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INTERAÇÃO VIDA-TRABALHO E BURNOUT: UM ESTUDO NACIONAL
WORK-LIFE INTERACTION AND BURNOUT: A NATIONAL STUDY
CONCILIACIÓN DE LA VIDA-TRABAJO Y BURNOUT: UN ESTUDIO NACIONAL

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RESUMO

Introdução: As vertentes profissional e pessoal são fundamentais para a atuação e desenvolvimento dos indivíduos, sendo crucial que interajam harmoniosamente. A síndrome de burnout é uma condição clínica que se desenvolve sob exposição contínua ao stress e sobrecarga. É, por isso, importante compreender como as práticas de interação vida-trabalho se relacionam com o burnout, e como ambos os constructos diferem de acordo com variáveis sociodemográficas.

Objetivo: Estudar a relação entre a interação bidirecional vida-trabalho e o burnout em trabalhadores no ativo e a associação destes constructos com características sociodemográficas, visando identificar o papel que as organizações podem ter nestas relações.

Métodos: Estudo exploratório transversal, quantitativo e descritivo, com uma amostra de 255 trabalhadores portugueses. Os dados foram recolhidos através do Survey Work-Home Interaction NijmenGens (SWING), Maslach Burnout Inventory General Survey (MBI-GS) e questionário sociodemográfico, e analisados através de t-Student, ANOVA, correlação e regressão linear múltipla.

Resultados: Dos resultados gerais, destaca-se que as interações negativas trabalho-vida e vida-trabalho foram identificadas como preditores de burnout. A interação trabalho-vida e o burnout evidenciaram diferenças significativas entre grupos de acordo com género, idade, estado civil, número de filhos, tempo na carreira e na organização, trabalhador-estudante e tipo de vínculo jurídico.

Conclusão: Para a adequada atuação e bem-estar dos indivíduos no trabalho, os padrões de interação trabalho-vida devem ser eficazmente geridos pelas organizações. São sugeridas implicações práticas.

Palavras-chave: interação trabalho-vida; burnout; características sociodemográficas; bem-estar

ABSTRACT

Introduction: Professional and personal lives are fundamental to an individual's functioning, being critical that they interact harmoniously. Burnout syndrome is a clinical condition that develops under continuous exposure to stress and overload, therefore it is important to understand how work-life interaction (WLI) practices are related to burnout and how both constructs differ according to sociodemographics.

Objective: To study the relationship between work-life bidirectional interaction and burnout in workers and the association of these constructs with sociodemographic characteristics, aiming to identify the role of organizations in these relationships.

Methods: Exploratory, quantitative, and descriptive cross-sectional study conducted on a sample of 255 Portuguese working individuals. Data was collected through the Survey Work-Home Interaction NijmenGens (SWING), the Maslach Burnout Inventory General Survey (MBI-GS), and sociodemographic questionnaire and analyzed through t-test, ANOVA, correlation, and multiple linear regression procedures.

Results: The general results show that negative work-life and life-work interactions were found as burnout predictors. Work-life interaction and burnout showed significant differences between groups according to gender, age, marital status, number of children, career length, time in the organization, working student, and legal relationship.

Conclusion: For the individual's work functioning and well-being, work-life interaction patterns are worthwhile for organizations to manage well. Practical implications are suggested.

Keywords: work-life interaction; burnout; sociodemographics; well-being

RESUMEN

Introducción: La vida profesional y personal son fundamentales para el funcionamiento de un individuo, siendo crítico que interactúen armónicamente. El síndrome de burnout es una condición clínica que se desarrolla bajo la exposición continua al estrés y la sobrecarga, por lo que es importante entender cómo las prácticas de interacción trabajo-vida personal se relacionan con el burnout y cómo ambos constructos difieren según la sociodemografía.

Objetivo: Estudiar la relación entre la interacción bidireccional trabajo-vida y el burnout en trabajadores y la asociación de estos constructos con características sociodemográficas, con el propósito de identificar el papel que las organizaciones pueden desempeñar en estas relaciones.

Métodos: Estudio transversal exploratorio, cuantitativo y descriptivo realizado en una muestra de 255 individuos trabajadores portugueses. Los datos fueron recogidos mediante el Survey Work-Home Interaction NijmenGens (SWING), el Maslach Burnout Inventory General Survey (MBI-GS), y un cuestionario sociodemográfico, y analizados a través de procedimientos de t-test, ANOVA, correlación y regresión lineal múltiple.

Resultados: Los resultados generales muestran que las interacciones negativas trabajo-vida y vida-trabajo se encontraron como predictores de burnout. La interacción trabajo-vida y el burnout mostraron diferencias significativas entre los grupos en función de género, edad, estado civil, número de hijos, duración de la carrera, tiempo en la organización, estudiante-trabajador y tipo de vínculo jurídico.

Conclusión: Para el adecuado funcionamiento laboral y el bienestar del individuo, es importante que las organizaciones gestionen bien las pautas de interacción entre el trabajo y la vida personal. Se sugieren implicaciones prácticas.

Palabras Clave: interacción trabajo-vida; burnout; sociodemografía; bienestar

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INTRODUCTION

Human resources management has been evolving since the beginning of its development and, nowadays, more exactly designated as people management, it has been growing in its organizational interventions, with several challenges around the well-being of human beings at work, namely, the work-life interaction challenge (Araújo, 2023).

Work often requires long hours, intensity, and pressure, interfering with the individual's private time. Individuals regularly have limited time for their various non-work daily activities (Lukács & Antal, 2023). Repercussions may manifest as an escalation of fatigue and mental health issues, including but not limited to anxiety, depression, burnout, and addictive behaviors (Koutsimani et al., 2019). This underscores the importance of maintaining a positive work-life interaction to prevent potential consequences that could adversely impact both aspects of life.

Work-life interaction literature, namely Compensation Theory gives us the perspective that these relationships have a bidirectional nature, i.e., work influences personal life and vice versa (Khateeb, 2021).

The interest in studying work-life interface lies in the fact that professionals find it difficult to reconcile professional and non-professional lives and is also due to this positive interaction benefits (Singh et al., 2022). In this paper, we adopt the term 'work-life interaction' (WLI) because, rather than establishing boundaries, it seeks to bring closer professional and personal lives.

According to Maslach and Leiter (2016), burnout is a psychosocial syndrome defined by chronic stress that occurs due to the accumulation of work and lack of motivation, among other factors. Edú-Valsania et al. (2022) found that WLI issues were positively related to a lower rate of burnout.

Several studies reveal that the Portuguese face work obstacles in reconciling professional responsibilities with personal life, especially from a gender-sensitive point of view (Marques et al., 2021). However, studies exploring its relationship with burnout in Portuguese workers and uncovering the sociodemographics' role are scarce. This is essential since burnout is considered physically, psychologically, and socially harmful (Edú-Valsania et al., 2022).

This study aims to understand the relationship between WLI and burnout in Portuguese workers and the association of these constructs with several sociodemographic characteristics.

1. THEORETICAL FRAMEWORK

Work-life interaction

Nowadays, workplaces are becoming increasingly demanding, making it crucial to have heightened awareness of the mutual impact of an individual's work and personal lives. This topic has been designated work-family conciliation, work-life balance, work-life articulation, and work-life integration, with many substantial arguments presented but trying to reach a conceptual unbiased and fair option (Marques et al., 2021).

The work-life theme was initially viewed as a conflict, assuming that professional and private lives were opposites (Schulz & Reimann, 2022). According to the authors, it evolved into a bidirectional problem, considering not only that professional life interfered with personal life, but also that personal life affected work.

The conflict between work and non-work dimensions occurs when work pressures are carried into the personal environment or vice versa. When this happens, there is an imbalance since the time spent on each activity is not well proportioned (Chen et al., 2022). Conversely, according to the same source, a positive work-life interaction happens when the time distribution is based on the needs of each work and non-work activity.

Aprilinda et al. (2021) point out that the evolution of this construct includes an integration view: the individual's ability to equally fulfill family/personal and professional commitments, along with responsibilities and non-work-related activities, with minimal conflicts. In this review paper, some listed authors clarify that equilibrium occurs when activities and aspirations in one domain are compatible with activities and aspirations in the other. Additionally, enrichment perspectives were explored, introducing the concept of harmony between the two realms of individuals' daily lives and envisaging both as complementary and interconnected rather than opposing each other. In this line, there would exist an individual perception of compatibility between work and non-work-related activities that promote personal growth (Liswandi & Muhammad, 2023). The reciprocity/interaction between work and non-work activities can, therefore, either become favorable or result in conflict.

Studies within the professional and family scope often highlight the negative effects and link conflicts to environmental, individual, and situational variables (Aledinat et al., 2021). Individual variables, such as age, gender, and education, contribute. Several other factors associated with work-life and life-work conflict, according to these authors, may include excessive working hours; workload, demands, pressures, and stress; organizational culture; lack of autonomy and social support. In the home-work conflict sphere, factors such as family responsibilities and emotional demands also play a role. Aledenat et al. (2021) also point out that, in cases where balance is not achieved, there are negative consequences in physical and mental health, namely stress, anxiety, fatigue, loss of appetite, and tension.

Achieving a positive work-life interaction is crucial for cultivating workplace well-being and happiness in life. Individuals who maintain a good harmony between the two roles experience greater life satisfaction than those solely focused on a single domain

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(Singh et al., 2023), emphasizing that the quality experienced in one role positively affects the other. Therefore, researchers advocate for an approach that recognizes the positive effects of balancing both domains, adding that this is, in fact, a happiness determinant.

Positive interference between work and home can be defined as the extent to which participation in one domain can be facilitated by experiences and skills acquired in the other, as highlighted by the latest theories in this scope (Khateeb, 2021). According to the author, this dimension is also bidirectional, meaning that positive professional experiences improve home life (positive work-home interference), and positive home experiences stimulate professional life (positive home-work interference).

Based on the dual nature of the interaction, Geurts et al. (2005) assert that the work-home concept entails four types of interaction that researchers should measure when exploring this construct: i) negative work-home interaction, ii) positive work-home interaction, iii) negative home-work interaction, and iv) positive home-work interaction. We will delve further into each aspect as we present our study.

Burnout

Burnout is the consequence of excessive energy demands imposed by the job itself and is understood as a set of biological/physical and psychosocial symptoms. Societal factors are decisive in burnout development, such as individualism and competition, and lack of mutual support, so new directions in studying this construct should be considered (Edú-Valsania et al., 2022).

Burnout syndrome manifests in three dimensions systematized by Lubbadah (2020): i) emotional exhaustion, based on a feeling of lack of energy to act, as well as a physical and emotional drain with no way to obtain relief; ii) Cynicism or depersonalization, related to the adoption of an interpersonal negative, derogatory, and critical mindset, irony and indifference, which emerges as self-defense or emotional escape, but can evolve into something more inhumane; and iii) reduced professional efficacy, based on feelings of incompetence, work-related unproductivity and defeat, usually conveying dissatisfaction with work, lack of self-esteem, and a sense of inadequacy which may lead to leaving the organization.

Burnout was primarily associated with work-related factors and subsequently with personality factors. Newer approaches suggest that both variables should be studied simultaneously within the organizational environment.

Organizational risk factors are divided into six critical work areas (Lubbadah 2020) which include: a) workload (high demands and responsibilities that positions may entail); b) control (professional's lack of autonomy); c) reward (lack of positive feedback/recognition, financial or social); d) community (quality of interpersonal work relationships); e) equity (feelings of lack of workplace justice due to trust, openness and respect problems); and f) values (individual's aspirations, motivations and ideals in the work environment that may be imbalanced with the organizational values). Individual misalignment in any of the mentioned six areas can lead to burnout or, conversely, the greater the person's adaptation to all factors, the greater the engagement with the organization (Maslach & Leiter, 2016; Lubbadah, 2020).

Emotional exhaustion has the most influence on mental consequences related to stress, commonly associated with headaches, fatigue, type 2 diabetes, and cardiovascular problems (Maslach & Leiter, 2016). According to these authors, psychological illnesses may lead to insomnia, depression, and anxiety.

The Standardarzneimittel Deutscher Apotheker (STADA, 2022) Health Report 2022 revealed that amid the pandemic, 37% of European participants experienced worsening stress, with 43% being female, 30% male, and 48% identifying as non-binary. Portugal ranked as the second European country with the highest increase in stress (47%). Furthermore, 48% of participants reported fair or poor mental health, while 57% admitted to nearing the brink of burnout.

Addressing the consequences of burnout is essential to obtain better work-home interaction and to prevent organizational losses, such as low performance and job abandonment (Edú-Valsania et al., 2022).

Work-life interaction, burnout, and sociodemographics

Several authors argue that WLI relates to burnout, as evidenced in Edú-Valsania et al. (2022) literature review.

A person is expected to prioritize and manage work-life time effectively; however, failure to achieve this equilibrium due to excessive working hours can lead to health problems, stress, or burnout, especially in the emotional exhaustion burnout dimension (Tuğsal, 2017). This author points out the relevance of marital status in this equation. Married employees spend more time with their spouse and if they have children or elderly family members to care for, time for oneself is increasingly limited. Consequently, they may develop burnout symptoms more easily than single employees. Tuğsal (2017) also identified the relevance of the income and activity sector on the emotional exhaustion dimension of burnout.

Prior research shows that sociodemographic and professional characteristics are associated with both constructs. Studies suggest a higher prevalence of work-life conflict among women compared with men, and higher levels of burnout are also more frequently registered in women (Gupta & Srivastava, 2020). In Stanley and Sebastine's (2023) study, burnout scores showed no correlation with age, years of work, or family size, but age and years of work positively correlated with a positive work-life interaction. Other sociodemographic and professional variables can play an important role in this issue, as we will further explore in our upcoming study.

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2. METHODS

For this study, an exploratory, cross-sectional, and descriptive quantitative analysis was designed.

2.1 Sample

The target population for this study was all working individuals living in Portugal at the time of data collection. The sample consisted of 255 participants, which sociodemographic characteristics are presented in Table 1.

Table 1 – Sample sociodemographics.

	Minimum	Maximum	Mean	SD
Age (in years)	18	67	36.8	11.7
Number of children	0	13	0.9	1.2
Career length (years)	0	43	12.3	10.9
Time in the organization (years)	0	43	8.8	9.9
Hours worked per week	0	96	37.6	14.6
	Frequency	Percentage (%)		
Gender (n=255)				
Female	185	72.5		
Male	69	27.1		
Other	1	0.4		
Marital status (n=255)				
Married/Cohabiting	135	52.9		
Single/Divorced	120	47.1		
Education (n=255)				
Elementary (9th grade)	39	15.3		
High school (12th grade)	72	28.2		
Post-secondary	12	4.7		
Bachelor/Graduate	97	38.0		
MSc	32	12.5		
Ph.D.	3	1.2		
Working student (n=255)				
Yes	43	16.9		
No	212	83.1		
Legal relationship (n=255)				
Employed worker	223	87.5		
Self-employed	24	9.4		
Both	8	3.1		

Note. SD=standard deviation.

Age averaged 36.8 (SD=11.7) and the number of children averaged less than one (SD=1.2). As for career length and time in the organization, the average was 12.3 (SD=10.9) and 8.8 years (SD=9.9), respectively. Respondents were, on average, working 37.6 hours per week, considering contractual and non-contractual hours (SD=14.6). Most participants were female (72.5%), employed workers (87.5%), and not working students (83.1%). The single/divorced (47.1%) were balanced with the married/cohabiting (52.9%) and, concerning education, bachelor/graduate degrees were the most representative group (38.0%).

2.2 Data collection, instruments, and procedures

Data was collected through a questionnaire comprising sociodemographics (shown in Table 1) and two scales to assess the constructs under study.

To measure WLI, we used the SWING - Survey Work-Home Interaction NijmegenGen, a bidirectional scale presented by Geurts et al. (2005) that assesses work-to-home and home-to-work interaction, and the nature or quality of the interaction (positive vs. negative). This scale has 22 items grouped into four dimensions: Negative Work-Home Interaction (NWHI), Negative Home-Work Interaction (NHWI), Positive Work-Home Interaction (PWHI), and Positive Home-Work Interaction (PHWI). Responses were scored on a Likert-type scale ranging from 0 to 3 (0=never, 1=sometimes, 2=often, 3=always). A Brazilian adaptation by Carlotto and Câmara (2014) was used for this study, which reported Cronbach Alphas of NWHI=0.89, NHWI=0.78, PWHI=0.80, and PHWI=0.80. The chosen instrument measures WLI in a Portuguese-speaking population, ensuring the items are understandable. The Portuguese version was validated with healthcare professionals. Both versions show the same results in factor analysis, have the

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same number of items, and demonstrate good applicability and psychometric quality. For convenience, our study used participants from the researchers' educational network, justifying using the Brazilian version, which was validated with teachers.

To assess burnout, the MBI-GS - Maslach Burnout Inventory General Survey was employed, specifically its adaptation to the Brazilian context (da Silva Schuster et al., 2015), since the authors could not access the Portuguese version. This scale has 16 items divided into three dimensions: Emotional Exhaustion, Cynicism, and Professional Efficacy, and uses a 7-point Likert-type response scale (0=never, 1=sometimes, 2=once a month or less, 3=a few times a month, 4=once a week, 5=a few times a week and 6=every day). High scores on emotional exhaustion and cynicism and low scores on professional efficacy are indicators of burnout. The authors reported Cronbach Alpha of Emotional Exhaustion=0.84, Cynicism=0.84, and Professional Efficacy=0.82.

The questionnaire was built in Google Forms and pre-tests were carried out to ensure that the questionnaire was easy to interpret. It was shared in February 2023 for one month on various digital platforms, including LinkedIn, Instagram, and Facebook. All the ethical standards related to this type of study were followed per the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments. The anonymity of the participants was guaranteed, the confidentiality of the data was ensured, and the data were used solely for this study's purposes. Informed consent was obtained, and all respondents participated voluntarily.

2.3 Statistical analysis

Data was analyzed in IBM SPSS 25 for Windows. The mandatory nature of the questionnaire accounted for no missing values. Cronbach's Alpha was used to analyze reliability according to the $\alpha \geq 0.7$ cutoff (Marôco, 2021).

To understand our variables relationships, we first analyzed whether the means of the constructs and their respective dimensions varied according to the sociodemographic groups. Normality assumptions were checked using the Kolmogorov-Smirnov test. The *t*-test for independent samples and the ANOVA one-way test were used for categorical independent variable scales and correlations were applied for metric independent variables scales. Multiple linear regression was used to estimate the predictive models.

3. RESULTS

Table 2 shows this study's measurement instruments descriptive statistics and reliability.

Table 2 – SWING and MBI-GS descriptive statistics and reliability

	Dimensions	Mean	SD	# items	Cronbach alpha
SWING	NWHI	1.13	0.66	4	0.87
	NHWI	0.67	0.66	8	0.90
	PWHI	1.22	0.64	5	0.83
	PHWI	1.59	0.71	5	0.80
MBI-GS	Emotional Exhaustion	2.62	1.70	6	0.94
	Cynicism	1.48	1.65	4	0.89
	Professional Efficacy	3.94	1.65	6	0.94

Note. SD=standard deviation.

The mean values of SWING reveal that, in our sample, workers experienced low Negative Home-Work Interaction. The other SWING dimensions scored between “sometimes” and “often”. In MBI-GS, Professional Efficacy had the highest mean, thus experienced between “a few times a month” and “once a week”, whereas Emotional Exhaustion and Cynicism scored lower, closer to “sometimes” and “once a month or less”. The standard deviation values show that the results' dispersion was high.

The reliability of SWING dimensions was found to be good or very good (Cronbach Alpha ranging from 0.80 to 0.90), like MBI-GS (ranging from 0.89 to 0.94). The Kolmogorov-Smirnov test revealed that in both scales the distribution was non-normal; however, skewness and kurtosis were within the $sk < |3|$ and $ku < |7|$ recommended limits for the use of generalized linear models (Marôco, 2021).

Tables 3 and 4 show the results of SWING and MBI-GS in the light of the sociodemographic variables.

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Table 3 – Mean differences: SWING, MBI-GS, and sociodemographic groups

		Gender		Marital Status		Education		Working student		Legal relationship	
		t	p	t	p	F	p	t	p	F	p
SWING	NWHI	-1.382	0.168	1.178	0.240	1.952	0.086	1.072	0.285	0.876	0.418
	NHWI	-0.982	0.327	1.793	0.074	0.469	0.799	1.690	0.092	0.599	0.550
	PWHI	-0.531	0.596	-0.875	0.382	0.314	0.904	2.864	0.005	0.398	0.672
	PHWI	-2.090	0.038	-1.456	0.147	0.501	0.776	0.971	0.333	4.216	0.016
MBI-GS	Em. Exhaustion	-0.643	0.521	2.597	0.010	0.817	0.538	0.717	0.474	4.903	0.008
	Cynicism	-0.319	0.750	3.634	0.000	1.112	0.355	0.992	0.322	1.684	0.188
	Profess. Efficacy	-0.548	0.584	-0.252	0.801	1.073	0.376	-0.346	0.730	0.247	0.781

Table 4 – Correlations: SWING, MBI-GS, and sociodemographics

		Age		No. of children		Career length		Time in the organization		Hours worked per week	
		r _s	p	r _s	p	r _s	p	r _s	p	r _s	p
SWING	NWHI	-0.015	0.807	0.005	0.937	0.048	0.443	0.125	0.047	0.110	0.078
	NHWI	-0.037	0.554	0.021	0.742	-0.074	0.241	0.015	0.816	-0.019	0.761
	PWHI	0.050	0.426	-0.044	0.489	-0.060	0.339	-0.100	0.113	0.012	0.845
MBI-GS	PHWI	0.081	0.199	0.082	0.193	-0.50	0.428	-0.002	0.972	-0.007	0.907
	Em. Exhaustion	-0.056	0.377	-0.060	0.344	0.000	0.997	0.029	0.642	0.064	0.306
	Cynicism	-0.145	0.021	-0.154	0.014	-0.142	0.024	-0.070	0.267	0.009	0.884
	Prof. Efficacy	0.152	0.015	-0.011	0.864	0.164	0.009	0.023	0.715	0.058	0.356

Note. r_s - Spearman's rho, chosen due to the dependent variables normality tests results.

Regarding SWING, Positive Home-Work Interaction showed significant gender differences ($t(252)=-2.090, p=0.038$), being more relevant in females ($M=1.65, SD=0.71$) than in males ($M=1.44, SD=0.68$), and also regarding legal relationship ($F(2, 252)=4.216, p=0.016$), in which self-employed ($M=1.90, SD=0.64$) was higher than both self-employed and employed worker ($M=1.13, SD=0.74$). Positive Work-Home Interaction was experienced significantly ($t(253)=2.864, p=0.005$) higher in working students ($M=1.47, SD=0.70$) than in the participants who only worked ($M=1.17, SD=0.61$). Negative Work-Home Interaction was revealed to be positively associated with time in the organization, ($r_s=0.125, p=0.047$) i.e., the longer the longevity in the organization, the greater the NWHI. The Negative Home-Work Interaction did not show significant differences in light of sociodemographics.

As for MBI-GS, Emotional Exhaustion was differently perceived according to marital status ($t(252)=2.597, p=0.010$) and legal relationship ($F(2, 252)=4.903, p=0.008$), being significantly higher in the single/divorced ($M=2.91, SD=1.71$) than in the married/cohabiting ($M=2.36, SD=1.66$), and in the employed worker ($M=2.75, SD=1.69$) than in the self-employed ($M=1.72, SD=1.54$). Cynicism was felt more significantly ($t(252)=3.634, p=0.000$) in the single/divorced ($M=1.87, SD=1.70$) when compared to the married/cohabiting ($M=1.14, SD=1.52$). Cynicism negatively and significantly correlated with age ($p=0.021$), number of children ($p=0.014$), and career length ($p=0.024$), i.e., as these variables increase, Cynicism decreases. Professional Efficacy was positively correlated with age ($p=0.015$) and career length ($p=0.009$), indicating that the greater the age and career length, the greater the Professional Efficacy.

Correlations between SWING and MBI-GS are displayed in Table 5.

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Table 5 – SWING and MBI-GS correlations

		1	2	3	4	5	6	7
1.	NWHI	--	0.471**	0.179**	0.121	0.619**	0.378**	0.025
2.	NHWI		--	0.244**	0.134*	0.355**	0.398**	-0.072
3.	PWHI			--	0.560**	0.097	0.102	0.062
4.	PHWI				--	0.117	0.052	0.174**
5.	Emotional Exhaustion					--	0.612**	0.233**
6.	Cynicism						--	-0.066
7.	Professional Efficacy							--

**p<0.01; *p<0.05

Table 6 presents the results of the multiple linear regression. As prerequisites, we found (Marôco, 2021): a) our sample exceeds the criterion of at least n=20 for each predictor variable; (b) the correlations among the predictors (NWHI, NHWI, PWHI, and PHWI) ranged from -0.07 to 0.62, thus lower than |0.75|, and multicollinearity absence was corroborated by Tolerance values ranging from 0.61 to 0.75, all >0.1, and Variance Inflation Factor values ranging from 1.33 to 1.64, all <10; (c) the independence of the residuals was acceptable, since the Durbin-Watson test produced 1.87 for Emotional Exhaustion, 1.90 for Cynicism and 1.92 for Professional Efficacy, complying with the [1.5;2.5] range.

Table 6 – Multiple linear regression results

Dependent variable	Independent variable	Unstandardized coefficients		Standardized coefficients		t	p	R ²
		B	Std. Error	Beta				
Emotional Exhaustion	(Constant)	0.763	0.243			3.143	0.002	0.385
	NWHI	1.512	0.147	0.587		10.276	0.000	
	NHWI	0.154	0.150	0.060		1.026	0.306	
	PWHI	-0.197	0.169	-0.074		-1.164	0.245	
	PHWI	0.184	0.150	0.077		1.228	0.221	
Cynicism	(Constant)	0.378	0.271			1.393	0.165	0.180
	NWHI	0.574	0.165	0.230		3.490	0.001	
	NHWI	0.645	0.168	0.258		3.838	0.000	
	PWHI	0.018	0.189	0.007		0.095	0.925	
	PHWI	0.004	0.168	0.002		0.026	0.979	
Professional Efficacy	(Constant)	3.298	0.291			11.328	0.000	0.056
	NWHI	0.248	0.176	0.099		1.402	0.162	
	NHWI	-0.431	0.180	-0.172		-2.389	0.018	
	PWHI	-0.139	0.203	-0.054		-0.686	0.494	
	PHWI	0.513	0.180	0.221		2.852	0.005	

Note. R²=coefficient of determination.

The ANOVA test produced F=39.183 for Emotional Exhaustion, F=13.689 for Cynicism, and F=3.731 for Professional Efficacy (p<0.001), which shows that the three models are highly significant, i.e., the regression model fits the data well. The R² values indicate that our model's independent variables explain 38.5% of the variation in Emotional Exhaustion, 18% in Cynicism, and 5.6% in Professional Efficacy.

As for the predictive effects, on Emotional Exhaustion, only the Negative Work-Home Interaction stem as a significant and positive predictor (β=0.587; p<0.001). Regarding Cynicism, both Negative Work-Home Interaction (β=0.230; p=0.001) and Negative Home-Work Interaction (β=0.258; p<0.001) emerged as positive predictors. Professional Efficacy was revealed to be negatively predicted

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by Negative Home-Work Interaction ($\beta=-0.172$; $p=0.018$) and positively predicted by Positive Home-Work Interaction ($\beta=0.221$; $p=0.005$).

4. DISCUSSION

This research aimed to understand the relationships between WLI and burnout and their connection to sociodemographic variables in Portuguese workers.

Given the large number of results, we will highlight selected findings based on their importance, coverage, and theoretical and practical pertinence. We will discuss their relevance and provide insights into organizational and labor market implications, along with future research guidelines. This integrative discourse will be structured around each result, facilitating a comprehensive understanding of the data.

We thus emphasize some noteworthy discoveries: (a) In our sample, workers seem to have experienced small overall Negative Home-Work Interaction. Although in line with the results of the SWING scale founders who reported $M=0,47$ ($SD=0.41$) (Geurts et al., 2005), this emerged as one of the surprising yet positive results since organizations frequently assume that life at home interferes strongly with work, especially for female workers. Regarding gender differences, it is important to notice that Portugal is frequently presented as “a singular case in terms of the women’s participation in the labor market and work-life balance policies” (Marques et al, 2021, p.1) with a relatively high rate of female employment intertwined with the prevalence of the dual-earner model based on continuous and fundamentally full-time employment since the 1960s. This may explain why, in our sample, Negative Home-Work Interaction was not significantly different between males and females. Moreover, it is coherent with the study of Liu et al. (2021), who found no differences in work-home interaction in a Chinese physicians’ sample. Overall, this does seem like a result that will encourage organizations and legislators to reinforce WLI programs from the negative home-work interaction perspective; (b) Positive Home-Work Interaction emerged as significantly higher in females. Our result somehow complements the findings presented in (a) and brings the idea of positive influence from family life into the workplace; (c) Positive Work-Home Interaction was higher when workers were simultaneously students. We found no research studying this sociodemographic variable. Nevertheless, our result seems to be a positive one that could promote incentive programs in organizations to attract and retain working students, hindering some prejudice (which exists in Portugal) that studying simultaneously might disturb the workers’ productivity. This finding indicates that this variable appears to be one of the most relevant to be explored in future research; (d) Positive Home-Work Interaction was higher for self-employed workers and Emotional Exhaustion was stronger for the employed workers, possibly because these professionals are less bound to fixed timetables and home activities are perceived as positive work regulators. This is also a new and relevant contribution from our study since we found no research comparing these variables. Therefore, differences based on legal relationships are likely a must in future research; (e) Burnout dimensions of Emotional Exhaustion and Cynicism were higher in single/divorced respondents, which is surprising and contradicts Tuğsal’s (2017) findings. A possible explanation may be related to the lack of close social support (Aledeinat et al., 2021), meaning that single/divorced resent not having the support of a spouse to help them cope and reduce work worries; (f) The higher the age, number of children, and career length, the lower the Cynicism. Contrasting with our results, in Stanley and Sebastine’s (2023) study, burnout scores did not correlate with age, years of work, or family size. On the other hand, a study by Martins and Veiga-Branco (2024) on Portuguese nurses revealed that participants with 6 to 15 career years perceived higher burnout levels than nurses with more than 15 years of service. The authors attributed it to the eventual build-up of stress management skills over the years of experience. In line with this reasoning, we argue that maturity and coping skills developed with age, number of children, and work experience may explain the reduction of Cynicism in our sample; (g) The higher the age and career length, the higher the Professional Efficacy. Coherent with the Martins and Veiga-Branco (2024) mentioned results, this is not surprising since the maturity of older workers tends to facilitate overcoming difficulties, and a longer career allows for increased work practice, benefiting competence and performance; (h) The longer the time in the organization, the greater the Negative Work-Home Interference. Liu et al. (2021) found that physicians who were middle or senior professionals with longer working hours per week were more likely to be dissatisfied with their WLB. Our results and Liu et al.’s (2021) findings may be explained by the increased professional fatigue that can be associated with negative perceptions when work interacts with home demands; (i) Negative Work-Home Interaction and Negative Home-Work Interaction correlated and incremented Cynicism, confirming that the WLI negative features lead to an interpersonal negative mindset; (j) Negative Work-Home Interaction correlated and increased Emotional Exhaustion; (l) Negative Home-Work Interaction damped Professional Efficacy; (m) Positive Home-Work Interaction correlated and favored Professional Efficacy. Regarding these last three grouped results, Liu et al. (2021) found that work-life interaction is more associated with the Emotional Exhaustion and Professional Efficacy dimensions of burnout. Our results indicate that, as theoretically expected, positive features of WLI tend to relate to positive dimensions of burnout, and negative features of WLI tend to be associated with negative dimensions of burnout.

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CONCLUSION

Our work contributed to the research that explores the levels of WLI and burnout in Portuguese professionals, the association between both constructs, and uncovered the role of several sociodemographic variables, seldom found in the literature.

Given the focus of our study on the role of the organizations in well managing WLI, burnout, and their relationships, the overall results of WLI in Portuguese workers are encouraging and may be the fruit of long years of efforts, measures, and political initiatives to improve this field (Marques et al, 2021). Nevertheless, our study highlights some differences when different sociodemographic groups, such as gender, working students, and years in the organization, are considered, which provides some guidance for specific organizational improvement plans. Burnout levels need to be kept under control, especially for employees who are single/divorced and lower in age and career length, and claiming a need for organizational action, ideally by people management departments, to hinder individual and organizational costs (Edu-Valsania et al., 2022). Individual intervention programs help individuals and encourage them to adopt proactive actions to cope with adversities, while organizational strategies focus on overcoming or reducing the misalignment of organizational and personal goals. Possible recommendations to prevent burnout are changing work patterns (e.g., working fewer hours and taking breaks more frequently), developing skills to manage time effectively, fostering good relationships with colleagues, and promoting work-home positive interaction. This may include engaging in leisure activities, relaxation techniques, and promoting healthy lifestyles alongside work activities.

Regarding our study limitations, we relied on a cross-sectional design, which hinders the ability to establish causal relationships over time, and on self-report measures, which may introduce biases due to social desirability. Future studies could be based on a longitudinal design, and use other sources (e.g., spouse, supervisor, colleagues) for comparison results. Future research may also focus on replicating our study using Portuguese versions of the measurement instruments.

As a final observation, when employees reach WLI, they are motivated to put in their best efforts in the workplace. As such, managers and people managers should ponder using these results to create well-being interventions at work rooted in WLI practices. New labor challenges emerged post-COVID-19 (Araújo, 2023), and their relation to burnout and WLI is still to be explored. So, as future research, we suggest further exploring WLI and burnout relations through the lens of generational differences and organizational orientation, e.g., employer branding strategies, organizational approaches to employee wellbeing, innovation culture and climate, and virtual teams and contexts.

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AUTHOR CONTRIBUTIONS

Conceptualization, I.M., L.N., P.A., and R.F.; data curation, I.M., L.N., P.A., and R.F.; formal analysis, I.M., L.N., P.A., and R.F.; investigation, I.M., L.N., P.A., and R.F.; methodology, I.M., L.N., P.A., and R.F.; project administration, I.M., L.N., P.A., and R.F.; resources, I.M., L.N., P.A., and R.F.; supervision, I.M., L.N., P.A., and R.F.; validation, I.M., L.N., P.A., and R.F.; writing-original draft, I.M., L.N., P.A., and R.F.; writing-review and editing, I.M., L.N., P.A., and R.F.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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