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STRESS AND BURNOUT IN EMPLOYEES OF A HIGHER EDUCATION INSTITUTION

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ABSTRACT

This study proposed to describe the prevalence of stress and burnout symptoms in employees of a Higher Education Institution (HEI) in southwestern Goiás. The sample consisted of 100 employees. In data collection, the following instruments were used: Data Collection Form, Stress Symptom Inventory for adults of LIPP – Revised ISSL-R and the Jbeili Questionnaire for preliminary identification of Burnout. As a result, it was observed that 83% of the staff has some symptomatology of stress, 29% of which is moderate, 29% in the severe form and 25% in the mild form. For Burnout, it was observed that 100% of the employees are in some phase of development of the syndrome, 44% in the initial phase, beginning of installation 31% and considerable burnout in 3%. In view of this, it is clear that the health of employees is affected and care actions must be implemented to change this reality that affects the lives of employees in their productivity.

Keywords: Mental health. Work. Occupational stress. Professional burnout. Psychological exhaustion.

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INTRODUCTION

Mental health is defined by the World Health Organization (WHO) as a state of well-being in which human beings can develop their skills, overcoming their daily stress, managing to develop their work in a positive and fruitful way, thus becoming productive in their environment. In contrast to this concept are mental health problems that fit into the first positions of morbidity and mortality in the Americas, which has become a serious public health problem. Although these problems are of high impact, initiatives to improve mental health have still been insufficient (WHO, 2013; WHO, 2021).

Among the main factors of mental illness, stress stands out, which is defined as a state of imbalance in the physiological functioning of the organism in the face of challenging situations that lead the organism to activate its psychobiological mechanisms to respond to situations seen as threatening. It is an effort by the organism to overcome a real, imaginary or threatening situation. Consequently, when the individual finds himself limited or with the absence of strategies in the face of the stressful situation, the body suffers damage to its physiological functioning, especially when the triggering factor persists, which may have severe consequences in its physical and psychological aspects (Lipp, 2017).

Stress is a complex physiological response of the body, involving biological and psychological factors from birth, with the objective of preserving life. It is what allows through the activation of catecholamines that allowed man to survive in threatening situations during his historical evolution. It is through the moderate, adrenergic response produced that there is motivation, energy and vigor that can result in high productivity. However, if released excessively in conditions of chronic stress, it can destroy the normal physiology of the body, causing physiological, physical, and psychological damage to the individual (Lipp, 2017).

Stress is currently proposed by a four-phase stage, alarm, resistance, near-exhaustion, and exhaustion. All these phases are characterized by physical and psychological symptoms. The physical symptoms of the alarm phase are cold hands and feet, sweating, dry mouth, muscle tension, teeth grinding and jaw clenching, sporadic diarrhea, and a feeling of knotting in the stomach. As psychological symptoms there is a sudden increase in motivation, enthusiasm and sudden desire to start new projects. In the second phase, resistance has physical symptoms such as memorization problems, a feeling of exhaustion and frequent tiredness. In psychological symptoms, there is

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excessive emotional sensitivity, constant thinking about what is worrying you, and excessive irritability (Lipp, 2019).

The third phase, of almost exhaustion, occurs Generalized feeling of malaise, numbness in the fingers or toes, change in appetite, dermatological problems, gastritis and hypertension crises. Regarding psychological symptoms, there are doubts about oneself and reduced sexual interest. In the fourth phase, exhaustion, physical symptoms are frequent diarrhea, sleep disorders, nausea, continuous high blood pressure, extreme appetite changes, gastric cardiological problems. Psychological symptoms, on the other hand, include inability to work, feeling of incompetence in all areas, desire to escape, anger, extreme tiredness, apathy, depression, and repetition of thoughts and speeches about the problem (Lipp, 2019).

Through a stressful situation, human beings can develop physical and mental diseases, such as heart disease, gastric ulcers, gastrointestinal disorders, anxiety, depression, headaches, cancer and diabetes. In addition, individuals in work environments that are subjected to a high load of stress may have their performance impaired by stress, facing difficulties in carrying out their work activities, in addition to the susceptibility to presenting symptoms of depression (Straub, 2014; Allemand; Schaffhuser; Martin, 2015).

In a study developed by Talomeu, et al., (2017) the level and phase of stress with Lipp's ISSL was evaluated in a sample of 38 higher education teachers. The mean age of these teachers was 34 years, and 55% (21) were male. It was observed in the study that the level of stress had a statistically significant relationship with the individual's gender, being more frequent in females. No significant relationship was found between the degree of stress and working hours, the practice of physical activity or the type of stress (psychological or physical).

However, it should be noted that work stress can often impact the employee's life, as in the case of Burnout, which is a psychological and behavioral syndrome in which exhaustion is visible in three essential pillars of life, the physical, psychological, and emotional. It is a condition caused in individuals exposed to prolonged situations of work-related stress, leading the individual to feel overloaded and with little satisfaction from work. Burnout affects, above all, individuals who are more perfectionist and meticulous in their work activities (Gerada, 2022).

It is widely known that work can directly impact mental health. In a study carried out on common mental disorders in technical-administrative employees in education, Mota,

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Silva and Amorim (2020, p. 894) presented that "42.86% of respondents sleep poorly, 35.25% have frequent headaches; more than 60% report some problem in the digestive system; 15.5% have hand tremors; and 12.21% have a lack of appetite". In addition, the authors mentioned that in relation to symptoms of depressive-anxious mood, 60.6% of the workers reported feeling nervous, worried or tense, 34.56% reported feelings of sadness, 26.73% reported being easily frightened and 16.82% have cried more than usual.

According to the International Statistical Classification and of Diseases and Related Health Problems (ICD-11), Burnout is validated as an occupational condition and not a medical condition. It is accompanied by stressful factors at work, leading to emotional exhaustion due to the phosphorylation of energy, causing the individual to withdraw from work and also from his productivity at work, seen as a derealization. This condition mainly affects professionals who are focused on public service functions and who require high performance, such as doctors, teachers, social workers (*World Health Organization* – WHO, 2019)

According to Bernadini, Barros and Murgo (2022), Burnout is massively present in teachers in higher education. In a study carried out with higher education professors from public, private or both institutions, a figure of 41.6% of professors with the presence of the incidence of Burnout according to the Maslach Burnout Inventory (MBI) research instrument. In another study carried out by Silva and Oliveira (2019), with 173 private higher education professors who "63 (36%); 54 (31.2%) and 42 (24.3%) of the teachers had moderate rates of emotional exhaustion, dehumanization and disappointment with work, respectively; and 51 (29.5%) and 60 (34.7%) had high rates of emotional exhaustion, dehumanization and disappointment, respectively".

Work is something vital in human life, because in the capitalist world it is what allows individuals to achieve their material and social achievements. However, work has a direct impact on the mental and physical health of the worker. In view of this, this research aimed to describe the prevalence of stress and burnout symptoms in employees of a Higher Education Institution - HEI in the southwest of Goiás. With the results of this study, it is sought to disseminate it in the means of scientific production and to the HEI itself, with the main factors associated with mental illness in the health of mental illnesses.

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METHOD

PARTICIPANTS

The sample of participants in this study was composed of 100 employees of a HEI located in the southwest of Goiás, including administrative technicians and faculty. Most participants were women (60%) who declared themselves white (68%) and married (60%). Regarding age, workers between 22 and 67 years of age participated (M = 38.79; SD = 9.76). With regard to work variables, 50% of the participants work 40 hours a week, 75% are only public servants, and 87% have tenure of civil servants.

INSTRUMENTS

Data Collection Form

This instrument was produced to be used to collect the participants' sociodemographic data, as well as information regarding their mental health. In this instrument, there was an investigation of aspects of the employees' personal life, work, emotional and professional information.

Stress Symptom Inventory for LIPP Adults – Revised ISSL-R (Lipp, 2022)

This instrument evaluates stress through three tables referring to its phases of stress, namely: 1) Physical and psychological symptoms (last 24 hours), composed of 15 items; 2) Composed of ten physical and five psychological symptoms experienced in the last week; and 3) 12 physical and 11 psychological symptoms, experienced in the last month. In all, the ISSL has 37 items of a somatic nature and 19 psychological items.

Jbeili questionnaire for preliminary identification of Burnout (Jbeili, 2008)

This instrument was developed and adapted by Chafic Jbeili, inspired by the *Maslach Burnout Inventory* – MBI, to screen for the possibility of Burnout Syndrome. It is a scale composed of 20 items that characterize psychophysical characteristics in relation to work (Ex: I get involved easily in the problems of others, I feel that I no longer believe in the profession I practice, among others). Each item was marked according to a Likert scale from 1 to 5 points.

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PROCEDURES

Initially, authorization from the educational institution was requested to carry out data collection in the academic environment. The research project was submitted to the Research Ethics Committee for consideration, and was approved by opinion 7,066,947. After approval, the research began, taking place between September and October 2024. The participants were approached by the researchers in charge, when they were asked to be available for approximately half an hour, the estimated time for administering the instruments.

In this study, the inclusion criterion was to have at least six months of service in the HEI. On the other hand, there was the exclusion of employees from another campus, which is not located in the southwest of Goiás, employees who were on vacation/sick leave, or returning from them during the collection period. In addition, scholarship holders who work at the institution were excluded from the research, since it sought to evaluate employees with an employment relationship with the educational institution.

Data collection for the sample took place in the classrooms of the educational institution itself, individually. On the occasion, the Informed Consent Form (ICF) was presented for the participants to sign. After filling out the informed consent, the survey began to be completed using the Data Collection Form, followed by the stress and burnout scales. It should be noted that some scales, in Brazil, are restricted to the use of psychologists. Therefore, data collection was carried out together with a Psychology professional to administer the restricted scales (ISSL-R).

DATA ANALYSIS

Descriptive analyses were performed to verify the sociodemographic characteristics of the sample. Then, using the cutoff points indicated in the literature for the scales used, the prevalence of stress and burnout in the sample was investigated. To assess the normality of the data, the values of asymmetry and kurtosis were used, considering that, for a distribution close to normality, the value of asymmetry should not exceed 2 and the value of kurtosis should not exceed 7. In view of the expectation of an approximately normal distribution, the t-test was performed to compare the means of stress and burnout in different groups, evaluating the magnitude of the difference using Cohen's d.

Statistically significant differences were considered when $p < 0.05$, interpreting the magnitude according to the criteria of Cohen (1988), where values < 0.20 are considered

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small, between 0.20 and 0.80 are considered medium and > 0.80 are considered large. Finally, Pearson's correlation analyses between stress, burnout, hours of sleep, age, workload, and years of work at the institution were conducted. To interpret the correlations, the following values were used: r ≥ 0.10 (weak), r ≥ 0.30 (moderate) and r ≥ 0.50 (strong; Cohen, 1992).

RESULTS AND DISCUSSION

The first analysis was performed to verify the level of stress present in the sample. The results are presented in Table 1, in which it is possible to see that 83% of the participants had some level of stress, while only 17% did not present stress.

Table 1- ISSL-R intensity frequency for full sample

Intensity/Phase of Stress	Frequency	Percentage %	Cumulative Percentage
Not eligible	17	17,0	17,0
Lightweight	25	25,0	42,0
Moderate	29	29,0	71,0
Serious	29	29,0	100

Source: Prepared by the authors.

In view of the above, Table 1 shows that the study participants are subjected to high levels of stress (83%), and 29% of them are under severe stress symptoms. In a study developed in Nigeria by Asa and Lasebikan (2016) with the purpose of observing the prevalence of signs of stress in teachers, it was shown that 72.2% of the participants had symptoms of stress, which is a lower result than that found in this study. In Brazil, Santos and Silva (2017), found through Lipp's Stress Symptom Inventory that 46% of the professors at a Federal Institute had symptoms of stress, also diverging from the results obtained in this research. However, of these, most were in the resistance phase. Thus, it is notorious that the stress level of the participants in this investigation is under a high stress load when compared to other studies with the same investigative line.

For Lipp (2022), stress is a reaction of the body that causes repercussions in the psychological and somatic area of the human being. In the initial phase of stress, the symptomatology can be considered universal for everyone. From the ability to eliminate or adapt, the symptomatology starts to have individual particularities of each person and with this the symptoms tend to have a genetic or life preponderance of the organism.

Consequently, it is noted that the clinic is the result of these factors. It refers to the development of the shock organ or target organ. As a result, the probability of developing

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arterial hypertension or gastric ulcers in the phases of near exhaustion or exhaustion increases, while those who have greater dermatological susceptibility to chronic stress have a greater chance of developing dermatological symptoms. With this, it is perceived that the body suffers from a specific clinic of the stage of stress it is in. Thus, care should be based not only on the prevention of stressors in general, but also on their symptoms in particular (Lipp, 2022).

Table 2 describes the results regarding the classification of psychophysical characteristics that indicate signs of burnout. It is noted that most participants were classified in the initial phase, with 31% in the installation phase. It is noteworthy that all participants had some level of Burnout. To perform the inferential analyses, the normality of the data was verified in order to choose the most appropriate statistical procedure. The asymmetry values were 0.91 for the stress scale and 0.13 for the burnout scale, while the kurtosis values were 0.23 and -0.75, respectively. These values for both instruments are within the acceptable limits to consider a normal distribution (Hair et al., 2010) and, therefore, the parametric analyses were maintained.

Table 2 - Frequency of intensity of the Jbeili Questionnaire for preliminary identification of Burnout for a complete sample

Intensity of Burnout symptoms	Frequency	Percentage%	Cumulative Percentage
No evidence	0	0	0
Possibility to develop	22	22,0	22,0
Early Phase	44	44,0	66,0
It begins to settle in	31	31,0	97,0
Considerable Burnout Phase	3	3,0	100,0

Source: Prepared by the authors.

Leite et., al (2019) found in his study with higher education professors from two public and two private institutions that 61.6% of the professors were in the initial phase of Burnout, while 35.3% were in the phase of onset of the disease. The author's results are similar to those found in this research for the phases of disease onset, onset of installation. On the other hand, the results are not consistent with the criteria without evidence of Burnout, since in this study 100% of the participants are in some stage of development of the syndrome, 3% in the severe phase and 22% in the probability of developing it, while for the author cited above they were; 2.1% in possible development of the syndrome and 1.0% showed no signs of developing Burnout.

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To verify whether there was a difference between groups of workers in the levels of stress and burnout, men and women, people who feel recognized for their work with those who do not feel recognized, people who practice physical activity with those who do not and, finally, people who self-declared with a diagnosis of mental disorder with those who self-declared without a diagnosis. The results of the comparisons are presented in Table 3.

The results of the group comparisons for the stress variable indicated that there was no significant variation between male and female genders, being a teaching employee or administrative technician, working in more than one place or being exclusive to the educational institution, practicing or not physical activity. However, there was a significant difference related to recognition at work and psychiatric treatment. The group that reported feeling a lack of recognition at work had a higher level of stress when compared to the group that did not report this lack of recognition. The magnitude of the difference was 0.42. The group undergoing psychological or psychiatric treatment had a higher mean of stress compared to the group that was not undergoing treatment, with a magnitude difference of 0.60, interpreted as average.

Table 3 - Comparison of the means of stress and burnout in different groups

Stress				
Group	**M (DP)**	**t**	**p**	**d**
Male	10,72 (8,89)	- 1,65	0,10	0,38
Female	14,02 (12,31)			
He does not feel a lack of recognition at work	10,25 (9,56)	-2,06	0,04	0,42
Feels a lack of recognition at work	14,33 (9,86)			
Teaching	9,90 (1,40)	-1,015	0,31	0,20
Administrative Technician	9,80 (1,39)			
Work in more places	14,33 (11,43)	1,05	0,30	0,21
Work exclusively at the University	12,12 (8,96)			
Perform Physical Activity	11,89 (8,81)	1,14	0.26	0,24
Not performing physical activity	14,39 (12,09)			
Undergoes psychiatric/psychological treatment	17,04 (11,20)	-2,54	0,01	0,60
Does not undergo psychiatric/psychological treatment	11,33 (9,04)			
Burnout				
Group	**M (DP)**	**t**	**p**	**d**
Male	51,60 (14,73)	-0,53	0,60	0,11
Female	53,22 (1,93)			
He does not feel a lack of recognition at work	44,55 (12,01)	-4,92	<0,01	1
Feels a lack of recognition at work	57,92 (14,12)			
Teaching	50,76 (13,78)	-1,23	0,22	0,25
Administrative Technician	54,38 (15,67)			
Work in more places	52,50 (14,88)	0,07	0,94	0,01
Work exclusively at the University	52,73 (14,88)			
Perform Physical Activity	54,25	0,72	0,47	0,15
Not performing physical activity	51,85			
Undergoes psychiatric/psychological treatment	51,58 (15,73)	0,37	0,71	0,09
Does not undergo psychiatric/psychological treatment	52,88 (11,59)			

Source: Prepared by the authors.

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Santos and Silva's (2017) investigation on quality of life and stress found that these variables are inversely proportional ($p<0.03$), showing that teachers with a higher level of stress have a lower quality of life compared to those who do not. Tanure et al., (2014) and Lipp (2022) emphasize a high negative stress load and prevents the performance of work activities effectively, as individuals experience emotions of fear, sadness, anxiety, and anger. Thus, negative stress occurs when the human being is no longer able to meet the requested demands, entering into psychic suffering, behavioral changes, sleep disturbances and the emergence of negative thoughts (Dias et al., 2016).

When analyzing individuals who undergo psychiatric/psychological treatment compared to those who do not, the group of participants who seek therapeutic actions are the participants who are under a higher level of stress. With this, it is noted that people are looking for self-care tools, which is important for the care of workers. As an alternative to this, Bortoletti, Vasconcelos and Sebastiani (2017) refer to the following as alternatives for stress management; supportive psychotherapy, focal psychotherapy, identification of signs of stress, improvement in skills and professional development, training of social and communication skills, leisure activities, physical exercise, avoidance of routines and monotony.

Santos et al., (2020) found in their investigation of stress levels among teachers that the lack of adequate financial remuneration was one of the factors with the greatest magnitude and the factors with the least impact were contractual insecurity, goals incompatible with the reality of the class. For Aragão and Maranhão (2020), valuing work, participation in decisions, positive feedback, growth opportunities are positive factors for employees to feel recognized at work and develop their activities with more fulfillment.

Regarding the levels of Burnout, the results of the comparisons indicated that the group that feels a lack of recognition at work also had higher levels of Burnout when compared to the group that did not report this lack. The magnitude of the difference, of 1, indicates a large difference between the groups. Similar results were found in the studies by Posada-Quintero et al., (2020) in which individuals with a lack of professional recognition and salary dissatisfaction tended to have lower motivation at work and consequently may be more vulnerable to the development of Burnout.

The correlations between stress, burnout, hours worked, hours of sleep, age, and length of employment with the institution are shown in Table 4. The correlation of sleep hours with both Burnout and stress were negative, significant, but with weak magnitude.

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The result indicates that fewer hours of sleep is associated with higher levels of impairment. A result similar to that found with age, the higher the age, the lower the levels of stress and burnout.

Table 4 - Pearson's correlations (N = 100) between ISSL-R and Jbeili Questionnaire with the variables sleep, workload, age and length of work in the HEI

	Hours of Sleep	Age	Working Hours	Years at the institution
Burnout	- 0.28**	-0.29**	-0,09	-0,17
Stress	-0.29**	-0.25*	-0,05	-0,15

Note: * = p<0.05; ** p< 0.01. Prepared by the authors.

Some factors are determinant in the quality of workers' health and in their satisfaction when performing their activities. Sleep, as a human behavior, is essential to maintain the body's homeostatic functions, which are fundamental for life, such as the preservation of energy and the control of thermoregulation. On the other hand, its deprivation can cause physical damage, cognitive, occupational and social changes, thus causing impairment of quality of life and causing consequences, such as absence from work. Thus, it is noticeable that sleep is essential for the physiological balance of the body, performing a repair function and impacting mood, reasoning, memory, attention (Straub, 2014; Frasson et al., 2014; Martinez, 2017).

This investigation revealed that younger individuals are more vulnerable to the development of Burnout, while older participants have a protective factor for the development of the syndrome. Results similar to those of this study were observed in a study that showed that older individuals also have this factor as a predictor of protection against professional burnout. This evidence can be associated with the fact that employees with more time in the service have more confidence in performing their duties, greater emotional and professional stability, and are more likely to have gone through almost all the work scenarios that they could perform on them (Araldi et al., 2021; Queiroz, 2023).

At first, it was also observed that Burnout is present in all study participants, who are in some stage of development or with it installed. In view of this, it is necessary to pay attention to the results of the participants and carry out therapeutic measures, as any individual who works in conditions of human suffering will develop, at some point, problems that impact their productivity. Actions such as reducing pressure in the high-pressure work environment, seeking a balance between work and play, teamwork, recognizing limitations, setting limits, and clinical assistance to employees are measures that can be stipulated (Gerada, 2022; Queiroz, 2023).

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FINAL CONSIDERATIONS

The information obtained in this study revealed that the impact of work has been significant on the mental and physical health of HEI employees. In this sense, the objectives of the research were achieved, since it was possible to identify that 100% of employees are in some degree of development of Burnout and that older employees are less vulnerable to the disease, while younger individuals are more susceptible. Thus, knowledge about this reality is important for the institution to recognize the health status of the staff and start implementing measures to prevent Burnout syndrome before it sets in.

It is evident that there is no Burnout without stress, another factor that was present in more than 80% of the institution's employees. Both Burnout and stress manifest themselves in different stages in employees, with a figure of 58% in moderate and severe forms. It was observed that participants who feel a lack of recognition at work are under a greater stressful load compared to individuals who do not share this view. Therefore, knowledge about stress levels allows the direction of actions in the promotion of health in the workplace.

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