

## Physical activity, psychological well-being, and physiological variables in university administrative staff

### Actividad física, bienestar psicológico y variables fisiológicas en personal administrativo universitario

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**Abstract.** Objective: To describe and analyze the physical activity, psychological well-being, and physiological variables of employees in a higher education institution in Colombia. Methods: A total of 90 participants were included, divided into 2 groups: women (n=45) and men (n=45). Validated instruments were used to measure levels of physical activity (IPAQ-SF), psychological well-being (PGWBI), and other measurement instruments for physiological variables. Results: The main findings reported correlations between systolic and diastolic hypertension with certain dimensions of psychological well-being and body composition variables, with the highest trend of hypertension being more commonly found in men over 41 years of age than in women. Univariate and multivariate comparison tests did not find significant differences between the study factors (gender, physical activity, PGWBIS, etc.). Conclusions: Men have a higher predisposition to hypertension, and we assert that men have significantly higher averages of hypertension in both systolic and diastolic levels. The association between gender and systolic hypertension also showed a greater tendency in men. Future studies are needed to explore the causal relationship between psychological dimensions and morphophysiological variables in individuals who work daily at university centers, such as office or administrative staff.

**Keywords:** lifestyle, psychological dimensions, body state.

**Resumen.** Objetivo: Describir y analizar la actividad física, el bienestar psicológico y las variables fisiológicas de los empleados de una institución de educación superior en Colombia. Métodos: Se incluyeron un total de 90 participantes divididos en 2 grupos: mujeres (n=45) y hombres (n=45). Se utilizaron instrumentos validados para medir los niveles de actividad física (IPAQ-SF), el bienestar psicológico (PGWBI) y otros instrumentos de medición para las variables fisiológicas. Resultados: Los principales hallazgos informaron correlaciones entre la hipertensión sistólica y diastólica con ciertas dimensiones del bienestar psicológico y variables de composición corporal, donde la tendencia más alta de hipertensión se encontró más comúnmente en hombres que en mujeres mayores de 41 años. Las pruebas de comparación univariada y multivariada no encontró diferencias significativa entre los factores de todo el estudio (sexo, actividad física, PGWBIS, etc.) Conclusiones: Los hombres tienen una mayor predisposición a la hipertensión, y afirmamos que los hombres tienen promedios significativamente más altos de hipertensión a niveles sistólicos y diastólicos. La asociación entre el sexo y la hipertensión sistólica también mostró una mayor tendencia en los hombres. Se requieren estudios futuros para explorar la relación causal entre las dimensiones psicológicas y las variables morfofisiológicas en personas que trabajan diariamente en centros universitarios, como personal de oficina o administrativo.

**Palabras clave:** estilo de vida, dimensiones psicológicas, estado corporal.

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### Introduction

According to the World Health Organization (WHO), health is conceptualized as a state of complete physical, mental, and social well-being, not merely the absence of diseases or illnesses (Zayed et al., 2018). Considering the aforementioned concept, new findings from population studies have shown a significant increase in non-communicable diseases (NCDs), such as diabetes, obesity, and hypertension, as well as some physical impairments, such as decreased muscle mass (Mesinovic et al., 2019). Due to these circumstances, it is important to adapt and raise awareness about healthy lifestyle habits, to internalize them and make them part of everyday life, promoting and publicizing public health, thus disseminating information on physical, mental, and social care. These actions allow for the development of important factors in biopsychosocial stability, allowing for the stable performance of daily activities (Baena et al., 2021).

Physical activity provides multiple benefits for both body and mind, allowing for the preservation of health and bodily vitality. At a workplace level, it has been observed that a physically active workforce is significantly associated

with the reduction of levels of work-related limitations. Furthermore, evidence supporting the notion that an increase in physical activity can lead to a decrease in work-related limitations has been found (Walker et al., 2017). In recent years, a series of studies have emerged that discuss the benefits of physical activity, demonstrating a reduction in stress levels, allowing for the release of hormones associated to well-being, such as dopamine, serotonin, and endorphins, which reduce fatigue and tension, making people feel lighter and liberated (Borrega-Mouquinho et al., 2021). Additionally, physical activity plays a positive role in the prevention and treatment of various medical conditions, highlighting the idea that physical activity can reduce stress levels and negative emotions while enhancing positive emotions. It has been evidenced that individuals, after engaging in physical activity, reported feeling less stressed and negative, and more positive. Currently, stress is a growing phenomenon in modern society and is associated with various health-related issues (Schultchen et al., 2019). People who work as administrative staff at university institutions spend more time at their desks, and due to these circumstances, the workplace has been defined as one of the priorities for health promotion in the 21<sup>st</sup> century (Stein et al., 2014).

Within the group of people who work daily in offices, different types of physical and mental ailments have been established due to the physical inactivity they every day, where dramatic decreases in movement and activity not only result in the development of various chronic diseases, such as cardiovascular diseases and obesity, but can also lead to an increase in musculoskeletal disorders, including pain and disability (Hanna et al., 2019).

Due to the functions and responsibilities of administrative or office staff, and the lack of mobility resulting from daily sedentary behavior, large amounts of stress are generated (Stellman, 1989). Our hypothesis is that physiological variables (heart rate, systolic and diastolic blood pressure, and oxygen saturation in blood) may be affected due to the psychological and physical inactivity factors, which translate into levels of distress and stress. Therefore, the description and analysis of physiological, psychological, and physical activity variables can provide us with an understanding of the overall state of the worker in their work environment. This information will enable healthcare professionals to monitor and identify phobias, fears, and other mental health issues generated by the daily stress faced by employees.

Considering the above and a literature review, the objective of our study was to describe and analyze sociodemographic variables, psychological well-being, levels of physical activity, and physiological variables of administrative personnel in a higher education institution in Colombia.

## Materials and methods

### Procedures

This study is descriptive, correlational, and comparative, aiming to associate physiological variables, self-perceived levels of physical activity, self-perceived indices of psychological well-being, of the administrative personnel at the Universidad Católica de Oriente in the city of Rionegro, Antioquia, (Colombia).

To carry out the tests, the participants were first provided with a printed informed consent form, which explained the reasons for the study, and the advantages and risks that may arise by being part of the research; the reading and signing by the employee implied acceptance and participation in the project. Subsequently, the administrative staff proceeded to answer 3 online surveys between August 24<sup>th</sup> and September 29<sup>th</sup>, 2021, sent through institutional email addresses. The dissemination of the study was carried out through the university's website and institutional newsletter. Three standardized questionnaires were administered through Google Forms and Microsoft Office 365, which included validated tools to measure different variables. The level of physical activity was measured with the International Physical Activity Questionnaire-Short Form [IPAQ-SF], which contained seven questions. For psychological well-being, the short version of the Psychological General Well-being Index [PGWBI-S] was used, and sociodemographic factors consisting of 15 items were also inquired from the participants (De la Rosa et al., 2022;

Monterrosa-Quintero et al., 2022).

The following sociodemographic variables were investigated: gender, age, marital status, number of children, illnesses, medications, type of transportation, administrative role, type of housing, and location (urban or rural), as well as the questions from the IPAQ-SF and PGWBI-S. Employees who did not complete the online surveys or the physiological or body measurements were excluded from the study.

The survey was approved by the Human Resources and Occupational Health department from the Universidad Católica de Oriente and supervised by an active professor from the Physical Education, Recreation and Sports program.

For the physiological tests, the participation of two students was authorized, who were trained on the subject, and who were accompanied and supervised by the professor in charge of the research.

The information contained in the online instruments was downloaded for data collection and then tabulated, identifying possible outliers, starting on October 1<sup>st</sup>, 2021.

### Participants

The sample universe consisted of 430 individuals, and for sample determination, a statistical power of 80% and a  $\alpha = 0.05$  were used with the G\*power® 3.1.6 software, employing articles that have the same variables and their results, as determined by the independent samples t-test. The total number of participants in the study was  $n=90$ , divided into 2 groups: women ( $n=45$ ), with an age of  $33.4 \pm 8.8$  years, height of  $160 \pm 6.2$  cm, and body weight of  $65.5 \pm 11.3$  kg; and men ( $n=45$ ), with an age of  $42.1 \pm 8.9$  years, height of  $171 \pm 6.1$  cm, and body weight of  $77.9 \pm 13.7$  kg. The sociodemographic characteristics of the study population can be observed in table 1.

### Inclusion and exclusion criteria

To be part of the study, participants had to meet the following criteria:

- i. To be an employee of the institution with administrative functions.
- ii. be over 18 years old and healthy (physically, psychologically, cognitively).
- iii. be working at the university campus.
- iv. live in the region where the study was conducted.

Participants who had the following conditions were excluded:

- i. not answering the assessment tools remotely.
- ii. not performing any physiological or body measurements.
- iii. having a pacemaker.

### Measuring instruments

#### Physical activity levels

To assess the levels of physical activity, the short form, self-administered International Physical Activity Ques-

tionnaire (IPAQ-SF) was used, which consists of 7 questions, and designed to measure metabolic equivalents of task (METs). The questionnaire helped to provide information on minutes per day, days per week, and when physical activity was performed. The employees answered questions about the frequency and duration of different types of activity, including vigorous (lifting heavy objects, performing intense aerobic exercises, cycling, using treadmills), moderate (lifting light weights, cycling at a regular pace), and low (gardening, walking activities), as well as the hours spent sitting at their work environment. (De la Rosa et al., 2022; Monterrosa-Quintero et al., 2022). Additionally, the IPAQ-SF algorithm was used to transform continuous data into categorical data (low, moderate, and high physical activity). The results were calculated as the weekly metabolic equivalent for exercises and tasks in minutes (MET-minutes/week). All of this was in accordance with the scoring protocols and recommendations for the levels of physical activity in IPAQ, which are low (<600 MET-minutes/week), moderate (>600 MET-minutes/week), and high (>3000 MET-minutes/week) (Craig et al., 2003; Lee et al., 2011).

#### *Psychological general well-being index*

This questionnaire was used to evaluate the overall levels of self-perceived psychological well-being of employees at the Universidad Católica de Oriente. The PGWBI-S short version survey consists of six dimensions and a subset of six items that have a scoring scale from 0 to 5, for a maximum of 30 points. The score was obtained according to the six total dimensions (vitality, depression, anxiety, self-control, well-being, and general health), and all dimension values were multiplied by 3.66 (comparison factor with the original version of the PGWBI). Subsequently, the participants were rated based on a six-level scale: values below 60 indicated high distress; values between 60 and 69 indicated distress; values between 70 and 89 indicated a state of no distress; values above 90 indicated a positive state of well-being. Additionally, the study used Cronbach's alpha to assess the instrument's reliability, yielding a result of 0.87, indicating good reliability and content validity. (Grossi et al., 2006).

The PGWBI-S instrument is based on Likert-type questions corresponding to items 5, 6, 7, 18, 20, 21 of the original scale, shown below:

1. Have you felt nervous or bothered by your nerves in the past month?
2. How much energy, pep or vitality did you have or feel in the past month?
3. Have you felt down or depressed in the past month?
4. Were you emotionally stable and confident in yourself in the past month?
5. Have you felt happy or content in the past month?
6. Have you felt tired, worn out, exhausted or drained in the past month?

#### *Body and Physiological Measurements*

The following instruments were used to perform the body and physiological measurements: for body weight and composition (7 variables), the digital scale and impedance meter Omron HBF-514C (USA) was used; a portable stadiometer with Avanutri support (Brazil) was used to determine the participants' height; for systolic and diastolic blood pressure, a digital blood pressure monitor Basic 11 HomeLife (USA) was used; a Polar Pacer heart rate monitor (USA) was used to measure heart rate, and a professional HomeLife PRO 303 pulse oximeter was used to measure blood oxygen saturation. The evaluations of these variables were performed during working hours (8:00 am to 12:00 pm and 2:00 pm to 6:00 pm) from Monday to Friday.

#### *Statistical analysis*

The analyses were performed using the Jamovi<sup>®</sup> version 1.6 software (<https://www.jamovi.org/>, accessed on March 7, 2022). Sociodemographic data are presented as numbers, and percentages in contingency tables are used for qualitative variables, with associations determined using the chi-square ( $X^2$ ) test. For quantitative variables, data are presented as mean  $\pm$  standard deviation. The Kolmogorov-Smirnov test was used to verify the normality of the data. The Student's t-test for independent samples was used to identify significant differences between sociodemographic, physiological, and body composition characteristics between genders. The interaction between variables was examined using a mixed analysis of variance (ANOVA). A multivariate analysis of variance (MANOVA) was performed to evaluate the different dimensions that shape the PGWBI. Univariate comparisons associated with the groups were performed using Pearson's correlation, followed by both multiple and simple linear regression analyses to observe the impact of the variables on the dependent variable. The correlation coefficient scale used followed the proposal by (Hopkins, 2002).

The internal consistency of the PGWBI instrument was validated with the Cronbach's alpha test, where values  $\geq 0.7$  met the homogeneity requirement within the instrument's scale (Sattler et al., 2018).

Differences according to sex, for the sociodemographic, body composition, and physiological variables, were determined using Student's t test, and the Mann-Whitney U test (oxygen saturation) for quantitative values. Contingency tables were used for qualitative (categorical or ordinal) values as a method for describing frequency and percentage in the different study factors. All the effects of the differences between means were determined as proposed by Cohen (1977).

#### **Results**

Table 1 shows the comparisons between the study variables according to gender.

Table 2 shows the correlations between body composi-

tion and Physiological variables determined with the Pearson's correlation test.

Table 3 shows differences between sociodemographic factors and the psychological dimensions belonging to the Psychological General Well-being Index.

Table 1.

Sociodemographic, body composition, and physiological data from the study.		
Variables	Men	Women
Age (years)	42.1±8.9*	33.4±8.8*
Height (cm)	171±6.1*	160±6.2*
Body weight (kg)	77.9±13.7*	65.5±11.3*
BMI (Kg/m <sup>2</sup> )	26.5±4.7	25.7±3.6
METs (minute/week)	1802±1730	1945±2454
Heart rate (beats/min)	71.1±13.2	73.7±8.6
Systolic pressure (mmHg)	128±15.2*	115±11.6*
Diastolic pressure (mmHg)	82.9±11.9*	75.3±10.4*
Oxygen saturation (Spo <sub>2</sub> )	97 (94 to 100)*	98 (92 to 100)*
Biological age (years)	45.8±13.7	42.1±11.4
Visceral fat (%)	9.8±5.1*	6.1±1.9*
Muscle mass (%)	35.3±3.83*	25.4±28.8*
Body fat (%)	25.4±6.91*	38.6±6.3*
BMI		Men
	Women	
Low	1 (2.2%)	0 (0.0%)
Normal	19 (42.2%)	19 (42.2%)
Overweight	25 (55.6%)	26 (57.8%)
Physical activity levels		Men
	Women	
Low	11 (24.4%)	16 (35.6%)
Moderate	27 (60%)	19 (42.2%)
Active	7 (15.6%)	10 (22.2%)
Age category		Men
	Women	
20-40 years	20 (44.4%)	36 (80%)
> 41 years	25 (55.6%)	9 (20%)

BMI=body mass index; METs=metabolic equivalent of task; \*=significant values ( $p \leq 0.05$ ); & = not significant, Mann-Whitney U test.

The findings showed significant differences with a large effect, where men had higher means in the variables age (ES: 0.90); height (ES: 1.84); body mass (ES: 1.0); systolic blood pressure (ES: 0.97); and visceral fat (ES: 0.97); a moderate effect in diastolic blood pressure (ES: 0.69) and a

Table 3.

values of sociodemographic variables vs psychological dimensions.

Sex	Anxiety	Vitality	Depression	Control	Well-being	Health	Score
Woman	14.6±4.13	12±3.37	14.2±3.92	13±4.78	13±4.38	11.7±4.32	78.6±19.4
Man	15±3.33	13±2.87	14.2±3.84	13.7±4.16	12.9±4.17	12.6±3.54	81.5±17.3
BMI							
Low	14.6±0.0	14.6±0.0	11.0±0.0	18.3±0.0	14.6±0.0	11.0±0.0	84.2±0.0
Normal	15.0±3.38	12.6±3.38	14.3±3.97	13.6±4.07	12.8±3.88	12.4±4.04	80.7±16.9
Overweight	14.7±4.04	12.4±4.04	14.3±3.82	13.1±4.76	13.1±4.59	12.0±3.95	79.5±19.6
Physical activity							
Low	14.0±3.80	11.7±2.88	14.0±3.80	12.5±4.90	12.7±3.98	10.8±4.12	75.6±18
Moderate	15.1±3.98	12.8±3.16	14.2±4.24	13.7±4.19	13.1±4.54	12.7±3.84	81.7±18.8
Active	15.5±2.75	13.1±3.44	14.6±2.89	13.8±4.58	12.9±4.12	12.7±3.69	82.7±17.4
Age category							
20-40 years	15.1±3.95	12.2±3.44	14.4±3.94	13.5±4.36	13.4±4.20	12.1±4.35	80.7±18.7
> 41 years	14.4±3.36	13.0±2.58	14.0±3.77	13.1±4.69	12.3±4.31	12.3±3.23	79.1±18

BMI= Body Mass Index.

The study found no significant differences between sociodemographic characteristics and psychological dimensions ( $p > 0.05$ ), as shown in Table 3. However, significant associations were observed between sex and systolic and diastolic blood pressure (with or without hypertension). Men had a 35.6% tendency and women had an 8.9% tendency towards having diastolic hypertension ( $X^2$ : 9.26;  $p =$

small effect in muscle mass (ES: 0.49), respectively. The only variable in which women had a higher average was body fat, with a large effect (ES: 2.02).

Table 2.

Correlations between body composition and Physiological variables.

Variables	Oxygen saturation	Systolic pressure	Diastolic pressure
Body weight	NC	0.357***	0.235*
Body fat	NC	0.207*	NC
Muscle mass	NC	0.288*	NC
BMI	-0.230*	0.272**	NC
Visceral fat	-0.240*	0.387***	0.292**
Biological age	NC	0.291**	NC

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ ; BMI = Body Mass Index; NC= no correlation.

The results indicated that body composition and physiological variables had small to moderate correlations ( $r \leq 0.29$  to  $\leq 0.5$ ). Physical activity levels were correlated with psychological well-being indices ( $r=0.21$ ;  $p \leq 0.05$ ), and among these dimensions, correlations were found with vitality ( $r=0.26$ ;  $p \leq 0.05$ ) and overall health ( $r=0.21$ ;  $p \leq 0.05$ ), which are important components of the psychological well-being index. No significant correlations were found between physical activity levels and all physiological and body composition variables in our study population.

The findings indicate that the coefficient of determination ( $R^2$ ) stands at 0.257, meaning that approximately 25.7% of the systolic pressure variable can be explained by the multiple linear regression model determined in the correlations found in Table 2.

When performing a simple linear regression between the highest correlation of all variables (visceral fat) and systolic pressure, we found that the model yielded an adjusted coefficient of determination ( $R^2$ : 0.150;  $p < 0.01$ ), representing 15% of the model.

0.002), while men had a 13.3% tendency for systolic hypertension ( $X^2$ : 6.43;  $p = 0.011$ ). Additionally, individuals over the age of 41 showed a 14.7% association with systolic hypertension ( $X^2$ : 5.68;  $p = 0.017$ ), respectively.

The multivariate analysis of the total PGWBI factors and physical activity levels did not reveal significant differences in any of the physiological variables, as identified by the

MANOVA test using Pillai's Trace ( $F = 0.64$ ;  $p = 0.922$ ).

ANOVA tests were performed among all the factors in comparison with the physiological variables, and no differences were found among the physiological variables as determined by Tukey's test ( $p > 0.05$ )

## Discussion

From our point of view, this study stands out as one of the few that jointly addresses morphophysiological variables, body composition, levels of physical activity, and psychological well-being in the context of university employees. We emphasize the importance of focusing on the development of physical activity interventions that can be implemented through so-called active breaks in the workplace, with particular attention to promoting health and enhancing the quality of life of employees (Forberger, S., Wichmann, F., & Comito, 2022).

This study provides new insights into the characteristics of the variables comprising body composition, physiological responses, as well as anxiety and stress levels. The evidence gathered in this research contributes to a deeper understanding of how to plan activities that could potentially enhance both physical and mental well-being, ultimately resulting in increased productivity for employees working in offices located in university centers. The discussion will center on three key aspects that shape this manuscript: physical inactivity, morphophysiological variables, and psychological well-being.

### *Inactivity and active sedentary behavior*

The key findings revealed that 66.6% of the hours, within the workweek from 6 am to 6 pm, were occupied by employees in our study performing their duties in offices, which is quite common in Latin America due to the working hours and labor policies in this part of the world, resulting in a restriction on physical activity, as workers spend nearly 75% of their work time sitting (Fountaine, C. J., Piacentini, M., & Liguori, 2014). Extended periods in static positions without any body mobility interventions are associated with health risks (Mackenzie et al., 2015). They are considered similar to physical inactivity, as they promote postprandial states and incentivize a reduction in blood glucose and insulin response (Dunstan et al., 2012; Patterson et al., 2018).

The findings in the literature show that the time people spend sitting for more than 7 hours a day is similar to physical inactivity, increasing the risk of mortality, and resulting in a 2% increase in deaths due to prolonged sitting (Puig-Ribera et al., 2015). This situation should be deeply addressed, as supported by different evidence in physical and mental aspects. Therefore, physical activity is necessary for optimal integral health, as hormones such as dopamine, serotonin, and endorphins, are released through physical activity, bringing the body to a state of satisfaction and self-confidence (Rokade, 2011).

### *Physiological variables in employees*

Hypertension affects more than a quarter of the world's population and is considered a public health risk factor, especially in the context of cardiovascular diseases (Lackland & Weber, 2015). Some studies have found similar findings when comparing genders, where men surpass women in different types of hypertension, with a probability of being hypertensive being approximately 3 to 4 times higher. This has been attributed to possible additional fat accumulation, leading to a decrease in high-density lipoprotein levels and an increase in low-density lipoprotein and triglyceride levels, with the latter considered a risk factor for hypertension (Dereje et al., 2021). Although the possible causes of hypertension are not fully understood, morbidity associated with this condition and psychosocial problems have been the subject of research by several groups. However, the relationship between high blood pressure and psychosocial factors presents significant scientific gaps, at times controversial (Cai et al., 2022).

Some studies have shown the incidence of hypertension in certain types of disorders with significant associations ( $\chi^2:16 = 212.6$ ,  $P \leq .05$ ), while in others, no effects were evident among factors. It is important to note that the results may be underestimated, increasing bias due to uncontrolled intervening variables such as smoking, congenital diseases, and lack of knowledge about other variables that cannot be controlled due to the complexity and variability of the study participants (Cai et al., 2022; Stein et al., 2014; Stevelink et al., 2020).

Blood pressure seems to be an indicator of anxiety levels in people. Some studies conducted on African American women found a relationship between depression and elevated systolic levels, which can lead to cardiovascular risks, stress, and social isolation. These findings are reflected in unhealthy lifestyle habits, such as physical inactivity, excessive consumption of alcoholic and sugary beverages, ultra-processed foods, and smoking, among others (Artinian et al., 2006; Mendels, 1971). Our findings provide new evidence on the importance of understanding the association between psychological well-being dimensions and hypertension, as compared to studies investigating the incidence of a physiological factor as opposed to a mental one. The data presented here provide relevant information about the relationship between psychological dimensions that influence workers' well-being through their self-assessments, and important morphophysiological conditions in public health related to the work environment.

### *Anxiety and Stress Issues in Office Environments*

Due to the daily demands in the office environment, employees are increasingly exposed to work-related stress, and this is a continuously growing trend. In this context, we examined the relationship between work-related stress and depression/anxiety among the participants in our study. Psychological well-being levels were assessed in the workplace, and the results revealed an equality in the experiences

of both genders. These findings differ from other studies, in which men reported higher psychological job demands, lower workplace social support, and more physically demanding tasks than women. Additionally, the attributable risk fraction was calculated separately for men and women, with the results highlighting that the risk of developing depression and anxiety disorders associated with work-related stress was higher in women as compared to men. Specifically, the relative risk of experiencing depression and anxiety disorders associated with high job demands was 2.98 for women and 2.00 for men (Melchior et al., 2007).

Some findings highlight the importance of addressing burnout and work-related stress as potential risk factors for anxiety symptoms in office personnel. This could involve the implementation of interventions aimed at reducing job-related stressors, providing mental health support and resources, as well as promoting a positive work environment. Ultimately, these efforts could contribute to improving the quality of care provided by employers and, consequently, enhancing outcomes for both internal and external clients of higher education institutions (Ding et al., 2014).

### Limitations

This study has limitations that should be considered when extrapolating the results. Firstly, the sample size is considered small, due to the study being conducted within a limited sample universe. A suggestion is made to increase the number of participants and to conduct controlled longitudinal studies. It is important to conduct studies where factors such as medication, smoking, high salt consumption, and other factors that can affect and increase the bias of the data when analyzed, are established. Blood tests should be performed to determine lipid profile or diabetes, as well as other tests associated with high blood pressure. Within the study, as it is self-perceived, there may be bias due to hormonal or tense situations within the work environment. Therefore, other instruments should be used to monitor the level of anxiety of the population and compare them with the data on the psychological dimensions.

### Conclusions

In conclusion, we assert that our hypothesis is rejected, as physiological variables do not appear to be influenced by the entirety of the dimensions that constitute psychological well-being and physical activity variables. Additionally, it was observed that diastolic and systolic blood pressure may be influenced by body composition variables, particularly visceral fat. Moreover, our findings revealed that men exhibit significantly higher means of both systolic and diastolic hypertension, and high blood pressure ranges are correlated with 3 out of the 6 dimensions that constitute psychological well-being. Furthermore, there is a notable gender-based trend in systolic hypertension, with men showing a greater predisposition. It is worth noting that being 41 years old, regardless of gender, appears to increase the likelihood of

systolic hypertension. Future studies are imperative to explore the potential causal relationship between psychological dimensions and morphophysiological variables among individuals working in daily roles at university centers, such as office or administrative staff.

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### Declaration of competing interest

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### Conflict of interest

The authors declare no conflicts of interest in the preparation of the manuscript.

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