

# Physical activities practicing among scholar professors: focus on their quality of life

*Prática de atividade física em docentes do ensino superior: foco na qualidade de vida*

*La práctica de actividades física realizada por los docentes de la enseñanza universitaria: Enfoque en la calidad de vida*

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## ABSTRACT

**Objective:** To investigate the practice of physical activity among scholar professors focusing on their quality of life. **Methods:** A cross-sectional study was carried out with 121 professors at one of the campuses of a state university in the State of Paraná, using a questionnaire created by Baecke and adapted for the study. **Results:** The analyzed group presented a level of inadequate physical activity of 54.4%, with mean body mass of 26.20, considered overweight. **Conclusion:** The study indicated that professors do not practice physical activity at the level recommended by the World Health Organization; therefore, they are, for the most part, sedentary and have complaints of anxiety. It is advisable to carry out actions aimed at the health of the professors, directed to the modification in the lifestyle, with regular practice of physical activities and balanced diet, for the improvement of the quality of life.

**Keywords:** Physical activity; Professors; Worker's health; Overweight.

## RESUMO

**Objetivo:** Investigar a prática de atividade física em docentes universitários com foco na qualidade de vida. **Métodos:** Estudo transversal, realizado com 121 docentes, em um dos *campi* de uma universidade estadual do Estado do Paraná, utilizando questionário criado por Baecke e adaptado para o estudo. **Resultados:** O grupo analisado apresentou nível de atividade física inadequado de 54,4%, com média de massa corporal 26,20, considerado sobrepeso. **Conclusão:** O estudo indicou que os docentes não praticam atividade física no nível preconizado pela Organização Mundial de Saúde, são, em sua maioria, sedentários e tem queixas de ansiedade. Aconselha-se a realização de ações visando à saúde dos docentes, direcionadas à modificação no estilo de vida, com prática regular de atividades físicas e dieta balanceada, para a melhoria da qualidade de vida.

**Palavras-chave:** Atividade física; Docentes; Saúde do trabalhador; Sobrepeso.

## RESUMEN

**Objetivo:** Investigar la práctica de actividad física realizada por los docentes universitarios enfocando la calidad de vida. **Métodos:** Estudio transversal, realizado con 121 docentes, en uno de los *campus* de una universidad estadual del Estado de Paraná, en el que se utilizó un cuestionario creado por Baecke, adaptado para el estudio. **Resultados:** El grupo analizado presentó un nivel de actividad física inadecuado de 54,4%, con media de masa corporal 26,20, lo que es considerado como sobrepeso. **Conclusión:** El estudio indicó que los docentes no practican actividad física a nivel de lo preconizado por la Organización Mundial de la Salud, siendo mayoritariamente sedentarios y presentando quejas de ansiedad. Se aconseja la realización de acciones direccionadas a la salud de los docentes, para que modifiquen su estilo de vida, con la realización de actividades físicas regulares y una dieta balanceada, para así mejorar la calidad de vida.

**Palabras clave:** Actividad física; Docentes; Salud del trabajador; Sobrepeso.

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## INTRODUCTION

Physical activity, understood as any body movement produced by the skeletal muscles resulting in energy expenditure higher than rest,<sup>1</sup> encompasses activities in various contexts, such as leisure, transportation, domestic tasks and work.<sup>2</sup>

Physical inactivity is one of the main determinants of chronic non-communicable diseases, causing one in ten deaths worldwide.<sup>3</sup> In the context of disease prevention, physical activity plays a major role in the prevention of Metabolic Syndrome (MS), which is characterized by the presence of at least three of the following risk factors: abdominal adipose, hypertriglyceridemia and low concentration of high density lipoprotein (HDL-C), elevated triglycerides, high blood pressure and elevated glucose.<sup>4,5</sup>

The World Health Organization (WHO) establishes as ideal for adults the practice of at least 150 minutes per week of moderate physical activity (PA) or 75 minutes per week of vigorous PA, in sessions of at least 10 minutes duration, without determination of weekly frequency.<sup>6</sup> In a study carried out in Minas Gerais, physical activity was classified as follows: ideal, if practiced, at least 150 minutes/week; between 1 and 149 minutes per week; and poor if there is no moderate or vigorous physical activity.<sup>6,7</sup>

Data reveal that 17% of the world population is considered physically inactive and 60% do not correspond to the minimum of advisable physical activity.<sup>8,9</sup> Sedentary life affects approximately 70% of the world population, being considered by WHO the main responsible for 2,000,000 deaths per year worldwide and for 75% of deaths in the Americas.<sup>8</sup>

It is worth noting that the high levels of physical inactivity are associated with the contemporary style of life of the people, having as determinants the obligations and needs related to work, use of motorized transportation and preference for leisure activities related to electrical and electronic equipment such as television, computers and video games.<sup>10</sup> It is also observed that the work areas related to safety and education, in which professors are inserted, are the most affected and most present behaviors that can be detrimental to health.<sup>5,10</sup>

The influence of working conditions on workers' health occurs due to inadequate behaviors that can be caused by the labor universe, with sedentarism being one of the recurring problems among several professionals, and among them the professors, due to their long stressful daily activities, associated with lack of regular physical activity during leisure time.<sup>11</sup>

Studies show that lack of physical activity is also directly associated with high rates of overweight in higher education professors, and is accentuated by inadequate eating habits, alcohol use and high levels of stress.<sup>12,13</sup> Work and study commitments are among the main barriers to the practice of physical activities among professors.<sup>13</sup>

Overloading and inadequate working conditions, coupled with pressure to achieve productivity goals, result in high levels of stress and lack of regular physical activity.<sup>14,15</sup>

Considering the relevance of the practice of physical activity for the welfare and quality of life of teaching professionals, the present study was delineated through the following research question: "Do you practice physical activity with the objective of improving your quality of life?" Finding the key in question may provide significant data for the construction of intervention programs with the teaching staff of the higher education institution. Therefore, the objective of the present study was to investigate the practice of physical activities of university professors focusing on quality of life.

## METHODS

This is a transversal research using quantitative approach, developed in one of the seven campuses of a public university in the state of Paraná. The institution has a total of 68 undergraduate courses, of which 38 are bachelor's degrees and 30 are bachelor's degrees. The general teaching staff consists of 686 professionals, distributed in the various campuses. The campus that will be the focus of this research covers 11 courses, distributed in the morning, afternoon and evening shifts that are served by 177 professors.

The sample consisted of 121 professors, who make up the centers of human sciences and education, applied social sciences and health sciences, which, for the most part, have an exclusive work regime. The inclusion criterion used was to be a full-time professor during the period of data collection, and the exclusion criterion was to be on leave of any type or absent due to qualification processes. The sample was determined by means of a sample calculation, which considered the number of the total population ( $n = 177$ ), the unknown prevalence of physical inactivity of the population (50%), confidence level equal to 95% and sample error of 5%. 10% of this value was added to the sample, providing for eventual losses and refusals, totaling 133 professors.

The instrument selected for data collection was the 'Brief Questionnaire for Measuring Standard Physical Activity in Epidemiological Studies', created by Baecke Burema and Frijters, adapted for the present study.<sup>16</sup>

The Baecke questionnaire is composed of 16 questions that cover three scores of Habitual Physical Activity (HPA) of the last 12 months: 1) occupational physical activity score, with eight questions; 2) physical exercise in leisure time score (PEL), with four questions; 3) leisure and locomotion physical activity score (LLA), with four questions.

In the present study, the questions of the occupational physical activity scores and the questions of physical activities of leisure and locomotion were used, as well as the records of the anthropometric indices of height and weight of the professors, which were used to calculate the Body Mass Index (BMI).

Data collection was performed between May and July of 2016, at the institution's premises. The researcher was present at the institution for three days a week, alternating between the morning, afternoon and evening shifts, to fill out the questionnaire by the professors. The approach of the professors was done in the nursing laboratory, in the corridors of the institution and also in the collegiate classrooms.

The questionnaire was given to the professors after being accepted to collaborate with the research, demonstrated from the signing of the Informed Consent Term. The time required to complete the questionnaire ranged from 10 to 15 minutes for each professor, making the researcher available until the completion of the questionnaire, to resolve doubts, when necessary.

The data collected were stored in an Excel 2010 worksheet and the analysis was performed by means of descriptive statistics with mean values and standard deviation for the continuous variables and by absolute and relative frequencies for the categorical variables. Analyzes were carried out by means of the Statistical Package for Social Science (SPSS), version 20.0.

The research complied with the requirements of Resolution No. 466/2012 of the National Health Council, and was approved by the Committee of Ethics in Research with Human Beings of the State University of Maringá, under the opinion nº 1,625,229. This research is part of the Worker's Health Program, which is being developed at the institution of higher education.

## RESULTS AND DISCUSSION

The sample was composed of 121 faculty members at the university. Of the participants, 55 (45.5%) were male and 66 (54.5%) were female, ranging in age from 20 to 67 years, with a mean age of 44.4 years (Table 1).

It is noticed that the increase in the number of women in the labor market portrays a fact considered irreversible, and women professors sometimes accumulate more than one working shift: as health and/or educational professionals and as housewives.

**Table 1.** Sociodemographic and economic profile of the servers of a higher education institution in the countryside of Paraná - PR, 2016.

Variable	N	%
<b>Sex (n = 121)</b>		
Female	66	54.5%
Male	55	45.5%
<b>Schooling (n = 121)</b>		
Graduation	6	4.5
Specialization	21	16.4
Masters	46	34.3
Doctorate	43	32.1
Post doctoral	5	3.7

This unfavorable situation reflects on their health, which can trigger a stress process, in addition to other health problems.<sup>17</sup>

Regarding the anthropometric data, the average weight of the professors was 72.57 kg and the average height was 168.28 cm. In relation to the number of days per week in which they practice physical activity, an average of 2.37 was presented (Table 2). The standard deviation of the group considered adequate for the body mass index has a mass of (14.60), height (9.68), BMI (3.99) and days of the week of Physical Activity (60). When compared to the inadequate, the mean of the inadequate group was (74.83), height (167.86), BMI (26.20) and days of the week of Physical Activity (2.81). The standard deviation of the inadequate group for the mass was (15.36), the stature of (8.74), the BMI (4.29) and days of the week of Physical Activity (2.01).

In this study, the BMI result showed certain equivalence between professors classified as eutrophic (46.8%) and overweight (36.9%), and the minority (16.2%) presented obesity (Table 2). It should be noted that the average number of days of the week that professors practiced physical activity did not exceed 3 (minimum of 2.37 and maximum 2.81 days).

Thus, insufficient levels of physical activity have been related to the excessive accumulation of body fat, negative modifications in the profile of blood lipids and high blood pressure levels.<sup>18</sup> It is noteworthy that most of the professors surveyed (53.1%) presented overweight and obesity, which may represent a predominance of a risk profile for metabolic and cardiovascular diseases (Table 3). It is known that the practice of regular physical activity is a fundamental part for the precaution of several health problems, for its biopsychosocial benefits and besides being indispensable for full motor development.<sup>19</sup>

Overweight is related to inadequate eating habits and lack of physical activity, which can lead to an increase in blood pressure levels and lead to high levels of stress. It is believed that the risk of stroke is doubled in stressed workers and that 32.5% of myocardial infarctions are influenced by psychosocial aspects, including stress and anxiety.<sup>18,19</sup>

Quality of life at work (QWL) is related to stress concerns and ways of avoiding it, seeking work satisfaction and fulfillment, as well as preserving mental health in the work environment.<sup>20</sup>

Thus, it is observed that the maintenance of healthy habits, such as the practice of physical activity, constitutes one of the attitudes that can contribute to an improvement in the quality of life of individuals, as well as in the prevention of diseases such as obesity and stress, promoting individuals' health.<sup>20</sup>

Corporal practices, physical activity, physical exercises and sport practice are linked to the improvement of the quality of life. However, there is no conceptual clarity or even an exact pathway to such practices and their relationship to quality of life.<sup>21</sup>

When assessing the level of physical activity based on the weekly frequency with which this activity is performed, the results showed that 45.6% were classified with an adequate level and 54.4% inadequate (Table 4).

**Table 2.** Distribution of the mean body mass index of the professors of a higher institution of higher education in the state of Paraná - PR, 2016

Variable		Mass	Stature	BMI	Physical activity*
Adequate	Mean	72.57	168.28	25.59	2.37
	N	49	50	48	52
	Standard deviation	14.60	9.68	3.99	.60
Inadequate	Mean	74.83	167.86	26.20	2.81
	N	60	57	57	62
	Standard deviation	15.36	8.74	4.29	2.01
Total	Mean	73.82	168.06	25.92	2.61
	N	109	107	105	114
	Standard deviation	14.99	9.15	4.15	1.54

\* Weekdays frequency.

**Table 3.** Body mass index in professors of a higher education institution in the state of Paraná - PR, 2016

Variable	N	%	
Valid	Eutrophic	52	46.8
	Overweight	41	36.9
	Obesity	18	16.2
	Total	111	100.0

**Table 4.** Classification of the level of physical activity among the professors of a higher education institution in the state of Paraná - PR, 2016

Variable	N	%	
Valid	Adequate	52	45.6
	Inadequate	62	54.4
	Total	114*	100.0

\* The difference in n is that some professors do not answer this question.

The practice of physical activity is considered one of the main factors for a healthy life, and its absence is consequently seen as a risk factor for the health of the population, accounting for 6% of global mortality.<sup>21</sup> The incorporation of an active lifestyle is a very important condition for the preservation/maintenance of health status.

A study carried out in Santa Catarina with physical education professors showed that, in the overall lifestyle, professors had positive values ranging from 41.6% to 84.8% in the investigated dimensions, highlighting the active lifestyle, with 57.6%, which was evaluated in the study as a positive behavior in terms of quality of life.<sup>19,20</sup>

The research conducted in southern Brazil, where 46.5% of professors did not perform programmed physical activity, justified by lack of time, double working hours and socioeconomic issues corroborates these findings.<sup>21,22</sup> It is worth noting that lack of

physical activity predisposes these professionals to muscular weakness, possibility of muscular fatigue and difficulty to endure the long hours of weekly work, with predisposition to work away from work due to occupational diseases.

Among the causes of absenteeism are the psychobiological disorders, for they negatively influence professors' working capacity and, consequently, students' learning. This situation is in contrast to an intense work pace, which requires high levels of attention and concentration, necessary for the good performance of teaching activities.<sup>22,23</sup>

In a study with professors, physical inactivity was prevalent in 79.7% of the professors, who were linked to the variables: female individuals, older and with lower socioeconomic status.<sup>23</sup> The level of physical activity in professors of upper public state education oscillates according to the age of each professor. The predominance of insufficient levels of physical activity was 46.3% in professors, with a predisposition to decrease physical activity with increasing age.<sup>23</sup>

Physical inactivity is a major public health problem, and 70% of the adult population does not reach the minimum levels of physical activity recommended by the WHO, which contributes to the increase of morbidity and mortality associated with cardiovascular diseases.<sup>24</sup>

A contemporary report on the global burden of disease has shown that factors such as inadequate diet, hypertension, high BMI, smoking, high fasting glucose and inactivity, in this order of importance, are of the highest magnitude for the cause of death and for the years of life adjusted due to disability in the Brazilian population.<sup>25</sup>

These results may help in the recognition that healthy habits remain precarious among the population, even among the most enlightened individuals. Thus, public health policies should prioritize actions for health promotion and disease prevention.

The present study presents as a limitation the fact that it was developed only with the professors of one of the campuses of

the institution, as well as the lack of policies aimed at physical activities and their respective applicability in the daily life of the educational institution.

The result of this research provides information that can trigger a planning and direction of actions to the university professors, guaranteeing the possibility of greater adhesion and incentive to practice physical activities as a way of improving the health and quality of life of the teaching staff. Therefore, it is necessary to carry out the research in the other campuses of the university, in order to detect the quality of life of professors and develop strategies throughout the university.

## CONCLUSIONS

The study showed that the large number of professors presented physical activity at levels inadequate to have a good quality of life, and more than half of the professors are at risk, such as overweight and/or obesity. In this way, intervention mechanisms must be thought early, aiming at the continuous health of professors. The first attitude to be taken concerns strategies that seek a lifestyle change centered on regular physical activity and a balanced diet.

In this perspective, the incentive of the practice of physical activity for professors should be stimulated through programs that offer a routine of physical activities and a balanced diet in the work place, besides the awareness in terms of the reduction of the time spent in hypokinetic activities, such as watching television and using computer for long periods of time.

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