
WORK ENGAGEMENT AND BURNOUT SYNDROME: A COMPARATIVE ANALYSIS
ENGAJAMENTO NO TRABALHO E SÍNDROME DE BURNOUT: UMA ANÁLISE COMPARATIVA

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ABSTRACT

Understanding the relationship between emotional distress, engagement, and worker health during the COVID-19 pandemic has been challenging for numerous organizations worldwide. In this context, this study aimed to compare work engagement and Burnout Syndrome in Brazilian public university workers during the COVID-19 pandemic. To understand this relationship, a quantitative study was carried out with primary data (n = 1,506) collected through a structured questionnaire from a sample of respondents composed of civil servants of Brazilian public universities. Robust statistical techniques were used for data analysis while emphasizing partial least squares structural equation modeling (PLS-SEM) and multigroup analysis (MGA) to identify the relationships among the constructs. This study presents relevant and unprecedented results, showing how work engagement and Burnout syndrome behave differently among professionals in the same environment. It also brings important information to health and social care regarding worker health and can help better understand and develop strategic guidelines to mitigate activities and attitudes that may contribute to the development of Burnout Syndrome in the workplace of universities, even more so concerning the differences between functional categories.

Keywords: Burnout Syndrome. Work engagement. Public servants. Multigroup Analysis.

RESUMO

Compreender a relação entre estresse emocional, engajamento e saúde do trabalhador durante a pandemia de COVID-19 tem sido um desafio para várias organizações em todo o mundo. Nesse contexto, este estudo teve como objetivo comparar o engajamento no trabalho e a Síndrome de Burnout em trabalhadores de universidades públicas brasileiras durante a pandemia de COVID-19. Para entender essa relação, foi realizado um estudo quantitativo com dados primários (n = 1.506) coletados por meio de questionário estruturado a partir de uma amostra de respondentes composta por servidores públicos de universidades públicas brasileiras. Técnicas robustas de estatística foram usadas para análise de dados, enfatizando a modelagem de equações estruturais de mínimos quadrados parciais (PLS-SEM) e análise multigrupo (MGA) para identificar as relações entre as dimensões. Este estudo apresenta resultados relevantes e inéditos, mostrando como o engajamento no trabalho e a síndrome de Burnout se comportam de forma diferente entre profissionais do mesmo ambiente. Também traz informações importantes para a saúde e a assistência social no que diz respeito à saúde do trabalhador e pode auxiliar no melhor entendimento a elaboração de diretrizes estratégicas para mitigar atividades e atitudes que possam contribuir para o desenvolvimento da Síndrome de Burnout no ambiente de trabalho das universidades, ainda mais no que se refere às diferenças entre categorias.

Palavras-chave: Síndrome de Burnout. Engajamento no trabalho. Servidores públicos. Análise Multigrupo.

INTRODUCTION

In recent centuries, several transformations of humanity have significantly affected the economy, and the consequent instrumental rationality and utilitarianism have led human beings away from their purposes of quality of life. Decisions made at certain times of life may entail serious future consequences, which are not always clear and perceived when the decision is made. Currently, a transformation that has affected the world economy significantly and affected the way of being of the population is the novel coronavirus COVID-19 pandemic, which was declared a global public health crisis by the World Health Organization on January 30, 2020 (MONT et al., 2020). This transformation of humanity is related to survival, given that countless people have lost their lives, jobs, and income (HOSSAIN, 2021). Governments have imposed lockdown measures to control and minimize COVID-19 transmission in many countries, resulting in a myriad of economic and educational activities being carried out remotely (BELZUNEGUI-ERASO; ERRO-GARCÉS, 2020). Given the complexities of social isolation, humanity's transformations are also replicated in organizations, where people bring their values, desires, longings, and needs and also incorporate this set of variables into the organizations to which they belong, and ensure the uniqueness of each organization, thus also making them complex (ZINGG et al., 2019).

Faced with these complexities, such as having organizational longevity, companies need to serve their stakeholders, employees, and customers and accept that there are innovations of both products and processes, which will directly and indirectly affect them. Organizational decision making is also complex in nature in the pandemic period, generating tense organizational environments that make employees prone to failures and stress and, invariably, organizational diseases (DINIBUTUN, 2020; KOC, 2019; PALENZUELA; DELGADO; RODRÍGUEZ, 2019). When this stress generates repercussions that lead to exhaustion, social and work detachment, burnout syndrome may manifest itself (PRADOS. GARCÍA-TIZON; MELÉNDEZ, 2021). Burnout syndrome, as described by Freudenberger (1974) and according to Gracia Marco, Moreno Carmona and Morera (2007, p. 113), is "a form of chronic job stress that can affect any profession." The authors continue by referring to this type of job stress as "having psychosomatic, behavioral, emotional, family, and social repercussions." In other words, it can lead to exhaustion, detachment from work, and a sense of ineffectiveness and lack of accomplishment (KROSHKAR; FARMANESH; NWEKE, 2020; LEITER; MASLACH, 2003).

In the literature, there is a need to broaden the understanding of burnout syndrome. For instance, authors such as Maslach and Leiter (2016, 2017) have brought their attention to the positive factor of this issue, which has been identified as work engagement. From this perspective, engagement consists of a state of high energy, strong involvement, and a sense of efficacy (AMANO et al., 2020; MASLACH; LEITER, 2016). In contrast, another approach defined work engagement as a positive state of mind, constant achievement, and motivational affect (BACKKER; ALBRECHT, 2018; CARMONA-HALTY; SCHAUFELI; SALANOVA, 2019, 2020; MASLACH; LEITER, 2016; SCHAUFELI et al., 2022).

Although different studies have been developed in the literature on the subject, authors including Zaluska, Kwiatkowska-Ciotucha and Slazyk-Sobol (2020) have highlighted the need for further research in higher education institutions. Moreover, Coetzee and Kluyts (2020) pointed out that public employees are predisposed to developing burnout syndrome, and one of the causes for this lies in the excessive workload. In this context, this study aimed to investigate the relationship between work engagement and burnout syndrome in civil servants of Brazilian public universities during the COVID-19 pandemic.

Regarding the area of education, this segment is relevant for research on the themes addressed since the performance of public university employees is associated with this syndrome and can directly influence personal performance (ROCHA et al., 2020), consequently affecting student engagement (AGUAYO et al., 2019; MARTÍNEZ-RUBIO et al., 2020; NAVARRO-ABAL et al., 2018). The relevance of this manuscript lies in contributing empirically to the comparison, investigation, description, and analysis of the relationships caused by burnout syndrome and engagement in the work environment during the COVID-19 pandemic, which facilitates the manifestation of burnout syndrome (DINIBUTUN, 2020).

Therefore, for Schaufeli et al. (2002) engagement is composed of three aspects (vigor, dedication, and absorption), being a positive mental state related to work. Vigor is a physical or behavioral component, it is the willingness to put effort into work in such a way that the worker feels empowered and vibrant while working; dedication is an emotional component, in which the individual is enthusiastic and connected to work; and absorption is a cognitive component, the worker feels completely immersed and focused on their activities (COETZA; DE VILLIERS, 2010; SCHAUFELI; DIJKSTRA; VAZQUEZ, 2013).

Engaged workers work hard (vigor), are deeply involved (dedication) and absorbed/concentrated (absorption) in their jobs (Schaufeli, 2018). Therefore, engagement at work is defined as the employee's passion for their work (VAN DER WALT, 2018). For Bakker et al. (2014), engagement at work can also be interpreted as a state of energy, the individual feels willing, involved and effective when developing their professional activities. Which consequently brings positive results for the professional and for the organizational environment to which the employee is a part. Since the greater the engagement at work, the greater the perception of workers about the meaning of their work (MERCALI; COSTA, 2019), improving its effectiveness.

However, in a study carried out by the mentioned authors, involving a sample of university professors from public and private institutions, it was revealed that professors have an average level of engagement, and alarmingly, this result is at the limit for a possible illness of these professionals. Thus, Mercali and Costa (2019), recommend that actions should be taken by institutions in order to impact the vigor and energy increase of professors, promoting the improvement of the positive state of professors' relationship with their work. In other words, actions that influence worker engagement and, consequently, work effectiveness. During the pandemic and in the course of activities in digital media, the challenge of maintaining or providing a work environment favorable to engagement became even greater. The numerous personal and professional demands that were concentrated in the workers' home environment further problematize the development and reconciliation of professors' life and work (RAJENDRAN; WATT; RICHARDSON, 2020). Which shows the need to seek evidence that supports the type of behavior of these professors during the pandemic, in relation to their work, and the comparison with previous moments, when normality was different.

For the measurement of engagement at work, it is known that there are different scales and different dimensions, however, as states Magnan et al. (2016), most of the research developed involving the theme

of engagement uses the scale Utrecht Work Engagement Scale (UWES) developed by Schaufeli and Bakker (2003) and adapted to the Brazilian context by Angst et al. (2009), due to its psychometric qualities.

During the pandemic, it was evident that professors with a high level of resilience faced the challenges imposed by the new normal as an opportunity to learn new things (ROMÁN, et al., 2020). This denotes a positive meaning given to that moment and is also related to the other dimensions of engagement at work. As it is not a momentary and singular state, “engagement refers to a more persistent and pervasive affective cognitive state that is not focused on any particular object, event, individual, or behavior” (Schaufeli et al., 2002, p. 74). In this way, perhaps the circumstances of the pandemic period did not profoundly interfere with worker engagement, however, new feelings about work may have surfaced.

Narayanamurthy and Tortorella (2021) reported that there were implications due to remote work during the pandemic, such as the difficulty of virtual connection and adaptation of the home environment to also be the work environment and professional activities according to the survey.

In this sense, when work activities were associated with adequate resources, individuals challenged themselves to engage in their activities and to take responsibility for more difficult tasks, which made them feel pleasure when performing them (MERCALI; COSTA, 2019). This is directly related to the characteristics of the absorption dimension, which promoted engagement at work (SCHAUFELI; DIJKSTRA; VAZQUEZ, 2013). However, when there were many demands and few resources, workers may become ill and wore out (SCHAUFELI et al., 2002), which made employees realize their inefficiency at work. Knowing the great diversity of professors in Brazil, the realities could be many those directly impacted the way they got involved with the work. It was relevant to investigate how this process took place in the midst of the pandemic in the lives of different professors in the country.

Occupational stress is one of many well-discussed issues regarding the aspects that permeate worker health (BASU; QAYYUM; MASON, 2017; DESOUKY; ALLAM, 2017; GUTSHALL et al., 2017; HUANG; VAN DER VEEN; SONG; 2018; NISAR; RASHEED, 2020; SAID; EL-SHAFEI, 2021; ZAGHINI et al., 2020). When stress becomes permanent in the work environment, it can contribute to the emergence of disorders directly related to people’s physical and mental health, such as burnout syndrome, and divergences between members and work teams (CARLOTTO; CÂMARA, 2019).

Bianchi, Schonfeld, and Laurent (2015) emphasized that burnout syndrome is characterized by sensations such as physical, psychological, and emotional exhaustion that arise due to excessive efforts at work. In addition, Malaquin et al. (2017) and Moss et al. (2016) complemented the findings mentioned above and showed that burnout syndrome is associated with harmful consequences, including low work engagement, high turnover rates, absenteeism, low worker satisfaction, and decreased quality of service. The Maslach Burnout Inventory (MBI) scale is a useful and effective tool to subjectively identify the presence and severity of burnout syndrome; it allows mental health professionals and managers to identify individuals who may be at risk and help implement prevention or treatment interventions (Soares et al., 2022). The MBI is subdivided into three dimensions: emotional exhaustion this dimension describes feelings of being emotionally exhausted by work. Individuals may feel they are at the limit of their emotional capabilities and have nothing to give for their work (MASLASH, 2018). Depersonalization (DP) refers to a negative, insensitive, or overly distant response to coworkers or customers. Individuals may begin to view their colleagues or clients as deserving of blame for their problems (SCHAUFELI; MASLACH; MAREK, 2017). Lastly, personal achievement at work involves feelings of competence and success in working with people. A low score on this dimension is associated with burnout (EDÚ-VALSANIA; LAGUÍA; MORIANO, 2022).

There is a strong relationship, in opposite directions, between the measurement of Burnout Syndrome and Engagement at work. And, in this sense, there are authors who understand that engagement is the positive side of the worker’s relationship with his work and the burnout syndrome the negative side. However, attention must be paid when relating these dimensions in an opposite way. Since not always, a worker who is not engaged with his/her work will suffer from burnout syndrome, and vice versa (SALANOVA; SCHAUFELI, 2009; BAKKER et al., 2014).

Considering the context of the pandemic period, where there was an imbalance between personal expectations and the needs of organizations, the impacts could also be felt in the family environment, which can change the perceptions of workers as a whole (TONIOLO-BARRIOS; PITT, 2020). The category of higher education professors characterizes a group of professionals with great potential to study themes related to commitment at work (ROWE et al. 2013), as it holds diverse groups of people. Therefore, the pandemic might have changed the perception of engagement at work, or even modified what are the sources of perception about engagement and effectiveness at work, since the context of work in the pandemic was completely transformed. What instigates the second hypothesis of the study.

These diverse professionals, have a challenging job that can be both a source of fulfillment and tension, as they are subjected to different regimes, conditions work and organizational policies aimed at supporting workers, besides being a complex job due to the numerous extracurricular activities and relationships with students, peers and managers (ROWE et al., 2013). Considering these characteristics and adding to this context the aggravation of the pandemic period, in which the professors' activities were fully transferred to the virtual environment, without prior preparation, engagement and effectiveness at work may change. That being said, it is understood as relevant to understand how it was and how it is during the pandemic the professors' perceptions on the subject, given the new reality of the virtual teaching/learning environment (CHIU et al., 2021).

Considering the COVID-19 pandemic, in which professors and employees had been developing their face-to-face activities, they began adapting to the new non-normality reality in developing teaching and extracurricular activities. Before the pandemic, there was a completely different reality from the one that would come to exist, so investigating the relationships between the scales in different realities is crucial.

To relate engagement at work with Burnout Syndrome, and the possible moderations of sociodemographic issues, the following hypotheses are proposed:

Work engagement is a positive emotional state characterized by high degrees of enthusiasm, energy, and absorption in work, stemming from high levels of satisfaction, motivation, and performance (SUBANDOWO; WINARDI, 2022). However, emotional exhaustion is a negative emotional state characterized by feelings of EE and low performance stemming from prolonged exposure to stressors at work (ANASTASIOU; BELIOS, 2020). More engaged workers tend to have less exhaustion because engagement contributes to well-being, making work more meaningful and rewarding, while individuals who feel more tired tend to disengage from activities due to personal imbalance and high stress levels (THOMPSON et al., 2022; TOYAMA et al., 2022). As for the relationship of vigor with exhaustion, evidence has shown that the higher the level of vigor, the lower the level of exhaustion; this means that when workers feel more energized, they tend to experience fewer symptoms of exhaustion (MASLACH, 1986; CORDES; DOUGHERTY, 1993; SETI, 2008; FRITZ et al., 2013; DANAUSKĖ; RAIŠIENĖ; KORSAKIENĖ, 2023). For this to happen, the work environment must be healthy, motivating, providing adequate resources and support or establishing policies to manage stress and prevent burnout strategies (DEMEROUTI, 2015).

The same happens with dedication and exhaustion; the more dedicated the worker is, the less they feel exhausted. Workers more committed and involved with their work tend to feel less exhausted. These negative relationships can be influenced by various factors, including quality in the relationship with colleagues and superiors, recognition for work well done, and the feeling of professional accomplishment (MASLACH; SCHAUFELI; LEITER, 2001). In return, the organization should promote creating a positive and healthy work environment, encouraging the recognition and appreciation of employees, and incentivizing equity and justice at work (HOMANN et al., 2022). Nonetheless, absorption, which refers to the mental state of being completely immersed in work, in which the worker loses track of time and space, may lead to an overload at work and, as a result, an increase in exhaustion (ABU DALAL et al., 2022). Therefore, workers should monitor these behaviors, creating a healthy and balanced work environment, encouraging disconnection from work outside of work hours, and promoting a healthy work-life balance (ADISA et al., 2022).

H1a: Vigor negatively influences Exhaustion;

H2a: Dedication negatively influences Exhaustion;

H3a: Absorption positively influences Exhaustion.

Engagement refers to an employee's level of involvement and commitment to their work, the willingness to go above and beyond what is expected, and emotional involvement. In contrast, cynicism is a negative belief attitude motivated by insincere and dishonest actions. Both behaviors are opposites; more engaged workers are less likely to be cynical, as engagement generates a sense of self and connectivity with the work, neutralizing feelings of distrust and negativity. When it comes to vigor at work and relating to cynicism, this may impact negatively, meaning cynicism may lead the worker to an increased stress load and burnout (BAKKER; EMMERIK; EUWEMA, 2006). High levels of vigor tend to have positive and collaborative attitudes, the worker tends to feel more challenged, and this mindset may protect them from burnout and cynicism (ZHAO; JIANG, 2021).

Dedicated workers tend to act less cynically, characterized by selfishness and a lack of trust in each other. A lack of dedication to work may lead to negligent behavior and carelessness (PLATANIA; MORANDO; SANTISI, 2022). Although, absorption is a state of deep and concentrated involvement with work activities, immersed in their tasks, therefore tends to be less likely to experience cynical situations (FERNANDEZ-SALINERO; TOPA; MUNOZ, 2023). More absorbed people are likelier to experience a positive and energized mental state, promoting a more harmonious work environment (NWACHUKWU et al., 2021).

H1b: Vigor negatively influences Cynicism;

H2b: Dedication negatively influences Cynicism;

H3b: Absorption negatively influences Cynicism.

Being engaged means having high energy, involvement, and enthusiasm for work; hence, they tend to be more productive and committed and develop a greater sense of professional efficacy (PATTNAIK; JENA, 2020). Workers with high levels of efficacy tend to feel confident and empowered to complete their work assignments and achieve their goals. Therefore, they tend to increase their engagement in the work environment (AHMED, 2017). Individuals with high vigor are more likely to have a strong sense of professional efficacy as they tend to take on their activities with confidence and determination to achieve their goals (PENG; CHEN, 2022).

Dedicated employees tend to have stronger feelings of effectiveness, and dedication is highly associated with motivation and effort, increasing employees' confidence and ability to perform well (BOONSIRITOMACHAI; SUD-ON, 2022). In contrast, individuals with greater absorption of work activities tend to have high levels of motivation and confidence, which are precursors to efficacy, therefore have a greater capacity to perform well in their activities and, consequently, a greater sense of well-being (JOO; BOZER; READY, 2019).

H1c: Vigor positively influences Professional Efficacy;

H2c: Dedication positively influences Professional Efficacy;

H3c: Absorption positively influences Professional Efficacy.

Finally, two control variables are presented, gender and functional category influencing the relationships between the dimensions of the scales:

H4: Gender influences the relationships of engagement dimensions with burnout syndrome dimensions;

H5: Functional category influences the relationships of engagement dimensions with burnout syndrome dimensions.

That said, we move on to the method applied to test and analyze the hypotheses raised by the study.

METHODS

Literature searches were conducted on the themes of work engagement and burnout syndrome to define the research gap. This study is justified based on the directions and needs for studies as suggested by Zaluska et al. (2020) and Coetzee and Kluyts (2020). These authors highlighted the need for further research in higher education institutions and that civil servants are more prone to develop burnout syndrome due to excessive workload.

In accordance with the proposed objective, this article presents a comparative study applied to university professors and civil servants during the 2020 pandemic (WALLIMAN, 2015), systematically elucidating a particular situation to highlight its behavior; a quantitative approach was chosen, as it aims to test theories and establish relationships between different variables, measured by research instruments, making it possible to subsequently analyze the data through statistical procedures (CRESWELL; CRESWELL, 2021).

Instruments

To evaluate the levels of burnout syndrome in professionals working in the educational area of Brazilian public universities, we applied the Maslach Burnout Inventory-General Survey (MBI-GS) scale of Maslach and Jackson (1981), which was adapted and validated for Portuguese by Tamayo and Tróccoli (2002) and used in populations with diverse types of occupations (MASLACH; SCHAUFELI; LEITER, 2001). This 16-variable scale assesses the levels of emotional Exhaustion (EX), Cynicism (CY), and Professional Efficacy (PE), and the items are measured quantitatively using a six-point Likert scale ranging from 0 (never) to 6 (every day). The Utrecht Work Engagement Scale (UWES) of Schaufeli, Bakker and Salanova (2006) was adapted and validated for Portuguese by Angst, Rosana, Benevides-Pereira, Ana Maria T., and Porto-Martins (2003). This 17-item scale evaluates Vigor (VI), Dedication (DE), and Absorption (AB) using a six-point Likert scale ranging from 0 (never) to 6 (every day).

Participant and procedure

The study population consisted of workers of Brazilian public universities. This is a non-probability convenience sampling with the application of an online questionnaire from May to July 2020, which was defined due to the COVID-19 pandemic that caused changes in work environments. University employees were invited to participate in the survey. This invitation was supported by the universities in all stages and had help from the data processing center of the Federal University of Santa Maria, located in the state of Rio Grande do Sul, Brazil. The research instruments were made available by e-mail, the confidentiality agreement, and the informed consent form. During the data collection period, the employees were subdivided into two job categories: professors and civil servant. Of the 4,708 questionnaires sent, 1,506 valid questionnaires were returned for analysis, being 552 professors (11.81%) and 954 civil servants (20.28%). This study is part of a project registered and approved by the Research Ethics Committee and National Research Ethics Commission (registration n. 57883816.4.0000.5346; opinion n. 1.638.754).

Data analysis techniques

To confirm the relationships between the proposed dimensions and compare the genders and functional categories, PLS-SEM and Multigroup Analysis (MGA) were used by employing the SmartPLS® software version 4.1.0.2. The method encompasses variance-based structural equation modeling and multigroup analysis techniques, which are suitable for predicting and relating key constructs, identifying driving constructs, and comparing groups two by two (HAIR et al., 2017). To use the PLS-SEM algorithm, the partial least squares method was chosen (RINGLE; WENDE; BECKER, 2022). The measurement model presents nine parameters (β 's) that connect to the six dimensions / latent variables (LV's) and 33 indicators/observed variables (OV's), and when structured in a multigroup manner, the models become 27 hypotheses, nine of them comparing the genders and another nine comparing the functional categories (HAIR; GABRIEL; PATEL, 2014).

Discriminant validity is understood as an indication of how much the dimension is truly distinct from the others according to the empirical patterns of the model (HAIR et al., 2014). There are two traditional criteria

to analyze discriminant validity: using the cross loading to identify indicators with higher factor loadings in the original dimensions (latent variables) than in the other dimensions (CHIN, 1998) and the Fornell and Larcker criterion (FORNELL; LARCKER, 1981), which determines the comparison of the AVE values of each dimension with the values of Pearson's correlations between the dimensions (latent variables), and the column with the square roots of the AVEs must have higher values than those of the correlation matrix.

The coefficient of explanation (R^2) is a measure of the model's explanatory and predictive ability and is calculated as the squared correlation between the specific current values of an endogenous construct and predictive values, demonstrating the combined effects of the exogenous latent variables on the endogenous latent variables (HAIR et al., 2017; SARSTEDT; CHEAH, 2019). The predictive validity measure Q^2 , which is also known as the Stone-Geisser indicator, assesses the accuracy of the fitted model. The values estimated by the process represent how well the measurement model can predict the originally observed values.

In the following analysis, the results of the moderating effects of gender and functional category using MGA were presented, and MGA is used aimed to statistically understand significant differences between two groups (male and female participants) and the functional categories (professors and civil servants) in relation to engagement and burnout syndrome. Before performing MGA, measurement invariance of composite models is tested using the three-step procedure (HENSELER; RINGLE; SARSTEDT, 2016). NGUYEN-PHUOC et al., 2021) suggested three steps, being step 1: configural invariance assessment, step 2) establishment of compositional invariance assessment, and step 3) assessment of equal means and variances.

ANALYSIS OF RESULTS

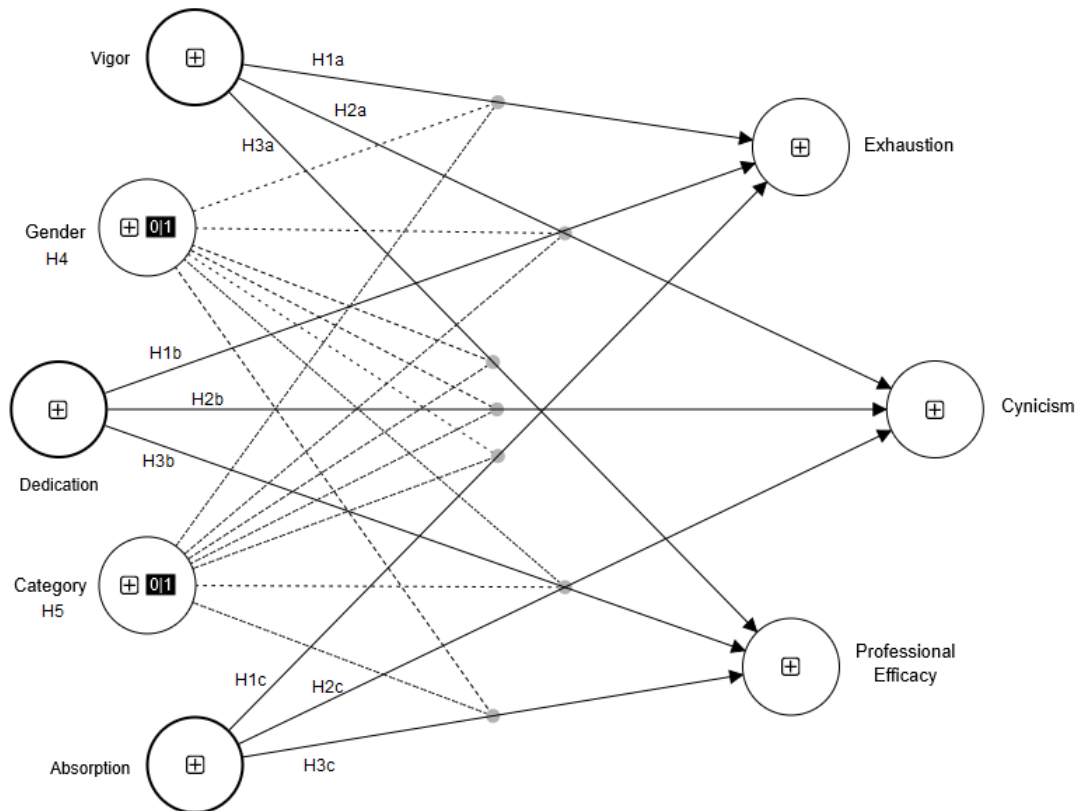
The respondents were predominantly female (836; 55.33%) and male (670; 44.67%), where 33.62% were between 31 and 40 years old and most of them (32.36%) with a PhD. Moreover, 58.84% have up to 10 years of service time, where 954 (63.35%) have the position of civil servants Class D (28.92%), and 552 (36.65%) are professors, 33.88% of whom are higher education professors. During data collection, the surveyed employees (80.87%) had not taken a vacation in the last 60 days, 78.09% had no leadership position, 66.58% worked 40 h a week, and 92.72% of the sample said they liked their job at the university.

The model of the structural equations of measurement with the multigroup analysis and respective hypotheses to be tested are shown in Figure 1. In this context, we sought to compare the genders and functional categories that rely on illustrating the research hypotheses by displaying the correlations between the LV's and OV's and their causal relationships (LOPES et al., 2020; HAIR et al., 2017).

Given the multidimensional model, Vigor and Dedication are considered the central dimensions of work engagement and are opposed, respectively, to Exhaustion and Cynism, which are also considered the center of burnout syndrome. However, the Absorption dimension of Engagement cannot be considered the opposite of Professional Efficacy of burnout, when this is considered as low professional efficacy since it is a state of optimal experience that occurs as a consequence of work engagement (CSIKSZENTMIHÁLYI, 1990; GONZÁLEZ-ROMÁ et al., 2006; MASLACH et al., 2001; SCHAUFELI, 2018; SCHAUFELI; BAKKER; VAN RHENEN, 2009).

In this perspective, this continuum of engagement at work - burnout syndrome indicates a goal to be achieved for burnout interventions, since in this context, individuals present increased energy, vigor, resilience, generating more involvement, absorption with the tasks and thus ensuring better professional and organizational effectiveness. Because of this, the state of engagement brings positive consequences, both for the worker and for the organization in which they work (MASLACH; LEITER; JACKSON, 2012; SCHAUFELI et al., 2006; SCHAUFELI; SALANOVA, 2010).

Figure 1 – Hypothetical multigroup model for measuring dimensions



Source: SmartPLS® Software v. 4.1.0.2.

The first round of the measurement model with the values of the factorial loadings that measure the marginal contribution that each ExL (exogenous latent) has in relation to its respective EnL (endogenous latent) is presented in Table 2. The algorithm converged and reached stable results in seven iterations. The variable ABS_06 was excluded as its factor loading ($\lambda = 0.350$) was below the benchmarks ($\lambda > 0.6$).

Cronbach's alpha and composite reliability (ρ_c) were calculated to identify the internal reliability of the scale. The average extracted variance (AVE) was used to assess the convergent validity of the measurement model (FORNELL; LARCKER, 1981; HAIR et al., 2016); both are listed in Table 2.

The Cronbach's alpha coefficients of the original UWES scale are: VI: $\alpha = 0.86$; DE: $\alpha = 0.87$; and AB: $\alpha = 0.85$ (Vazquez et al., 2015) and the measurement model found similar reliability for the VLs, being: VI: $\alpha = 0.877$, DE: $\alpha = 0.927$, and AB: $\alpha = 0.859$. The original MBI-GS scale, however, presented the following: EX: $\alpha = 0.93$, CY: $\alpha = 0.83$, and PE: $\alpha = 0.82$ and the measurement model found for the three VLs had following reliabilities: EX: $\alpha = 0.885$, CY: $\alpha = 0.897$, and PE: $\alpha = 0.879$.

The ρ_c of the model are as follows for the UWES scale: VI: $\rho_c = 0.907$, DE: $\rho_c = 0.945$, and AB: $\rho_c = 0.898$, and for the MBI-GS scale: EX: $\rho_c = 0.914$, CY: $\rho_c = 0.928$, and PE: $\rho_c = 0.908$. The sample was proven to be reliable since all the VLs in the model have $\rho_c > 0.7$ (Hair et al., 2014).

Table 1 – Cronbach’s Alpha, composite reliability, and average variance extracted (AVE) for the UWES → MBI-GS model

Dimensions	Cronbach’s alpha (α) of the original scale	Cronbach’s alpha (α) measured	Composite reliability (ρc)	Average variance extracted (AVE)
Vigor (VI)	0.860	0.877	0.907	0.622
Dedication (DE)	0.870	0.927	0.945	0.774
Absorption (AB)	0.850	0.859	0.898	0.638
Exhaustion (EX)	0.930	0.885	0.914	0.641
Cynicism (CY)	0.830	0.897	0.928	0.764
Professional Efficacy (PE)	0.820	0.879	0.908	0.624

Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

The Fornell-Larcker criterion is based on the idea that a dimension shares more variance with its indicators than with any other dimension (Hair et al., 2017). The Heterotrait-Monotrait Ratio (HTMT) criterion is considered more efficient as the cross-factor loading and Fornell-Larcker criteria may not be consistent for identifying discriminant validity (LOPES et al., 2020; HAIR et al., 2017; HENSELER; RINGLE; SARSTEDT, 2014; HWANG et al., 2020; KHAN et al., 2019). The HTMT results were greater than 0.9, which indicates no discriminant validity; therefore, Henseler et al. (2014) suggested that, by the bootstrapping method, the upper limit for 5% significance should be less than 1.0. The results of these analyses are listed in Table 2.

Table 2 – Discriminant validity analysis using the Fornell-Larcker and HTMT for the UWES-MBI-GS model

Dimensions	\sqrt{AVE}	Pearson’s correlation matrix					
		AB	CY	DE	EX	PE	VI
Absorption (AB)	0.799						
Cynicism (CY)	0.874	-0.615					
Dedication (DE)	0.880	0.775	-0.687				
Exhaustion (EX)	0.801	-0.457	0.596	-0.477			
Professional Efficacy (PE)	0.790	0.661	-0.601	0.693	-0.368		
Vigor (VI)	0.789	0.774	-0.645	0.867	-0.551	0.681	
Upper Limit (HTMT) ^{97.5%} .							
Cynicism (CY)		0.722					
Dedication (DE)		0.982	0.781				
Exhaustion (EX)		0.557	0.695	0.556			
Professional Efficacy (PE)		0.777	0.713	0.789	0.463		
Vigor (VI)		0.908	0.751	0.964	0.643	0.809	

Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

The UWES-MBI-GS model meets the Fornell-Larcker criterion since the values of the square root of the AVEs of the dimensions (main diagonal) are higher than the values of the correlations between them (other values). As for the HTMT criterion, the pairs of dimensions are below 1.00 and meet the precepts of Henseler et al. (2014).

To evaluate whether the structural model represents the theories underlying the measurement model and allow the predictive ability of the model and the relationships between the dimensions of this model to be analyzed, this evaluation considers the analysis of (multi)collinearity by estimating the variance inflation factor (VIF), the f^2 effect, the intensity of the coefficient of determination (R^2), the evaluation of the predictive relevance (Q^2) using the Blindfolding method, and finally the evaluation of the structural coefficients by the Student’s t-test. The significance of the values of f^2 , R^2 , and the betas is determined by the bootstrapping method for 5000 subsamples (HAIR et al., 2017; SARSTEDT; CHEAH, 2019).

The values of the VIF, f^2 effect, R^2 and predictive relevance measure Q^2 for the UWES-MBI-GS model are presented in Table 4. By analyzing the multicollinearity among the dimensions (VIF), we observed that the Vigor dimension with the other endogenous dimensions presented a VIF = 3.233, the Dedication dimension with the other dimensions a VIF = 3.260, and finally, the Absorption dimension presented a VIF = 3.509, that is, all relations did not present problems related to collinearity (VIF < 5).

The effect size of the exogenous dimension Vigor on Exhaustion dimension is moderate ($f^2 = 0.105$) and statistically significant, whereas the effect on the Professional Efficacy dimension is weak ($f^2 = 0.029$) and significant. In contrast, the effect of the exogenous dimension Dedication on the endogenous dimension Exhaustion is moderate ($f^2 = 0.108$) and significant ($p < 0.05$), and Dedication on Professional Efficacy is characterized as weak ($f^2 = 0.052$), albeit significant. Absorption does not show significant effects with the dimensions of Burnout syndrome ($p > 0.05$) (Table 3).

Professional Efficacy had an $R^2 = 0.507$, Cynicism of $R^2 = 0.483$, and Exhaustion of $R^2 = 0.309$ and had the coefficient of explanation with considerable effect. We also observed that the model was relevant from the point of view of those that the Q^2 values were greater than zero. According to the indicators used, the relationships of the dimensions of the engagement scale with the dimensions of the burnout syndrome scales are supported.

Table 3 – VIF values and the f^2 effect, R^2 and Q^2 for the UWES-MBI-GS model

Exogenous dimensions	Endogenous dimensions (significance)		
	Cynicism	Exhaustion	Professional Efficacy
	VIF		
Vigor	3.233	3.233	3.233
Dedication	3.260	3.260	3.260
Absorption	3.509	3.509	3.509
	f^2 effect (p-value)		
Vigor	0.018 (0.036)	0.105 (0.000)	0.029 (0.006)
Dedication	0.108 (0.000)	0.001 (0.125)	0.052 (0.000)
Absorption	0.001 (0.602)	0.004 (0.399)	0.004 (0.368)
R^2 (p-value)	0.309 (0.000)	0.483 (0.000)	0.507 (0.000)
Q^2	0.181	0.345	0.289

Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

The model hypotheses were rejected in only two relationships (H_4 and H_8), as can be demonstrated in Table 4. Hypothesis H_{1a} : Vigor directly and negatively influences Exhaustion was accepted and showed internal coefficient ($\beta_{1a} = -0.618$) and t-test = 11.878 ($p < 0.05$); hypothesis H_{1b} : Vigor directly and negatively influences Cynicism was accepted with internal coefficient ($\beta_{1b} = -0.219$) and t-test = 4.140 ($p < 0.05$); and hypothesis H_{1c} : Vigor directly and positively influences Professional Efficacy was accepted with internal coefficient ($\beta_{1c} = 0.275$) and t-test = 5.515 ($p < 0.05$).

Hypothesis H_{2a} : Dedication directly and positively influences Exhaustion was refuted with internal coefficient value ($\beta_{2a} = -0.057$) and t-test value = 1.095 ($p > 0.05$); hypothesis H_{2c} : Dedication directly and negatively influences Cynicism was accepted with internal coefficient ($\beta_{2c} = -0.543$) and t-test value = 11.249 ($p < 0.05$); and hypothesis H_{2c} : Dedication directly and positively influences Professional Efficacy was accepted and presented internal coefficient ($\beta_{2d} = 0.366$) and t-test = 7.561 ($p < 0.05$).

Hypothesis H_{3a} : Absorption directly and positively influences Exhaustion was accepted and presented internal coefficient ($\beta_{3a} = 0.130$) and t-test = 2.356 ($p < 0.05$); hypothesis H_{3b} : Absorption directly and positively influences Cynicism was refuted and presented internal coefficient ($\beta_{3b} = 0.051$) and t-test = 1.001

($p > 0.05$); and hypothesis H_{3c}: Absorption directly and positively influences Professional Efficacy was accepted and presented internal coefficient ($\beta_{3c} = 0.101$) and t-test = 2.086 ($p < 0.05$).

Table 4 – Results of the hypotheses of the UWES-MBI-GS model

Hypothesis	Relationship	Value			Result
		β	t-stat.	p-value	
H1a	VI → EX	-0.618	11.878	0.000	A
H1b	VI → CY	-0.219	4.140	0.000	A
H1c	VI → PE	0.275	5.515	0.000	A
H2a	DE → EX	-0.057	1.095	0.274	R
H2b	DE → CY	-0.543	11.249	0.000	A
H2c	DE → PE	0.366	7.561	0.000	A
H3a	AB → EX	0.130	2.356	0.019	A
H3b	AB → CY	0.051	1.001	0.317	R
H3c	AB → PE	0.101	2.086	0.037	A

R = Refuted; A = Accepted

Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

The results showed that the measurement invariance of both groups was partially established (Tables 5a and 5b), thus becoming the minimum requirement to evaluate the significant difference between both groups using MGA (HAIR et al., 2019; NGUYEN-PHUOC et al., 2021).

Table 5a – Results of invariance measurement testing using permutations (steps 1 and 2)

Dimensions	Step 1		Step 2			Partial measurement invariance established
	Configural invariance (same algorithm for both groups)	Original correlation	Compositional invariance			
			Confidence interval	p-value		
			F-M	Pro-Ser		
VI	Yes	1.000	[0.999; 1.000]	0.842	0.869	Yes
DE	Yes	1.000	[1.000; 1.000]	0.639	0.792	Yes
AB	Yes	1.000	[0.999; 1.000]	0.291	0.975	Yes
EX	Yes	0.999	[0.999; 1.000]	0.071	0.167	Yes
CY	Yes	1.000	[1.000; 1.000]	0.645	0.672	Yes
PE	Yes	1.000	[0.999; 1.000]	0.680	0.937	Yes

F = Female; M = Male; Pro = Professor; Ser = Civil Servant

Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

Table 5b – Results of invariance measurement testing using permutations (step 3)

Dim.	Step 3 - part 1				Step 3 - part 2				Full measurement Invariance established
	Mean original difference				Variance original difference				
	(F - M)	CI	p-value	Equal	(F - M)	CI	p-value	Equal	
VI	-0.097	[-0.095; 0.101]	0.054	Yes	0.014	[-0.162; 0.161]	0.872	Yes	Yes
DE	0.008	[-0.097; 0.101]	0.887	Yes	-0.016	[-0.181; 0.151]	0.849	Yes	Yes
AB	0.024	[-0.096; 0.104]	0.633	Yes	0.050	[-0.177; 0.172]	0.544	Yes	Yes
EX	0.267	[-0.098; 0.097]	0.526	Yes	0.034	[-0.120; 0.107]	0.562	Yes	Yes
CY	-0.016	[-0.106; 0.094]	0.759	Yes	-0.127	[-0.211; 0.208]	0.241	Yes	Yes
PE	-0.041	[-0.093; 0.108]	0.438	Yes	0.043	[-0.221; 0.207]	0.697	Yes	Yes
	(Pro-Sta)	CI	p-value	Equal	(Pro-Sta)	CI	p-value	Equal	
VI	0.052	[-0.100; 0.101]	0.328	Yes	-0.111	[-0.154; 0.157]	0.170	Yes	Yes
DE	0.043	[-0.105; 0.098]	0.427	Yes	-0.139	[-0.180; 0.163]	0.102	Yes	Yes
AB	0.067	[-0.102; 0.106]	0.206	Yes	-0.148	[-0.178; 0.167]	0.094	Yes	Yes
EX	-0.036	[-0.097; 0.107]	0.504	Yes	-0.022	[-0.128; 0.120]	0.718	Yes	Yes
CY	-0.038	[-0.105; 0.106]	0.488	Yes	-0.050	[-0.237; 0.215]	0.659	Yes	Yes
PE	0.029	[-0.110; 0.105]	0.594	Yes	-0.160	[-0.236; 0.217]	0.217	Yes	Yes

CI = Confidence interval; F = Female; M = Male; Pro = Professor; Ser = Civil Servant
 Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

The MGA results are presented in Tables 6a and 6b. Both methods, including Henseler's MGA (the non-parametric method) and the permutation test, were used. In Henseler's MGA method, a p-value below 0.05 demonstrated significant differences between specific path coefficients across two groups at a significance level of 5%. Nonetheless, a p-value < 0.05 will be used in the permutation test.

Table 6a – Multigroup analysis results: female (F) vs male (M)

Hip.	Relationship	PC (F - M)	p-value (difference) Henseler's MGA	Supported permutation test	Result
H4a	VI → EX	-0.024	0.586	0.827	No / No
H4b	VI → CY	-0.046	0.667	0.666	No / No
H4c	VI → PE	-0.005	0.521	0.957	No / No
H4d	DE → EX	-0.008	0.532	0.935	No / No
H4e	DE → CY	0.035	0.358	0.716	No / No
H4f	DE → PE	-0.087	0.811	0.378	No / No
H4g	AB → EX	0.063	0.285	0.569	No / No
H4h	AB → CY	0.029	0.394	0.787	No / No
H4i	AB → PE	0.110	0.125	0.250	No / No

PC = Path coefficients; F = Female; M = Male
 Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

Table 6b – Multigroup analysis results: professors (Pro) vs Civil Servant (Ser)

Hip.	Relationship	(Pro - Ser)	p-value (difference)		Result
			Henseler's Test	Permutation Test	
H5a	VI → EX	-0.154	0.940	0.120	No / No
H5b	VI → CY	0.055	0.309	0.618	No / No
H5c	VI → PE	-0.146	0.926	0.149	No / No
H5d	DE → EX	-0.090	0.810	0.380	No / No
H5e	DE → CY	-0.126	0.901	0.197	No / No
H5f	DE → PE	0.065	0.260	0.520	No / No
H5g	AB → EX	0.249	0.011	0.022	Yes / Yes
H5h	AB → CY	0.060	0.282	0.563	No / No
H5i	AB → PE	-0.003	0.513	0.974	No / No

PC = Path coefficients; Pro = Professor; Ser = Civil Servant

Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

In hypothesis H5g, there was a statistically significant difference in the MGA analysis. In this case, we chose to make the comparative analyses with the functional categories separated (Table 7).

Table 7 – Results of the hypotheses of the UWES-MBI-GS multigroup model by functional category

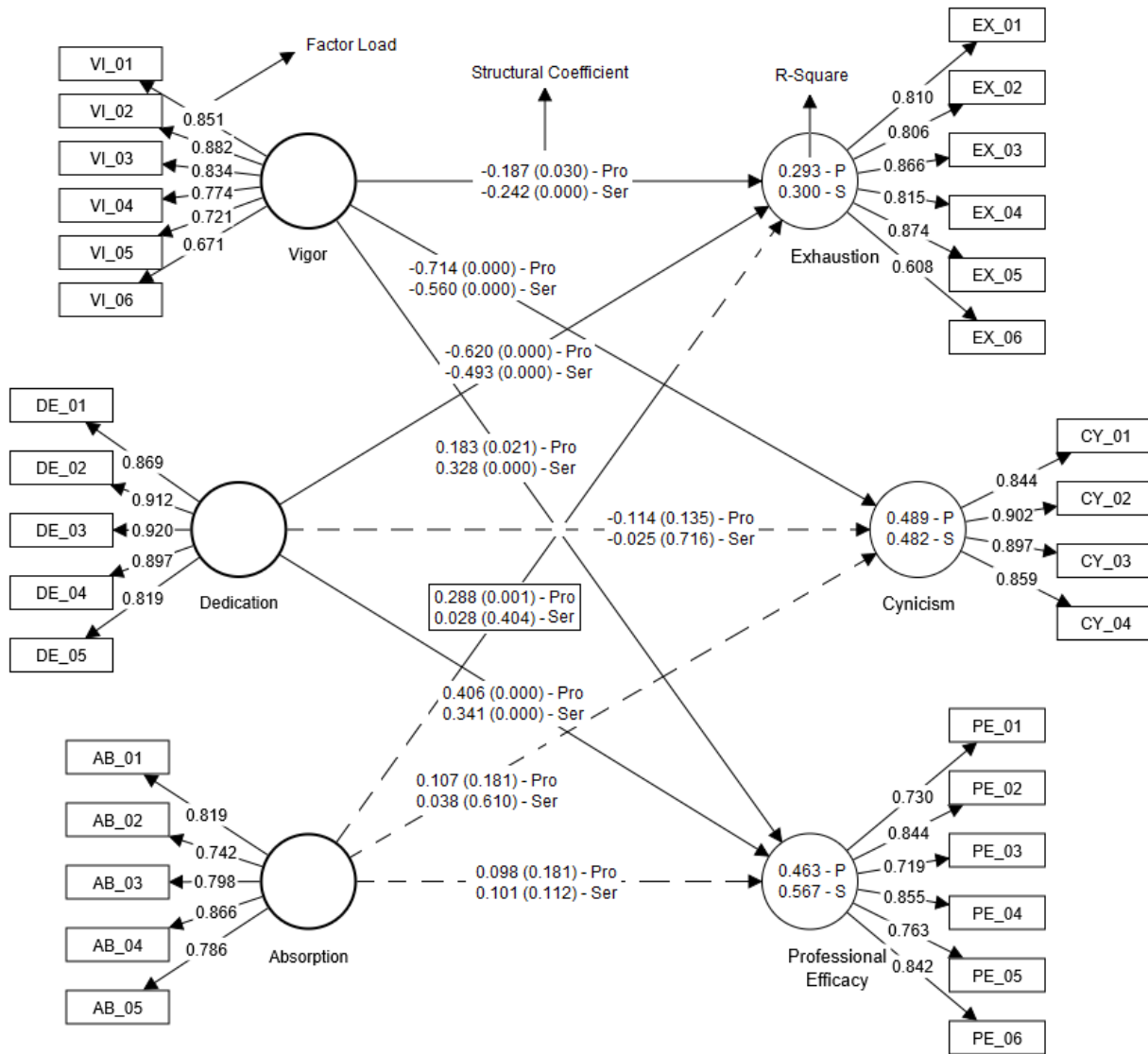
Hypotheses	Values (Pro)			Result	Values (Ser)			Result	
	β	t-stat.	p-value		β	t-stat.	p-value		
H5a	VI → EX	-0.187	2.174	0.030	A	-0.242	3.563	0.000	A
H5b	VI → CY	-0.714	9.952	0.000	A	-0.560	8.036	0.000	A
H5c	VI → PE	0.183	2.303	0.021	A	0.328	5.200	0.000	A
H5d	DE → EX	-0.620	8.277	0.000	A	-0.493	7.781	0.000	A
H5e	DE → CY	-0.114	1.493	0.135	R	-0.025	0.364	0.716	R
H5f	DE → PE	0.406	4.954	0.000	A	0.341	5.623	0.000	A
H5g	AB → EX	0.288	2.658	0.001	A	0.028	0.404	0.687	R
H5h	AB → CY	0.107	1.457	0.138	R	0.038	0.510	0.610	R
H5i	AB → PE	0.098	1.339	0.181	R	0.101	1.587	0.112	R

R = Refuted; A = Accepted

Source: Estimated using SmartPLS® Software v. 4.1.0.2 (RINGLE; WENDE; BECKER, 2022).

By comparing Table 4 (general model) with Table 7 (multi-group model) in relation to the functional category, we observed that when separated by functional category, hypotheses H3a/H5g ceased to be significant for the civil servant (i.e., the absorption was not significantly related to exhaustion). However, when analyzing the separate positions in hypotheses H3c/H5i, it is no longer significant for both professors and civil servant. Finally, in hypotheses H2b/H5e, even when updated so that the categories were separated, there were still no significant differences for both groups. Thus, Figure 2 shows the final model analyzed by the multigroup model.

Figure 2 – Final measurement multigroup model UWES-MBI-GS by functional category



Source: SmartPLS® Software v. 4.1.0.2.

Gabriel and Patel (2014) determined the measurement model for the endogenous and exogenous dimensions and reported that it was possible to visualize which variables describe each construct. The final model of this study is illustrated in Figure 2 and shows the coefficients of explanation and prediction (R^2), structural coefficients (β), the significance (p-value), the rejected hypotheses (dashed lines), and the accepted hypotheses (solid lines).

DISCUSSION OF THE RESULTS

Based on the results obtained in the analyses, most of the hypotheses presented positive or negative relationships with the compared dimensions. In this context, regarding hypothesis H_{1a} , we noted that the vigor dimension, which according to Schaufeli, Dijkstra and Vazquez (2013), means people are characterized as being strong, with high energy levels, keeping themselves vibrant in work activities, with

mental resilience, possessing characteristics of self-confidence and persistence, had a direct and negative influence on the Emotional Exhaustion dimension. Conversely, Maslach and Jackson (1981) reported that emotional exhaustion is determined by the absence or non-existence of energy, tiredness, feelings of being overloaded, and the person's moral, emotional, physical, and psychological exhaustion. These findings corroborate Csikszentmihályi (1990), Demerouti et al. (2001), González-Romá et al. (2006), Schaufeli et al. (2009), and Schaufeli et al. (2002) regarding the fact that the dimensions of work engagement are opposite to the "core" dimensions of burnout: Emotional Exhaustion and Depersonalization.

In hypothesis H_{1b}, Vigor showed a negative relationship with depersonalization, since when individuals present sensations related to this dimension, they may suffer from anxiety, irritability, and lack of motivation. Maslach and Jackson (1981) emphasized that at this level, the worker may begin to develop emotional insensitivity when it comes to dealing with their coworkers, clients, and even the company, treating them as objects.

As for hypothesis H_{1c}, we found that vigor positively influenced personal involvement at work dimension, which shows that for the sample investigated, as the feelings related to vigor increase, personal involvement at work, which according to Maslach and Leiter (2017), consists of the positive pole of the burnout syndrome tool, because in this dimension, the workers show involvement with their duties, greater interest in their activities, and develop personal and professional skills.

With regard to hypothesis H_{2a}, dedication does not directly and positively influence burnout. In the case of the sample of civil servants surveyed in this study, the higher the motivation is, the exhaustion will not undergo direct change, and if it does, it does so negatively. This finding is corroborated by Asikainen et al. (2020), as the authors stated that students who apply a more profound approach suffered less wear and tear (exhaustion) in their studies. When related to the present study, public servants who seek to dedicate themselves more are less likely to face attrition at work, as hypothesis H_{2a} was refuted. This indicates a positive influence, which implies that hypothesis H_{2a} suffers a negative influence, decreasing exhaustion. As for H_{2b}, dedication directly and negatively influences cynicism. In the study by Nimon and Shuck (2020), the authors stated that these two dimensions are the most important in their respective scales. Complementarily, De Ruiter et al. (2020) reported that the higher the person's anger, the lower their dedication, and their experiment focused on the behavior of professors.

For hypothesis H_{2c}, we noticed that, according to the analyses, the relationship was corroborated, given that the higher the dedication, the higher the professional efficacy. Hence, this study is in line with Xiong et al. (2020), who showed that professional efficacy positively affected dedication. The authors explored different factors in high school self-efficacy.

As verified in the corroborated hypothesis H_{3a}, absorption influences exhaustion directly and positively. Therefore, changes in absorption levels cause changes in exhaustion levels. These findings are corroborated by Salmela-Aro and Read (2017) and Asikainen et al. (2020), who indicated that the higher the engagement, the higher the exhaustion, since absorption is a dimension of engagement.

Intuitively, one would expect the absorption and cynicism dimensions to be inversely related. In fact, the refutation of hypothesis H_{3b} signals this as it states that cynicism is directly and positively influenced by absorption. Thus, it is valid to state that if there is a relationship between these dimensions, the higher the absorption, the lower the levels of cynicism. Salmela-Salmela-Aro and Read (2017) highlighted this mismatch between the dimensions and reported that cynicism increases as engagement decreases in a sample of higher education students.

Regarding hypothesis H_{3c}, it is corroborated that absorption directly and positively influences professional efficacy. Thus, the higher the levels of absorption, the higher the levels of professional efficacy. Similarly, Xiong et al. (2020) pointed to a positive relationship between the absorption dimension and the professional efficacy of a group of professors.

Nevertheless, when performing the analysis using the MGA model, hypothesis H_{5c} had a significant difference when comparing the groups according to the functional categories (Table 6). Given this fact, the

analysis presented in Table 7 was performed. Moreover, when performing the MGA analysis, hypothesis H_{2a}, which had been refuted in the UWES-MBI-GS analysis (Table 4), where the answers had not been stratified, was modified in order that in the analysis between respondents' functional categories (professors and civil servant), hypothesis H_{5d} was accepted and corroborated, thus indicating that dedication has a negative influence on burnout in both categories. These findings corroborate Tjink, Vergouwen and Smulders (2014), who evaluated the emotional exhaustion of medical professors and reported that dedication negatively influences exhaustion.

Professors and civil servants may value different aspects of their work which, when aligned with their dedication, reduce the sensation of exhaustion. This can occur due to a sense of accomplishment and personal efficacy, which are known to mitigate the effects of stress and workload (BAKKER; DEMEROUTI, 2007; FIDA et al., 2020). Another change that occurred when performing the MGA and separating the functional categories was the hypothesis H_{2b}, which was accepted, where in the new model, it is identified as hypothesis H_{5e}, being refuted, that is, dedication does not influence cynicism.

According to Maslach et al. (2001) the absence of a significant relationship between dedication and cynicism among teachers and public servants may be due to the heterogeneity within each group regarding the interpretation of 'dedication' and the different ways of coping with specific job demands. Professors may face unique challenges that affect their level of cynicism, even when they are dedicated (such as dealing with disciplinary challenges or a lack of resources) (BEZUIDENHOUT; CILLIERS, 2010), while civil servants may deal with other types of bureaucratic pressures (SAGLAM, 2022). Therefore, it is suggested that there is a need to investigate more deeply the working conditions, expectations, and individual perceptions of each professional group.

Regarding H_{5g}, what was previously characterized by H_{3a} for the professors remained as a result (Table 6), corroborating the hypothesis that absorption directly and positively influences exhaustion. However, when the analysis is performed for the civil servant, the hypothesis is refuted, demonstrating that in the case of these respondents, absorption does not directly and positively influence the exhaustion of the civil servant.

The reason why absorption may not relate to exhaustion in civil servants can be explained by the nature of the tasks and the work environment. Often, these workers operate within highly structured and bureaucratic systems where rules and standardized procedures dominate. In this environment, absorption may not necessarily translate into increased workload or emotional demands, which are factors more commonly associated with exhaustion.

Moreover, absorption, as a state of flow at work, can act as a positive coping mechanism, helping individuals to handle work demands more effectively. People absorbed in their tasks may experience time differently, which can mitigate the perception of workload and prevent exhaustion.

Therefore, the relationship between absorption and exhaustion may not be direct in civil servants, given that absorption can effectively function as a buffer against exhaustive demands, through positive engagement with work and an altered perception of work demands.

CONCLUSIONS

Professionals in Brazilian public universities work in a burdensome environment that causes unprecedented emotional stress, and the COVID-19 pandemic has elevated these levels in unprecedented ways. Nevertheless, understanding the relationship between emotional distress, engagement, and worker health in this period is challenging. In this context, this study aimed to compare work engagement and burnout syndrome in Brazilian public university workers during the COVID-19 pandemic. One thousand five hundred and six professionals working in public universities in Brazil answered a survey and reported their sociodemographic and organizational characteristics of work related to work engagement and burnout. Analyses emphasizing partial least squares structural equation modeling and multigroup analysis were carried out to elicit the relationships among the constructs.

The results showed that, among the nine proposed hypotheses, only two (H_{2a} and H_{3b}) were refuted because they did not present sufficient factor loading for the model to have convergent validity. Given the above, it is plausible that dedication does not directly and positively influence exhaustion and that absorption does not directly and positively influence cynicism.

When performing the multi-group analysis, we observed that one of the hypotheses (H_{5g}) made it necessary to perform a separate analysis between the professors and civil servants (Table 6b). Thus, when analyzing utilizing MGA, there were significant changes in some responses compared to the results of the analyses without stratification by functional categories. It is worth noting that the most significant change occurred in hypothesis H_{5g} (previously H_{3a} for joint analysis), which indicates that absorption is not significantly related to exhaustion in the case of the civil servant, although it remains significant in the professors' group.

This study is highly relevant due to the COVID-19 pandemic, increasing the development of burnout syndrome even more occasionally (Dinibutun, 2020), especially in the context of education, which was directly affected by the pandemic. Moreover, by investigating differences between functional categories, this study sheds light on the specificity of each group that coexists in the university environment. This study provides important information for health and social care in the community concerning worker health and may help better understand and develop strategic guidelines to mitigate the occurrence of activities and attitudes that may contribute to the development of burnout syndrome in the workplace of universities, even more so regarding the differences existing in functional categories.

Notably, this study has several limitations, as it uses a non-probability convenience sampling and a sample of 1,511 civil servants, which is small compared to the population of professors and civil servants in the educational sector. Concerning future studies, investigations should contemplate the dimensions in conjunction with issues related to anxiety, depression, well-being, and quality of life in civil servants.

Finally, it can be said that the research findings go beyond the field of public institutions, indicating that other sectors could benefit from the adoption of similar intervention models. For industries characterized by high emotional labor demands, implementing wellness programs that prioritize mental health, encourage professional development, and support work-life balance could be especially beneficial. Such an approach not only aids in preventing burnout but also enhances organizational efficiency and employee satisfaction across diverse professional landscapes. Additionally, future research should explore the integration of mental health considerations into organizational policies, aiming to build a resilient workforce capable of navigating the complexities of contemporary work environments, including the ongoing and evolving challenges posed by global health crises.

ACKNOWLEDGMENTS

This study was supported by the following Brazilian research agencies: Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES) and Fundação de Amparo à Pesquisa do Estado do Rio Grande do Sul, Brazil (FAPERGS). We would also like to thank Atlas Assessoria Linguística (ATLAS) for language editing.

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