as practicing physical activity regularly, having a balanced diet and even a quality sleep are linked to the level of academic and professional productivity (Respondent 5).

I believe so. I'm a former sedentary and had a BMI over 30 a few years ago, when I felt extremely tired and had difficulty concentrating. Today I feel much more alive, more active and able to have good income in all fields of life. Another thing I noticed, speaking of a physical process itself, is the ability to formulate thoughts in stressful situations. When I did presentations before, anything out of schedule took away my concentration and it was common for me to get lost in the subject. Today I do not experience these things anymore and I can respond calmly to external stimuli (Respondent 6).

Surely, because the individual's performance depends on what he consumes, and whether he feeds badly or doesn't eat very well drops his productivity because it triggers other diseases and can affect (Respondent 11).

Yes, I believe a lot in the direct relationship, but unfortunately today young people do not have so much time to play sports, even more if they live too far from college, as is my case. Two hours on the way could be meant to maintain a higher quality of life, but this is not possible (Respondent 26).

Yes, he who measures our classification of Severe Thinness or Obesity this implies a lot in our way of living as our self-esteem and even in the apparitions of diseases such as diabetes and cardiovascular diseases (respondent 67).

From the statements of students who highlighted the "no" as an answer, we select below the most important:

No, I don't like to associate this form of measurement with my well-being, because it limits the weight and height ratio, and the weight is not necessarily associated with poor quality of life (Respondent 7).

Not necessarily, I believe that this index points more to the state of health and what to do to improve. Academic productivity is influenced by other factors, which are not just about BMI (Respondent 41).

No, BMI is a WELL outdated and inaccurate method to "measure" or classify a person's health. I believe that a healthy diet, practices of exercises, hours of adequate sleep totally interferes in quality of life and academic productivity (Respondent 45).

According to research conducted by the Faculty of Economics and Administration of the University of São Paulo, undergraduate students in Administration have increasingly worried about complementing academic training and acquiring professional experience. (CASTRO et al., 2007)

Since in the present study, 34.7% of students work in the area as interns. According to Barros and France (2004), the internship was also seen as a gateway to the labor market, from the point of view of companies, the admission of trainees is valued because it is a means of investment in new talents, renew the team and acquire new knowledge.

Albuquerque and France (1998) consider that society lives new paradigms of ways of life inside and outside the company, generating, consequently, new values and demands for Quality of Life at Work, for authors, the field of health contributes to the study of the QOL, a since in this area, it has sought to preserve the physical, mental and social integrity of the human being and not only the control of diseases, generating biomedical advances and greater life expectancy.

Of the many challenges that present themselves to the business world today, two are fundamental, the first is related to the need for a healthy workforce, motivated and prepared for the extreme competition currently existing. The second challenge is the ability of the company to respond to the demand of its employees in relation to a better quality of life. (SILVA; MARCHI, 1997)

Overweight/obesity data in the Brazilian population show a growth in its prevalence between the 1970s and 1990s. Obesity can be defined, in a simplified way, as a disease characterized by excessive accumulation of body fat, being a consequence of positive energy balance and which causes repercussions to health with significant loss not only on quality but also in the amount of life. (WHO, 2000)

The reduction in the level of physical activity and its relationship with the rise in the prevalence of obesity refers to changes in the distribution of occupations by sectors (e.g., from agriculture to industry) and in work processes with reduced physical exertion occupational; changes in leisure activities, which go from activities of marked expenditure, such as sports practices, to long hours in front of television or computer; and the increasing use of household equipment with reduced energy expenditure of the activity, such as washing with machines rather than doing so manually. Data on the characteristics of physical activity of the population are even scarcer than on food consumption, since there is no

national population-based study that investigated the level of physical activity. (MENDONÇA; ANGELS, 2003)

In addition, cardiovascular diseases (CVD) are a serious public health problem in Brazil and in the world, being the main cause of death worldwide, accounting for approximately 15 million deaths each year and represent the highest costs in health care according to the World Health Organization (WHO, 2000). The increase in CVD in developing countries may result from three factors: decreased mortality from infectious-parasitic causes; with a progressive increase in life expectancy; socioeconomic changes and lifestyle associated with urbanization, leading to higher levels of risk factors for CVD; and special susceptibility of certain populations (because of specific genes), leading to greater impact on clinical events when compared to populations in developed Western regions. (GUIMARÃES, 2002)

An extremely worrying fact is the high rates of sedentary lifestyle and overweight in the population, especially in children and adolescents who feed too much and inadequately, are exposed to smoking seduction, make excessive use of the media and internet, among other forms of electronic activity, thus stimulating physical inactivity and acquiring possible risk factors for cardiovascular diseases. (GUIMARÃES, 2002)

According to Correia, Cavalcante and Santos (2010), an incentive to carry out preventive measures to verify blood pressure is necessary to reduce these statistics in relation to the consequences generated by the high levels blood pressure. Sedentary lifestyle is also one of the main risk factors for CVD, being one of the enemies of public health in the world, compromising between 50% and 80% of the world's population. Sedentary lifestyle was found in 44.44% of the interviewees; however, only 2.22% demonstrated pressure levels compatible with hypertension. (BELT; CAVALCANTE; SANTOS, 2010)

A study conducted with individuals of high and low BMI demonstrated that intra-abdominal fat influences metabolism, different from peripheral subcutaneous fat, so the distribution of fat is a more important factor in metabolic alterations than the BMI. In this same study it can be proven that individuals who have high concentrations of intra-abdominal fat, although with low BMI, are the most likely to develop MS, hence the importance of playing sports. (ROCHA et al., 2010)

It is impossible to deny the contribution of academic sport to the approximation of the human being, of their relationship; encouraging collectivism, those spirits encouraging the formation of new leaders. (ATLAS OF SPORT IN BRAZIL, 2006)

Modern sport, with its current structural organization, categories and standardization of rules is closely linked to the university. In fact, he was born in English universities and public schools in the 19th century, where popular practices were systematized for better control of the free time of adolescents from the ruling and ascending classes (ELIAS, 1992; FOUCAULT, 2007).

Collective sports games have manifested significantly on the national scene, and it is up to the Brazilian Confederation of University Sport (CBDU) to organize national competitions and represent Brazil with the International Federation of University Sport, FISU. (CBDU et al., 2018)

6. Final Considerations

Quality of life is a subject increasingly discussed today, since young adults, adults and the elderly constantly seek to obtain good physical and mental health, worrying about healthy habits. We cannot fail to emphasize that physical activity and healthy eating are factors that directly relate to quality of life, since they act directly in the prevention of chronic non-communicable diseases.

As identified in the research, most students believe that BMI interferes with their productivity and quality of life, although in the analysis of their habits, health problems related to overweight and unhealthy habits such as inadequate diet, alcohol consumption and smoking

Since the body mass index (BMI) is one of the most used anthropometric indicators in the identification of individuals at nutritional risk, we identified based on other studies that should not be used alone, the most appropriate would be their study outlined with other indices, such as abdominal circumference analysis and anthropometric measurements, which in the present study was not possible because it is a more invasive examination and the need for devices, such as addometer.

The University has the important role as a promoter of policies and planned actions against student sedentary lifestyle. In addition, most students stated that if physical activity was offered in the programmatic content of the course as a complementary activity, it would carry out

To unveil the possibilities of sport and leisure in the university, understand

these manifestations beyond compensatory activities, reflect on issues related to body practices, sport and leisure as elements for the improvement of quality of life and productivity of the student, in addition to the inter and intrapersonal relationships in the university environment is still a great challenge.

The present study found limitations regarding the number of students who answered the questionnaire, once they were referred only to students of the course of administration of the Faculty of Economics and Administration of the Pontifical Catholic University of São Paul, the other students do not agree to receive e-mail with such a request other than the course itself. Another reason would be the student's willingness to answer this questionnaire during the period in which he was referred.

Further studies should be conducted in order to complement this research, such as the possibility of insertion of full-time universities, we have as examples great American world athletes, who were inserted and always encouraged to sport in the period of their training, from the school phase to the university. Another study that would add this research would be the need for young people to enter the labor market early, while still attending university and for this reason they do not dispose from a timely time to practice physical activities.

The movement of relationship of the tripod body, soul and mind arose in the 1970s us, but in recent years more strength, interest and concern of people in obtaining the balance between the body, the support to live provided through its vital systems; the mind, associated with intellect and psyche; and finally, the soul, the essence of every human being, the inner world.

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