

## Article

# Occupational Stress and Turnover Intentions in Employees of the Portuguese Tax and Customs Authority: Mediating Effect of Burnout and Moderating Effect of Motivation

Mariana Freitas <sup>1</sup>, Ana Moreira <sup>1,2,3,\*</sup>  and Fernando Ramos <sup>4</sup>

<sup>1</sup> School of Psychology, ISPA—Instituto Universitário, Rua do Jardim do Tabaco 34, 1149-041 Lisboa, Portugal; 27227@alunos.ispa.pt

<sup>2</sup> APPsyCI—Applied Psychology Research Center Capabilities & Inclusion, ISPA—Instituto Universitário, R. do Jardim do Tabaco 34, 1149-041 Lisbon, Portugal

<sup>3</sup> Faculdade de Ciências e Tecnologia, Universidade Europeia, Quinta do Bom Nome, Estr. da Correia 53, 1500-210 Lisboa, Portugal

<sup>4</sup> APIT—Associação Sindical dos Profissionais da Inspeção Tributária e Aduaneira, Rua Duque da Terceira, 403, 1.º Esq, 4000-537 Porto, Portugal; frms62@gmail.com

\* Correspondence: amoreira@ispa.pt

**Abstract:** The main objective of this study was to study the effect of occupational stress on turnover intentions, as well as determine whether this relationship is mediated by burnout levels and moderated by motivation. The sample size of this study consisted of 603 participants, all employees of the Portuguese Tax and Customs Authority, which is part of the Ministry of Finance and belongs to the Direct State Administration. The results indicate that occupational stress (with managers, career and pay, and overwork) has a positive and significant effect on turnover intentions and that this relationship is mediated by burnout. Motivation (intrinsic and identified) has a negative and significant effect on turnover intentions. Intrinsic motivation moderates the relationship between occupational stress (with managers, colleagues, career and pay, and family problems) and turnover intentions. These results indicate that among the dimensions of occupational stress, the most critical are the stress caused by managers, work overload, and career and pay. These are factors that the Direct State Administration should be concerned with to reduce employees' stress levels, as well as their turnover intentions.

**Keywords:** occupational stress; burnout; turnover intentions; motivation; quantitative study



**Citation:** Freitas, Mariana, Ana Moreira, and Fernando Ramos. 2023. Occupational Stress and Turnover Intentions in Employees of the Portuguese Tax and Customs Authority: Mediating Effect of Burnout and Moderating Effect of Motivation. *Administrative Sciences* 13: 251. <https://doi.org/10.3390/admsci13120251>

Received: 31 October 2023

Revised: 6 December 2023

Accepted: 8 December 2023

Published: 11 December 2023



**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

## 1. Introduction

In recent decades, the technological revolution has brought about a significant change in work, speeding up its pace and increasing the information overload. The characteristics of the contemporary labor market (e.g., temporary contracts, new psychological contracts between workers and employers, and perceptions of employability) jeopardize job security, representing an inexhaustible source of occupational stress and, in chronic cases, burnout. Occupational stress results from the individual's inability to deal with the sources of stress associated with their work context. This feeling of stress can have physical, psychological, social, personal, and professional consequences for the individual (Afonso and Gomes 2012; Santos et al. 2018). In Portugal, problems related to employee stress and mental health cost organizations EUR 5.3 billion in 2022 (Ordem dos Psicólogos Portugueses 2023). This damage is caused by absenteeism, presenteeism, and loss of productivity.

Another major problem facing organizations today is the high turnover of employees, especially if they are highly specialized, which can represent high costs for the organization (Kusy and O'Leary-Driscoll 2020; Reiche 2008). This situation has led many professionals and scientists to explore the factors that have a significant impact on turnover intentions (Regts and Molleman 2013), since previous studies (Griffeth et al. 2000; Regts and Molleman

2013; van Breukelen et al. 2004) indicate that the best predictor of voluntary departure from the organization is the turnover intention. This response can be interpreted in the light of the theory of planned behavior, according to which the behavioral intentions are the causal antecedents of behavior (Ajzen 2012).

From the perspectives of Avey et al. (2009), among other factors, one of the antecedents of turnover intentions is occupational stress. Occupational stress can result in burnout, affecting job satisfaction and productivity, and leading to employees wanting to leave the organization (Salama et al. 2022). This reasoning leads us to our first objective, which is to study whether burnout is the mechanism that explains the relationship between occupational stress and turnover intentions.

Previous studies on turnover intentions have mainly focused on the relationship between this construct and organizational or individual factors such as occupational stress, burnout, job satisfaction, and job insecurity (Huang et al. 2003; Urbanaviciute et al. 2018; Wang et al. 2012). Few studies have focused on the individual motivation as an antecedent of turnover intentions (Zheng et al. 2021). However, Wang et al. (2019) studied the relationship between motivation and turnover intentions and found a significant and negative relationship between these two constructs.

This is why it was considered essential to study the relationship between motivation and turnover intentions, and whether motivation moderates the relationship between occupational stress and turnover intentions, which is our second objective. What differentiates this study from others is that the study population was employees of the Portuguese Tax and Customs Authority, working in all districts of Portugal, including the Autonomous Regions of Madeira and the Azores.

## 2. Theoretical Framework and Research Hypotheses

### 2.1. Occupational Stress and Turnover Intentions

Occupational stress can be defined as a reaction to the perception of a lack of resources to deal with a given situation (Jiang et al. 2022). Occupational stress, as an emotional state, is one of the stress issues affecting the working population and has gained enormous importance, being one of the most significant mental health problems (Bicho and Pereira 2007). This results from a group of situations and experiences at work, i.e., “the interaction between working conditions and the characteristics of the worker, in such a way that the demands placed on them exceed their ability to cope with them” (Bicho and Pereira 2007). When occupational stress becomes chronic, it can have severe consequences on both a personal and professional level, with consequences that can be both physical and psychological (Yao et al. 2019). In their work, employees face their job’s demands, such as tight deadlines and high workloads, which can lead them to develop high levels of occupational stress (Imeokparia and Ediagbonya 2013; Issever et al. 2008).

Turnover intentions are understood as the employees’ desires to leave their current organization and start looking for a new workplace (Benson 2006) and are the final step in the decision-making process before leaving the workplace (Bester et al. 2015). It is known that the turnover intentions are the best predictor of voluntary departure from the organization (Long et al. 2012; Moreira et al. 2022; Park and Shaw 2013), which can cause great damage to the organization especially if the departing employee is highly qualified (Kusy and O’Leary-Driscoll 2020; Reiche 2008). This relationship can be explained based on the theory of planned behavior, with the behavioral intentions being the antecedents of the actual behavior (Ajzen 2012).

As for the relationship between occupational stress and turnover intentions, employees who experience high-stress levels tend to leave the organization where they work as quickly as possible (Lee and Song 2020). There are many studies linking occupational stress with turnover intentions in professionals from various sectors such as health, hospitality, teaching, and banking (Ahn and Wang 2019; Gok et al. 2017; Gautam and Gautam 2022; Islam et al. 2019; Jabutay and Rungruang 2020; Lee and Song 2020). For example, we can cite the study by Jiang et al. (2022) on emergency medical professionals, where they concluded

that occupational stress has a positive and significant effect on turnover intentions. The results of the study by [Tziner et al. \(2015\)](#) also go in the same direction, i.e., a positive and significant relationship between occupational stress and turnover intentions.

This study sought to understand how occupational stress influences the intentions to leave. The following hypothesis was formulated:

**Hypothesis 1.** *Occupational stress (users, management, colleagues, overwork, career and pay, family problems, and working conditions) has a positive and significant effect on turnover intentions.*

## 2.2. Occupational Stress and Burnout

To [Maslach and Leiter \(2016\)](#), burnout is a psychological syndrome characterized by high levels of emotional exhaustion (such as lethargy, exhaustion, and fatigue), depersonalization (such as negative attitudes, irritability, and social withdrawal), and reduced personal fulfilment (such as decreased productivity and/or inability to cope with the situation(s)).

According to [Meier's \(1984\)](#) theoretical framework, burnout is viewed as a state that follows a pattern of continuous work experiences in which the subject has low expectations for the presence of rewarding stimuli, high expectations for the presence of punishment, and low expectations for their capacity to manage their efforts. With such high expectations, it is common to feel unhappy at work. According to this theoretical section, the environment and the subject interact to cause burnout rather than being caused by it alone. According to [Leiter \(1988\)](#), people who experience emotional tiredness respond by depersonalizing, which causes them to break the psychological commitment they uphold at work, present a poor self-assessment in terms of personal fulfilment, and result in burnout. High levels of stress relate to emotional weariness.

Burnout can be considered a psychological syndrome that occurs when employees face a stressful work environment over a long period of time and perceive their resources to cope with the demands of the job to be scarce ([Bakker and Demerouti 2008](#); [Maslach et al. 2001](#); [Leiter and Maslach 2016](#)). It is therefore considered to be a serious reaction to occupational stress, with resulting physical and psychological changes ([Marques-Pinto et al. 2003](#)). The consequences of burnout are varied in terms of health, safety, and well-being, as well as productivity, quality of service, and cost-effectiveness for the organization ([Poghosyan et al. 2010](#); [Carod-Artal and Vázquez-Cabrera 2013](#)). In a study carried out by [Jesus et al. \(2023\)](#) on healthcare professionals, it was found that burnout has a significant effect on suicidal behavior. Occupational stress is one of the antecedents of burnout, as long-term stress leads to severe situations of exhaustion ([Galanakis et al. 2020](#); [Khalid et al. 2020](#)). One occupational stress factor leading to severe burnout is overwork ([Singh et al. 2020](#)). Many studies on the relationship between occupational stress and burnout focus on health or education professionals. We aim to test this relationship with Portuguese Tax and Customs Authority professionals.

The following hypothesis is therefore formulated:

**Hypothesis 2.** *Occupational stress (users, management, colleagues, overwork, career and pay, family problems, and working conditions) has a significant and positive effect on burnout levels (disengagement and exhaustion).*

## 2.3. Burnout and Turnover Intentions

As organizations are aware that high employee turnover, especially if they are highly specialized, represents high costs for them ([Reiche 2008](#)), in recent years, there has been an increase in studies on the effect of burnout on increasing absenteeism rates and turnover intentions. According to [Olivares-Faúndez et al. \(2014\)](#), burnout is positively and significantly associated with absenteeism attitudes and behaviors. In turn, in a study of employees in the restaurant sector, [Han et al. \(2016\)](#) concluded that the burnout caused by customer

incivility has a positive and significant association with turnover intentions. For [Rahim and Cosby \(2016\)](#) as well as [Kartono and Hilmiana \(2018\)](#), a direct relationship was also found between burnout levels and turnover intentions. In a study of education professionals in the United States, [Lee \(2019\)](#) also concluded that burnout is a strong predictor of the intention to leave.

These results from previous studies led us to formulate the following hypothesis:

**Hypothesis 3.** *Burnout (disengagement and exhaustion) has a positive and significant effect on turnover intentions.*

#### 2.4. Occupational Stress, Burnout, and Turnover Intentions

As previously mentioned, occupational stress has a significant and positive association with burnout, which in turn has a positive and significant association with turnover intentions. Several studies report that burnout has a mediating effect on the relationship between occupational stress and turnover intentions ([Han et al. 2016](#); [Salama et al. 2022](#)). In a study of professionals in the education sector, [Padmasundari \(2019\)](#) concluded that the stress of working as an early childhood educator could be seen with the increase in burnout and intentions to leave, reducing teaching effectiveness.

We aim to test whether burnout is the mechanism that explains the relationship between occupational stress and turnover intentions. To this end, we formulated the following hypothesis:

**Hypothesis 4.** *Burnout (disengagement and exhaustion) has a mediating effect on the relationship between occupational stress (users, management, colleagues, overwork, career and pay, family problems, and working conditions) and turnover intentions.*

#### 2.5. Motivation at Work and Turnover Intentions

Studies on motivation in the workplace have been the subject of great interest internationally due to the link between individual and organizational performance ([Tamayo and Paschoal 2003](#)). [Maslow \(2000\)](#), a pioneer of theories on motivation, highlights the importance of this issue, stating that “The healthier we are emotionally, the more important our needs for creative fulfilment at work become. At the same time, the less we tolerate the violation of our needs for such fulfilment”.

Various researchers have proposed theories on motivation to understand its origin and influence on human behavior ([Silva and Gomes 2009](#)). One is the self-determination theory ([Deci et al. 2017](#); [Deci and Ryan 2008](#); [Gagné et al. 2015](#)). According to this theory, there are two qualitatively different forms of work motivation: autonomous and controlled. Regarding autonomous motivation, we get involved in the work because of the pleasure it gives us (intrinsic motivation) or because we identify with the task, and it has value and/or meaning for us (identified motivation) ([Grohmann et al. 2013](#)). As for controlled motivation, we get involved in the work for external reasons (extrinsic motivation) or internal reasons (introjected motivation), due to the regulation of behavior by self-esteem contingencies ([Grohmann et al. 2013](#)). Although few studies link motivation with turnover intentions, in a study on professionals in the education sector, [Hussain et al. \(2018\)](#) concluded that motivation has a negative and significant effect on turnover intentions and a positive effect on performance. In a more complex study of public and private sector employees, [Zheng et al. \(2021\)](#) found a negative and significant association between intrinsic motivation and turnover intentions. [Kim \(2018\)](#), in a study on public employees from local governments in South Korea, concluded that intrinsic motivation negatively and significantly affects turnover intentions. The following hypothesis was therefore formulated:

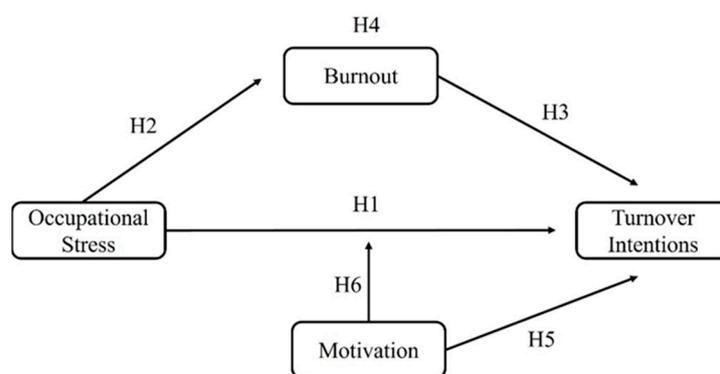
**Hypothesis 5.** *Motivation (intrinsic, identified, introjected, and extrinsic) has a negative and significant effect on turnover intentions.*

### 2.6. The Moderating Effect of Motivation

As seen above, motivation has a negative and significant effect on turnover intentions. Furthermore, in a study carried out by Özbağ et al. (2014), they concluded that motivation moderates the relationship between burnout and turnover intentions. However, one of the aims of this study is to determine if motivation has a moderating effect on the relationship between occupational stress and turnover intentions. The following hypothesis was therefore formulated:

**Hypothesis 6.** *Motivation (intrinsic, identified, introjected, and extrinsic) moderates the relationship between occupational stress (users, management, colleagues, overwork, career and pay, family problems, and working conditions) and turnover intentions, with the relationship expected to be weaker for employees with high levels of motivation than for employees with low levels of motivation.*

To integrate the hypotheses formulated in this study, a theoretical model was developed that synthesized all the relationships (Figure 1).



**Figure 1.** Research model.

## 3. Materials and Methods

### 3.1. Data Collection Procedure

A total of 603 subjects voluntarily participated in this study, all employees of the Portuguese Tax and Customs Authority, which is part of the Ministry of Finance and belongs to the Direct State Administration. The data collection process was nonprobabilistic, intentional, and followed snowball sampling (Trochim 2000).

The questionnaire was posted online on the Google Forms platform, and its link was sent to employees of the Portuguese Customs Authority via the Trade Union Association of Tax and Customs Inspection Professionals (APIT). A member of the APIT (coauthor of this article) sent the link to the questionnaire to all Portuguese Tax and Customs Authority employees working in mainland Portugal and the Autonomous Regions of Madeira and the Azores. The questionnaire contained all the information about the purpose of the study, as well as guaranteed the confidentiality of the answers provided. Participants were also informed that their answers would never be known since the data would be processed considering all the answers provided. At the beginning of the questionnaire, after reading the informed consent form, participants were asked if they agreed to answer the questionnaire. If participants chose the “no” option, they were directed to the end of the questionnaire, i.e., to the acknowledgements page.

The questionnaire included ten sociodemographic questions (age, gender, academic qualifications, length of service in the tax and customs authority, length of service in the civil service, district of residence, service to which they belonged, type of employment, staff group in the tax administration, method of admission, and whether they were unionized) and four scales (occupational stress, burnout, motivation, and turnover intentions). The data were collected between April and June 2023.

### 3.2. Participants

The study sample consisted of 603 participants between the ages of 32 and 69 ( $M = 52.46$ ;  $SD = 6.86$ ), with 320 (53.1%) female participants and 283 (46.9%) male participants. In terms of educational qualifications, 155 (25.7%) have a 12th-grade degree or less, 396 (65.7%) have a bachelor's degree, and 52 (8.6%) have a master's degree or higher. Seniority in the customs authority varies between 1 and 46 years ( $M = 23.49$ ;  $SD = 10.66$ ), and seniority in the civil service varies between 5 and 47 years ( $M = 27.09$ ;  $SD = 8.29$ ). Concerning the district in which they live, the highest percentage of participants work in the districts of Lisbon or Porto, although the employees work in all of Portugal's districts (Table 1).

**Table 1.** Distribution of employees by district in Portugal.

District	Frequency	Percentage
Faro	20	3.3
Beja	5	0.8
Évora	2	0.3
Setúbal	41	6.8
Portalegre	9	1.5
Santarém	28	4.6
Lisboa	159	26.4
Castelo Branco	12	2.0
Leiria	55	9.1
Coimbra	39	6.5
Guarda	10	1.7
Viseu	18	3.0
Aveiro	45	7.5
Porto	86	14.3
Bragança	5	0.8
Vila Real	10	1.7
Braga	32	5.3
Viana do Castelo	7	1.2
Funchal	6	1.0
Ponta Delgada	5	0.8
Horta	4	0.7
Angra do Heroísmo	5	0.8

Among these participants, 71 (11.8%) work in central services, 212 (35.2%) in finance directorates, 70 (11.6) in customs, 233 (38.6%) in finance services, and 17 (2.8%) in customs offices. As for the method of employment, 264 (43.8%) are appointed, 16 (2.7%) are on service commission, and 323 (53.6%) are on public service contracts. Among these participants, 14 (2.3%) are managers, 67 (11.1%) are in tax and customs management, 262 (43.4%) are in tax and customs inspection/management, 133 (22.1%) belong to subsistence careers, 88 (14.6%) belong to IT staff, and 39 (6.5%) to general regime staff. As for how they were hired, 536 (88.9%) were hired through a competitive procedure, 38 (6.3%) through internal mobility, 2 (0.3%) returned from unpaid leave, 12 (2%) are on service commission and 15 (2.05%) are in another situation. Regarding whether they are union members, 487 (80.8%) said they are union members, and 116 (19.2%) said they are not union members.

### 3.3. Data Analysis Procedure

The data were imported into SPSS Statistics 29.0 software (IBM Corp., Armonk, NY, USA). The first step was to test the metric qualities of the instruments used in this study. To test the validity of the instruments measuring occupational stress, motivation, and burnout, confirmatory factor analyses were carried out using AMOS Graphics 29.0 software (IBM Corp., Armonk, NY, USA). The procedure followed a "model generation" logic (Jöreskog and Sörbom 1993). Six fit indices were merged following the published recommendations (Hu and Bentler 1999), considering in the analysis of their adjustment the results obtained for the chi-square test ( $\chi^2/df \leq 5$ ; for the Tucker Lewis index (TLI)  $> 0.90$ ; for the goodness-

of-fit index (GFI) > 0.90; for the comparative fit index (CFI) > 0.90; for the root mean square error of approximation (RMSEA)  $\leq$  0.08; and for the root mean square residual (RMSR), where a smaller value corresponds to a better adjustment. We then tested the construct reliability for each scale's dimensions, which should be greater than 0.70. Finally, the convergent validity was tested by calculating the average variance extracted (AVE), which should be greater than 0.50 (Fornell and Larcker 1981). However, when Cronbach's alpha value is above 0.70, AVE values greater than 0.40 are acceptable, indicating good convergent validity (Hair et al. 2011).

The discriminant validity was tested by comparing the square root of the AVE values with the correlation values between factors. The square root values of the AVE should be higher than the correlation value between the factors whose discriminant validity is to be analyzed.

For the instrument measuring turnover intentions, as it is made up of only three factors, its validity was tested by carrying out an exploratory factor analysis. The KMO value was calculated, which should be greater than 0.70 (Sharma 1996). We also calculated the average variance extracted, which should be greater than 50%. As for the factor weights of each item, all items with factor weights greater than 0.50 were considered.

The internal consistency was tested for each of the dimensions that make up the instrument by calculating Cronbach's alpha, which must be greater than 0.70 (Bryman and Cramer 2003).

Concerning the sensitivity of the items, the median, minimum, maximum, asymmetry, and kurtosis were calculated. Items should not have the median leaning against one of the extremes, and they should have responses at all points, and their absolute values of skewness and kurtosis should be below 3 and 7, respectively (Kline 2011).

Descriptive statistics were carried out on the variables under study to see if the answers given by the participants differed significantly from the central point of the respective scale. This was done using the one-sample Student's *t*-test. The association between the sociodemographic variables and the variables under study was also tested using Student's *t*-test for independent samples, one-way ANOVA, and Pearson's correlation.

Hypotheses 1, 2, 3, 4, and 5 were tested using simple and multiple linear regressions. Hypothesis 6, which assumed a moderating effect, was tested using MACRO Process 4.0, developed by Hayes (2013).

#### 3.4. Instruments

To measure occupational stress, we used the Occupational Stress Instrument—General Version (QSO-VG) by Gomes (2010), developed based on studies in different professional areas, giving it credibility for studying occupational stress. This instrument identifies and assesses potential sources of stress (i.e., stressors) in the course of work. It consists of 24 items relating to sources of stress. These items are divided into seven subscales with a 5-point Likert score (0 = no stress to 4 = much stress). The dimensions assessed are as follows: relationship with users (items 2, 8, 13, and 21); relationship with managers (items 12, 20, and 24); relationship with colleagues (items 4, 17, and 22); overwork (items 5, 10, 11, and 16); career and pay (items 1, 6, 15, and 19); family problems (items 3, 14, and 23); and working conditions (items 7, 9, and 18). A confirmatory factor analysis was carried out on the seven factors. The fit indices obtained were adequate ( $\chi^2/df = 2.90$ ; GFI = 0.93; CFI = 0.97; TLI = 0.96; RMSEA = 0.056; and SRMR = 0.045). The construct reliability of the dimensions varied between 0.85 (relationship with management) and 0.96 (family problems). Regarding convergent validity, the AVE values varied between 0.65 (relationship with managers) and 0.88 (family problems). As for divergent validity, all the AVE's square root values were higher than the correlations between the factors for which discriminant validity was to be tested.

To measure turnover intentions, we used the instrument developed by Bozeman and Perrewé (2001), consisting of 3 items, which are anchored on a five-point Likert scale (from 1 "Strongly Disagree" to 5 "Strongly Agree"). The validity of this instrument was tested

using an exploratory factor analysis. A KMO of 0.74 was obtained, which can be considered reasonable (Sharma 1996), and Bartlett's test of sphericity was significant at  $p < 0.001$ , which indicates that the sample comes from a multivariate population (Pestana and Gageiro 2003). This instrument is made up of one factor, which explains 85.32% of its total variability. As for internal consistency, a Cronbach's alpha of 0.91 was obtained.

The Oldenburg Burnout Inventory, developed by Demerouti and Nachreiner (1998) and adapted for the Portuguese population by Sinval et al. (2019), measured burnout. Its aim is to assess the exhaustion and depersonalization dimensions (Halbesleben and Demerouti 2005), in which the exhaustion subscale represents the feeling of emptiness, excessive workload, physical, cognitive, and emotional exhaustion (Demerouti et al. 2003). The depersonalization subscale reflects the disengagement from the professional environment and the attitudes towards work (Bakker and Demerouti (2008)). This instrument consists of 16 items, which are anchored on a five-point Likert scale (from 1 "Strongly Disagree" to 5 "Strongly Agree"). These 16 items are divided into two dimensions: disengagement (items 1, 3, 6, 7, 9, 11, 13, and 15) and exhaustion (items 2, 4, 5, 8, 10, 12, 14, and 16). The validity of this instrument was tested by carrying out a two-factor confirmatory factor analysis. The fit indices obtained were adequate ( $\chi^2/\text{gl} = 3.81$ ; GFI = 0.95; CFI = 0.95; TLI = 0.93; RMSEA = 0.068; and SRMR = 0.045). The construct reliability for disengagement was 0.85, and for exhaustion, 0.91. As for internal consistency, disengagement had a Cronbach's alpha of 0.84 and exhaustion of 0.88. Concerning convergent validity, the AVE values were 0.43 for disengagement and 0.56 for exhaustion. Although disengagement had a low AVE value, according to Hair et al. (2011), when Cronbach's alpha value is above 0.70, values above 0.40 can be accepted. As for divergent validity, all the AVE's square root values were higher than the correlation between the two factors.

Motivation was measured using the instrument developed by Gagné et al. (2010), consisting of 12 items anchored on a five-point Likert scale (from 1 "Strongly Disagree" to 5 "Strongly Agree"). This instrument is made up of 4 dimensions: intrinsic motivation (items 1, 2, and 3); identified motivation (items 4, 5, and 6); introjected motivation (items 7, 8, and 9); and extrinsic motivation (items 10, 11, and 12). To test the validity of this instrument, a 4-factor confirmatory factor analysis was carried out. The fit indices obtained were adequate ( $\chi^2/\text{gl} = 2.76$ ; GFI = 0.97; CFI = 0.98; TLI = 0.97; RMSEA = 0.054; and SRMR = 0.033). As the extrinsic motivation dimension had very low construct reliability (0.61), very low internal consistency (0.59), and a low AVE value (0.43), we decided to remove this dimension. A new confirmatory factor analysis was carried out. The fit indices were adequate ( $\chi^2/\text{gl} = 2.42$ ; GFI = 0.98; CFI = 0.99; TLI = 0.98; RMSEA = 0.049; and SRMR = 0.030). The construct reliability varied between 0.79 (introjected motivation) and 0.84 (intrinsic motivation). As for consistency, it varied between 0.78 (introjected motivation) and 0.86 (intrinsic motivation). Regarding convergent validity, the AVE values varied between 0.57 (introjected motivation) and 0.64 (intrinsic motivation). As for divergent validity, all the AVE's square root values were higher than the factor correlation.

## 4. Results

### 4.1. Descriptive Statistics of the Variables under Study

To understand the position of the answers given by the participants, descriptive statistics were carried out on the variables under study.

The results show that the participants in this study reported levels of stress, with all the dimensions having an average significantly higher than the central point of this scale (2), except for the "stress caused by colleagues" dimension (Table 2). It was the employees working in the customs officers who showed the highest levels of stress in terms of stress about career and pay, family problems, and working conditions (Figure 2). The employees working in finance had higher levels of stress caused by users and overwork (Figure 2). Concerning the stress caused by colleagues and managers, the employees working in customs reported the highest levels (Figure 2).

**Table 2.** Descriptive statistics of the variables under study.

Scale	Dimension	t	p	Mean	SD
Occupational stress	Users	11.88	<0.001	2.46	0.96
	Managers	7.17	<0.001	2.32	1.10
	Colleagues	−3.84	<0.001	1.83	1.08
	Overwork	21.42	<0.001	2.77	0.88
	Career and pay	22.85	<0.001	2.83	0.90
	Family problems	9.87	<0.001	2.43	1.07
	Working conditions	18.83	<0.001	2.74	0.97
Turnover intentions		11.32	<0.001	3.51	1.11
Burnout	Disengagement	15.38	<0.001	3.46	0.73
	Exhaustion	21.75	<0.001	3.64	0.72
Motivation	Intrinsic	−8.49	<0.001	2.69	0.89
	Identified	10.91	<0.001	3.67	1.51
	Introjected	−15.72	<0.001	2.44	0.88

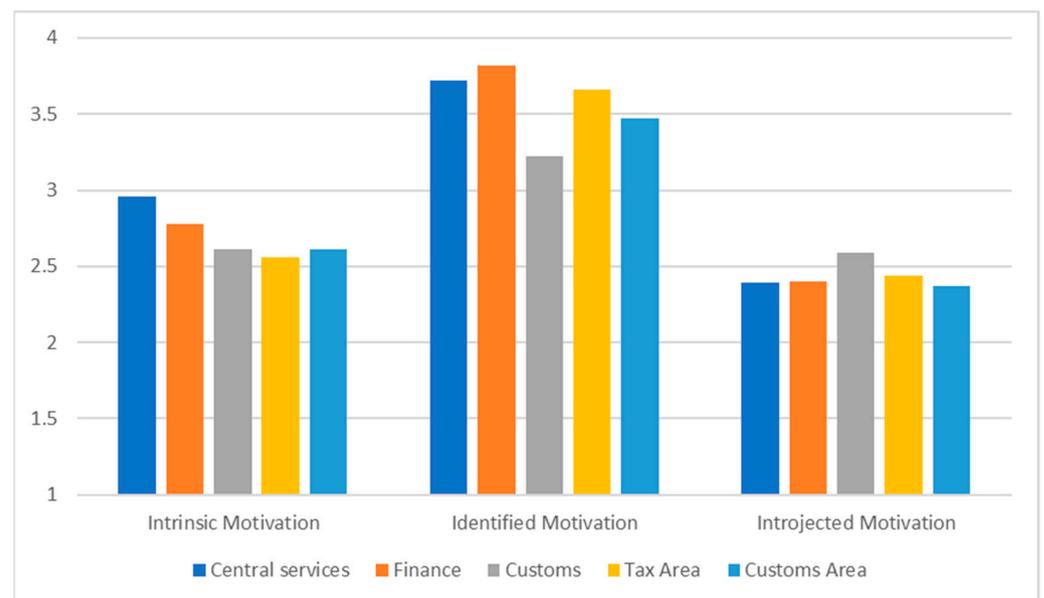
**Figure 2.** Distribution of occupational stress according to the department where the employee works.

The participants also showed high turnover intentions as well as high levels of burnout, significantly higher than the scale's central point (3) (Table 2). It is the participants working in financial services who have the highest turnover intentions (Figure 3). Regarding burnout levels, participants working in the tax area reported higher levels of disengagement, and those working in the customs area reported higher levels of exhaustion (Figure 3).



**Figure 3.** Distribution of turnover intentions and burnout according to the department where the employee works.

As for motivation levels, the intrinsic and introjected motivation were significantly below the central point of the scale (3), while the identified motivation was significantly above the central point (Table 2). The participants working in central services reported the highest levels of intrinsic motivation (Figure 4). As for identified motivation, the employees who reported the highest levels were those working in finance, and those who reported the lowest were those working in customs (Figure 4). Concerning introjected motivation, the participants working in customs reported the highest levels (Figure 4).



**Figure 4.** Distribution of motivation according to the department where the employee works.

#### 4.2. Association between the Variables under Study

The association between the variables under study was tested using Pearson's correlation.

The results show that intrinsic and identified motivation are negatively and significantly associated with turnover intentions, disengagement, exhaustion, and all the dimensions of occupational stress (Table 3). Introjected motivation is negatively and significantly associated with turnover intentions, disengagement, and exhaustion, and positively and significantly associated with family problems (Table 3). Turnover intentions were positively

and significantly associated with disengagement, exhaustion, and all the dimensions of occupational stress (Table 3). Disengagement and exhaustion are positively and significantly associated with all dimensions of occupational stress (Table 3). The age was only negatively and significantly associated with intrinsic motivation, introjected motivation, and stress caused by career and pay (Table 3).

**Table 3.** Pearson’s correlation results.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Intrinsic	-													
2. Identified	0.38 **	-												
3. Introjected	0.29 **	0.12 **	-											
4. Turnover int.	-0.60 **	-0.43 **	-0.17 **	-										
5. Disengagement	-0.74 **	-0.44 **	-0.27 **	0.65 **	-									
6. Exhaustion	-0.58 **	-0.41 **	-0.09 *	0.54 **	0.63 **	-								
7. Users	-0.32 **	-0.30 **	-0.02	0.36 **	0.41 **	0.50 **	-							
8. Managers	-0.37 **	-0.42 **	-0.01	0.41 **	0.48 **	0.50 **	0.48 **	-						
9. Colleagues	-0.28 **	-0.30 **	0.00	0.33 **	0.33 **	0.39 **	0.41 **	0.63 **	-					
10. Overwork	-0.34 **	-0.37 **	0.03	0.42 **	0.40 **	0.65 **	0.60 **	0.52 **	0.44 **	-				
11. Career and pay	-0.22 **	-0.51 **	0.06	0.35 **	0.33 **	0.35 **	0.39 **	0.40 **	0.29 **	0.43 **	-			
12. Family probl.	-0.22 **	-0.35 **	0.10 *	0.32 **	0.29 **	0.56 **	0.47 **	0.46 **	0.41 **	0.68 **	0.42 **	-		
13. Working cond.	-0.22 **	-0.43 **	-0.01	0.34 **	0.36 **	0.43 **	0.51 **	0.50 **	0.41 **	0.59 **	0.50 **	0.50 **	-	
14. Age	-0.10 *	0.03	0.15 **	0.02	0.04	0.06	-0.03	0.02	0.04	0.02	-0.16 **	0.01	-0.03	-

Note. \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

### 4.3. Hypothesis

Initially, we considered age as a control variable. However, as it is not significantly correlated with any dependent variables (exhaustion, disengagement, and turnover intentions), we did not do so.

To test Hypothesis 1, a multiple linear regression was carried out.

The results show that only stress caused by the manager ( $\beta = 0.17$ ;  $p = 0.001$ ), overwork ( $\beta = 0.21$ ;  $p < 0.001$ ), and the career and remuneration ( $\beta = 0.15$ ;  $p < 0.001$ ) has a positive and significant effect on turnover intentions (Table 4). The model explains 24% of the variability in turnover intentions (Table 4). The results also indicate that the model is statistically significant ( $F(7, 595) = 28.30$ ;  $p < 0.001$ ) (Table 4). Hypothesis 1 was partially supported.

**Table 4.** Effect of occupational stress on turnover intentions.

Independent Variable	Dependent Variable	F	p	R2a	$\beta$	p
Users	Turnover intentions	28.30 ***	<0.001	0.24	0.08	0.099
Managers					0.17 **	0.001
Colleagues					0.06	0.184
Overwork					0.21 ***	<0.001
Career and pay					0.15 ***	<0.001
Family problems					-0.04	0.481
Working conditions					0.01	0.861

Note. \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

Hypothesis 2 was tested by performing two multiple linear regressions.

The stress caused by users ( $\beta = 0.16$ ;  $p < 0.001$ ), managers ( $\beta = 0.32$ ;  $p < 0.001$ ), overwork ( $\beta = 0.14$ ;  $p = 0.012$ ), and career and pay ( $\beta = 0.10$ ;  $p = 0.012$ ) has a positive and significant effect on disengagement (Table 5). The model explains 29% of the variability in disengagement and is statistically significant ( $F(7, 595) = 35.40$ ;  $p < 0.001$ ) (Table 5).

**Table 5.** Effect of occupational stress on burnout.

Independent Variable	Dependent Variable	F	<i>p</i>	R2a	$\beta$	<i>p</i>
Users	Disengagement	35.40 ***	<0.001	0.29	0.16 ***	<0.001
Managers					0.32 ***	<0.001
Colleagues					0.01	0.970
Overwork					0.14 *	0.012
Career and pay					0.10 *	0.012
Family problems					−0.08	0.091
Working conditions					0.03	0.568
Users	Exhaustion	79.76 ***	<0.001	0.48	0.11 **	0.004
Managers					0.17 ***	<0.001
Colleagues					0.00	0.966
Overwork					0.38 ***	<0.001
Career and pay					0.02	0.669
Family problems					0.19 ***	<0.001
Working conditions					−0.04	0.273

Note. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

The stress caused by users ( $\beta = 0.11$ ;  $p = 0.004$ ), managers ( $\beta = 0.17$ ;  $p < 0.001$ ), overwork ( $\beta = 0.38$ ;  $p < 0.001$ ), and family problems ( $\beta = 0.19$ ;  $p < 0.001$ ) has a positive and significant effect on exhaustion (Table 5). The model explains 48% of the variability in exhaustion and is statistically significant ( $F(7, 595) = 79.76$ ;  $p < 0.001$ ) (Table 5). Hypothesis 2 was partially supported.

Hypothesis 3 was tested by performing a multiple linear regression.

Both disengagement ( $\beta = 0.52$ ;  $p < 0.001$ ) and exhaustion ( $\beta = 0.21$ ;  $p < 0.001$ ) have a positive and significant effect on turnover intentions (Table 5). The model explains 45% of the variability in turnover intentions and is statistically significant ( $F(2, 600) = 249.87$ ;  $p < 0.001$ ) (Table 6). Hypothesis 3 was supported.

**Table 6.** Effect of burnout on turnover intentions.

Independent Variable	Dependent Variable	F	<i>p</i>	R2a	$\beta$	<i>p</i>
Disengagement	Turnover intentions	249.87 ***	<0.001	0.45	0.52 ***	<0.001
Exhaustion					0.21 ***	<0.001

Note. \*\*\*  $p < 0.001$ .

Hypothesis 4, which presupposes a mediating effect, followed the assumptions of Baron and Kenny (1986). These assumptions were verified in Hypotheses 1, 2, and 3. Only the mediating effects between the variables that met the three assumptions were tested. Two multiple linear regressions were carried out. In each multiple linear regression, the predictor variables were introduced as the independent variables in the first step and the mediating variables in the second step.

A total mediation effect of disengagement was proven in the relationship between the stress caused by managers and turnover intentions ( $\beta_1 = 0.22$ ;  $\beta_2 = 0.02$ ) (Table 7). After the mediating variable was introduced into the regression equation, the stress caused by managers no longer had a significant effect on turnover intentions. Sobel's test confirmed the total mediation effect ( $Z = 5.81$ ;  $p < 0.001$ ).

**Table 7.** The mediating effect of disengagement on the relationship between occupational stress and turnover intentions.

Independent Variable	Step 1 $\beta$	Step 2 $\beta$
Managers	0.22 ***	0.02
Overwork	0.24 ***	0.14 ***
Career and pay	0.16 ***	0.10 **
Disengagement		0.55 ***
F	64.07 ***	129.79 ***
R2a	0.24	0.46
$\Delta R2a$		0.22 ***

Note. \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

As for the mediating effect of disengagement on the relationship between the stress caused by overwork and turnover intentions ( $\beta_1 = 0.24$ ;  $\beta_2 = 0.14$ ), as well as on the relationship between the stress caused by career and pay and turnover intentions ( $\beta_1 = 0.16$ ;  $\beta_2 = 0.10$ ), there were two partial mediation effects; when the mediating variable was introduced into the regression equation, both overwork stress and career and pay stress continued to have a significant effect on the dependent variable, but the effect decreased in intensity (Table 7). Sobel's test confirmed the partial mediation effect for overwork stress ( $Z = 2.49$ ;  $p = 0.013$ ) and work overload, as well as career and pay stress ( $Z = 2.46$ ;  $p = 0.013$ ). The increase in variability proved to be significant ( $\Delta R^2_a = 0.22$ ;  $p < 0.001$ ). Both model 1 ( $F(3, 599) = 64.07$ ;  $p < 0.001$ ) and model 2 ( $F(4, 598) = 129.79$ ;  $p < 0.001$ ) were statistically significant (Table 7).

A total mediation effect of exhaustion was proven in the relationship between overwork stress and turnover intentions ( $\beta_1 = 0.29$ ;  $\beta_2 = 0.06$ ), since after the mediating variable was introduced into the regression equation, overwork stress no longer had a significant effect on turnover intentions (Table 8). Sobel's test confirmed the total mediation effect ( $Z = 4.49$ ;  $p < 0.001$ ).

**Table 8.** The mediating effect of exhaustion on the relationship between occupational stress and turnover intentions.

Independent Variable	Step 1 $\beta$	Step 2 $\beta$
Managers	0.26 ***	0.16 ***
Overwork	0.29 ***	0.06
Exhaustion		0.42 ***
F	86.07 ***	93.40 ***
R2a	0.22	0.32
$\Delta R2a$		0.10 ***

Note. \*\*\*  $p < 0.001$ .

As for the mediating effect of exhaustion on the relationship between the stress caused by the manager and turnover intentions ( $\beta_1 = 0.24$ ;  $\beta_2 = 0.14$ ), a partial mediation effect was confirmed, since when the mediating variable was introduced into the regression equation, the stress caused by the manager continued to have a significant effect on the dependent variable, but the effect decreased in intensity (Table 8). Sobel's test confirmed the partial mediation effect ( $Z = 3.24$ ;  $p = 0.001$ ). The increase in variability proved to be significant ( $\Delta R^2_a = 0.10$ ;  $p < 0.001$ ). Both model 1 ( $F(2, 600) = 86.07$ ;  $p < 0.001$ ) and model 2 ( $F(3, 599) = 93.40$ ;  $p < 0.001$ ) were statistically significant (Table 8).

Hypothesis 4 was partially supported.

Hypothesis 5 was tested by performing a multiple linear regression.

The results show that intrinsic motivation ( $\beta = -0.51$ ;  $p < 0.001$ ) and identified motivation ( $\beta = -0.24$ ;  $p < 0.001$ ) have a negative and significant effect on turnover intentions

(Table 9). The model explains 40% of the variability in turnover intentions and is statistically significant ( $F(3, 599) = 133.76; p < 0.001$ ). Hypothesis 5 was partially supported.

**Table 9.** Effect of motivation on turnover intentions.

Independent Variable	Dependent Variable	F	p	R2a	β	p
Intrinsic motivation	Turnover intentions	133.76 ***	<0.001	0.40	-0.51 ***	<0.001
Identified motivation					-0.24 ***	<0.001
Introjected motivation					0.01	0.886

Note. \*\*\*  $p < 0.001$ .

To test hypothesis 6, as it presupposes a moderation effect, the Macro Process developed by Hayes (2013) was used. Only the moderating effect of intrinsic motivation and identified motivation on the relationship between occupational stress and turnover intentions was tested since identified motivation has no significant effect on turnover intentions.

The results showed that intrinsic motivation has a moderating effect on the relationship between occupational stress (with managers, colleagues, career and pay, and family problems) and turnover intentions (Table 10).

**Table 10.** Moderating effect of Intrinsic Motivation on the relationship between Occupational Stress and Turnover Intentions.

Variables	B	SE	t	p	95% CI
Users → turnover intentions ( $R^2 = 0.39; p < 0.001$ )					
Constant	3.53 ***	0.04	95.50 ***	<0.001	[3.46, 3.60]
Users	0.21 ***	0.04	5.39 ***	<0.001	[0.13, 0.29]
Intrinsic motivation	-0.67 ***	0.04	-15.93 ***	<0.001	[-0.76, -0.59]
U*IntM	-0.06	0.04	-1.64	0.101	[-0.13, 0.14]
Managers → turnover intentions ( $R^2 = 0.40; p < 0.001$ )					
Constant	3.54 ***	0.04	94.73 ***	<0.001	[3.46, 3.60]
Managers	0.21 ***	0.03	6.09 ***	<0.001	[0.14, 0.27]
Intrinsic motivation	-0.65 ***	0.04	-15.22 ***	<0.001	[-0.74, -0.57]
M*IntM	-0.07 *	0.04	-2.05 *	0.041	[-0.01, -0.14]
Colleagues → turnover intentions ( $R^2 = 0.39; p < 0.001$ )					
Constant	3.54 ***	0.04	96.64 ***	<0.001	[3.46, 3.61]
Colleagues	0.19 ***	0.03	5.53 ***	<0.001	[0.12, 0.25]
Intrinsic motivation	-0.68 ***	0.04	-16.52 ***	<0.001	[-0.77, -0.60]
C*IntM	-0.10 **	0.04	-2.64 **	0.009	[-0.02, -0.17]
Overwork → turnover intentions ( $R^2 = 0.41; p < 0.001$ )					
Constant	3.52 ***	0.04	96.11 ***	<0.001	[3.45, 3.58]
Overwork	0.31 ***	0.04	7.22 ***	<0.001	[0.22, 0.39]
Intrinsic motivation	-0.64 ***	0.04	-15.30 ***	<0.001	[-0.72, -0.56]
O*IntM	-0.03	0.04	-0.67	0.503	[-0.06, 0.12]
Career and pay → turnover intentions ( $R^2 = 0.41; p < 0.001$ )					
Constant	3.53 ***	0.04	99.16 ***	<0.001	[3.46, 3.60]
Career and pay	0.28 ***	0.04	6.92 ***	<0.001	[0.20, 0.35]
Intrinsic motivation	-0.69 ***	0.04	-17.05 ***	<0.001	[-0.77, -0.61]
CP*IntM	-0.10 *	0.04	-2.31 *	0.022	[-0.02, -0.19]
Family problems → turnover intentions ( $R^2 = 0.39; p < 0.001$ )					
Constant	3.53 ***	0.04	97.88 ***	<0.001	[3.46, 3.60]
Family problems	0.20 ***	0.03	5.83 ***	<0.001	[0.13, 0.26]
Intrinsic motivation	-0.70 ***	0.04	-17.04 ***	<0.001	[-0.78, -0.62]
FP*IntM	-0.08 *	0.04	-2.10 *	0.036	[-0.01, -0.15]
Work conditions → turnover intentions ( $R^2 = 0.40; p < 0.001$ )					
Constant	3.52 ***	0.04	98.23 ***	<0.001	[3.45, 3.59]
Work conditions	0.24 ***	0.03	6.50 ***	<0.001	[0.17, 0.32]
Intrinsic motivation	-0.69 ***	0.04	-16.86 ***	<0.001	[-0.77, -0.61]
WC*IntM	-0.05	0.04	-1.25	0.213	[-0.03, 0.13]

Note. \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

For participants with low levels of intrinsic motivation, when compared to participants with high intrinsic motivation, occupational stress (caused by managers, colleagues, career

and pay, and family problems) becomes relevant to boosting their turnover intentions (Figure 5).

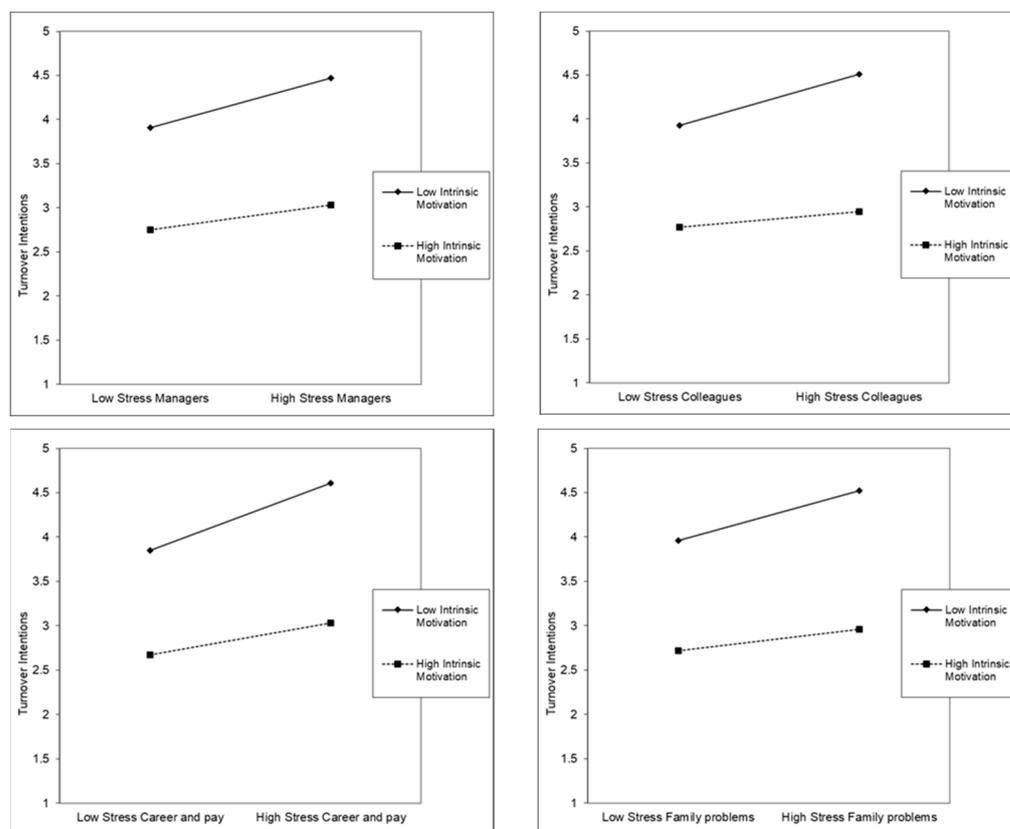


Figure 5. Interaction effects of occupational stress × intrinsic motivation.

There was no moderating effect of identified motivation on the relationship between occupational stress and turnover intentions. Hypothesis 6 was partially supported (Table A1). Finally, Table 11 summarizes the results obtained in this study.

Table 11. Summary of hypotheses results.

H1	Occupational stress (users, management, colleagues, overwork, career and pay, family problems, and working conditions) has a positive and significant effect on turnover intentions.	Partially supported
H2	Occupational stress (users, management, colleagues, overwork, career and pay, family problems, and working conditions) has a significant and positive effect on burnout levels (disengagement and exhaustion).	Partially supported
H3	Burnout (disengagement and exhaustion) has a positive and significant effect on turnover intentions.	Supported
H4	Burnout (disengagement and exhaustion) has a mediating effect on the relationship between occupational stress (users, management, colleagues, overwork, career and pay, family problems, and working conditions) and turnover intentions.	Partially supported
H5	Motivation (intrinsic, identified, introjected, and extrinsic) has a negative and significant effect on turnover intentions.	Partially supported
H6	Motivation (intrinsic, identified, introjected, and extrinsic) moderates the relationship between occupational stress (users, management, colleagues, overwork, career and pay, family problems, and working conditions) and turnover intentions, with the relationship expected to be weaker for employees with high levels of motivation than for employees with low levels of motivation.	Partially supported

## 5. Discussion

The main aim of this study was to investigate the relationship between occupational stress and turnover intentions and whether this relationship was mediated by burnout and moderated by motivation.

Hypothesis 1 was partially supported since among the dimensions of occupational stress, only the stress caused by managers, overwork, and career and pay has a positive and significant effect on turnover intentions. These results align with the literature that occupational stress has a positive and significant effect on turnover intentions (Jiang et al. 2022). The dimension of occupational stress that has the strongest effect on turnover intentions is work overload. This result aligns with what Singh et al. (2020) say, that work overload is one of the most critical factors in occupational stress levels (Imeokparia and Ediagbonya 2013).

Hypothesis 2 was also partially supported. The stress caused by users, managers, work overload, and career and remuneration has a positive and significant effect on disengagement. It should be noted that the dimension of occupational stress that has the strongest effect on disengagement is the stress caused by managers. The stress caused by users, managers, work overload, and family problems has a positive and significant effect on exhaustion. The dimension of occupational stress that has the strongest effect on burnout is work overload. These results are in line with the literature since burnout occurs when employees face a stressful work environment over a long period, and there are few resources to cope with the demands of the job (Bakker and Demerouti 2008; Galanakis et al. 2020; Khalid et al. 2020; Maslach and Leiter 2016; Maslach et al. 2001). Burnout is a severe reaction to occupational stress (Marques-Pinto et al. 2003), and one of the occupational stress factors that leads to more severe burnout situations (especially exhaustion) is work overload (Singh et al. 2020).

As expected, Hypothesis 3 was confirmed. Both disengagement and burnout have a positive and significant effect on turnover intentions. It should be noted that disengagement is the dimension that has the most substantial effect on turnover intentions, which is natural because if the employee is in a situation of disengagement, it is natural that they will be more willing to leave the organization where they are working. These results are in line with what the literature tells us. According to several authors, burnout has a positive and significant effect on turnover intentions (Rahim and Cosby 2016; Kartono and Hilmiana 2018; Lee 2019).

As for the mediating effect of burnout on the relationship between occupational stress and turnover intentions, it was found that disengagement has a total mediating effect on the relationship between the stress caused by managers and turnover intentions and has a partial mediating effect on the stress caused by work overload and career and pay. Exhaustion has a total mediation effect on the relationship between work overload and turnover intentions and a partial mediation effect when the predictor variable is stress caused by managers. The total mediation effect of exhaustion on the relationship between work overload and turnover intentions was expected, since, as the literature tells us, work overload is one of the factors that leads to more severe burnout (especially exhaustion) (Singh et al. 2020). These results align with the literature, which states that burnout mediates the relationship between occupational stress and turnover intentions (Han et al. 2016; Padmasundari 2019; Salama et al. 2022).

Hypothesis 5 was partially confirmed since only intrinsic motivation and integrated motivation have a negative and significant effect on turnover intentions. These results are in line with the literature since these two dimensions are part of what is known as autonomous motivation (Lopes et al. 2022; Kim 2018; Zheng et al. 2021). Autonomous motivation leads employees to engage in adaptive behaviors including turnover intentions (Fernet et al. 2017; Fernet et al. 2015; Trépanier et al. 2015).

Finally, there was evidence of the moderating effect of intrinsic motivation on the relationship between the stress caused by managers, colleagues, career and remuneration, and family problems. For participants with low intrinsic motivation, when compared

to participants with high intrinsic motivation, these dimensions of stress are relevant to boosting turnover intentions. These results align with the literature (Özbağ et al. 2014). High levels of intrinsic motivation allow for the effect of occupational stress (stress caused by managers, colleagues, career and pay, and family problems) on turnover to decrease in intensity.

The descriptive statistics of the variables under study showed that all the dimensions of occupational stress had a mean significantly higher than the central point of the scale, except for in stress caused by colleagues. The dimensions with the highest mean scores were the stress about career and pay, work overload, and working conditions. Those who showed the highest stress levels with career and pay were the employees of the customs offices, and the same was true of stress caused by working conditions. As for the stress caused by overwork, the highest levels were found among employees in the tax and customs offices.

Turnover intentions were also very high, indicating that many employees are considering leaving the Tax and Customs Authority soon. This may also be because the average age of these employees is very high. The employees with the highest levels of intention to leave are those working in the tax service, but it is precisely these employees who have the highest average age.

Burnout levels are also very high, with exhaustion levels higher than disengagement levels. It should be noted that among the dimensions of occupational stress, the one that has the strongest effect on burnout is work overload, which in turn, is one of the dimensions with the highest average. It was the employees in the customs offices who showed the highest levels of exhaustion. As for disengagement, it was the employees in the finance departments who showed the highest levels.

Concerning motivation, employees showed low levels of intrinsic motivation and introjected motivation but high levels of identified motivation. Employees in the finance department showed the lowest levels of intrinsic motivation, and those in the customs offices showed the highest levels of introjected motivation. Regarding identified motivation, those with the highest values are from the tax department. The low intrinsic and identified motivation levels in this study are in line with the results of the study conducted by Nishimura et al. (2021) on employees from the Portuguese Public Administration.

#### *Limitations*

Firstly, we have the limitation of the sampling process, which was nonprobabilistic, intentional and of the snowball type.

Secondly, the type of questionnaire used in this study, a self-report questionnaire, may have biased some of the participants' responses. However, several methodological and statistical recommendations were followed to reduce the impact of common method variance (Podsakoff et al. 2003).

Thirdly, it was a cross-sectional study, which does not allow us to establish causal relationships. It would be necessary to carry out a longitudinal study to test causal relationships.

#### **6. Conclusions**

This study is one of the first whose population is exclusively made up of employees of the Portuguese Tax and Customs Authority and which had an exceptional contribution from APIT to reach as many employees as possible to cover not only the mainland, but also the Autonomous Regions of Madeira and the Azores. It was confirmed that among the different departments of the Portuguese Tax and Customs Authority, the most critical departments are the tax offices and customs offices. The participants revealed high levels of stress, caused mainly by the problems with career progression and low pay. The fact that some careers have stagnated due to the crisis in Portugal since 2008 has caused many employees to feel a sense of injustice, and their stress levels have therefore increased. In recent years, we have witnessed several strikes by the tax and customs services in Portugal, where the main demands are based on the delay in regulating the revision of the careers

of tax workers, the growing degradation in the functioning and loss of authority of the AT, the performance evaluation system, and the “robotic functions that hinder the fight against fraud and tax evasion” (CNN Portugal 2021; Diário Digital de Castelo Branco 2023). Other factors that cause high levels of stress are work overload and working conditions. These high levels of stress lead to increased levels of burnout (Carod-Artal and Vázquez-Cabrera 2013; Galanakis et al. 2020; Khalid et al. 2020) and workers wanting to leave the organization, as some authors have pointed out (Jiang et al. 2022; Tziner et al. 2015). Those responsible for the Direct State Administration through the Ministry of Finance should be concerned with restoring career progression, reducing work overload, and improving the working conditions of these employees so that the levels of occupational stress are reduced, and subsequently, burnout and turnover intentions. Another concern is the high average age of employees, which is far too high (52.46 years) When you can join the civil service from 18, and the retirement age is 64 years and four months, this average age is high. In private organizations, the average is lower, often between 35 and 40 years old. We know that the Portuguese population is very elderly and that many young talents leave Portugal for other countries where job prospects are more attractive. However, the increase in the retirement age (66 years and four months) has also led to an increase in the average age of Portuguese public administration employees.

**Author Contributions:** Conceptualization, M.F., A.M. and F.R.; methodology, M.F. and A.M.; software, A.M.; validation, M.F., A.M. and F.R.; formal analysis, A.M.; investigation, A.M.; resources, A.M.; data curation, A.M.; writing—original draft preparation, M.F. and A.M.; writing—review and editing, M.F., A.M. and F.R.; visualization, A.M.; supervision, A.M.; project administration, M.F.; funding acquisition, A.M. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Ethical review and approval were waived for this study since all participants (before answering the questionnaire) needed to read the informed consent portion and agree to it. This was the only way they could complete the questionnaire. Participants were informed about the purpose of the study, as well as that the results were confidential, as individual results would never be known and would only be analyzed in the set of all participants.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available upon request from the corresponding author. The data are not publicly available because in their informed consent, participants were informed that the data were confidential and that individual responses would never be known, as data analysis would be of all participants combined.

**Conflicts of Interest:** The authors declare no conflict of interest.

## Appendix A

**Table A1.** Moderating effect of identified motivation on the relationship between occupational stress and turnover intentions.

Variables	B	SE	t	p	95% CI
Users → turnover intentions ( $R^2 = 0.24; p < 0.001$ )					
Constant	3.53 ***	0.04	86.13 ***	<0.001	[3.45, 3.61]
Users	0.29 ***	0.04	6.64 ***	<0.001	[0.20, 0.37]
Identified motivation	−0.26 ***	0.03	−9.51 ***	<0.001	[−0.32, −0.21]
U*IdM	0.04	0.03	1.65	0.099	[−0.08, 0.10]
Managers → turnover intentions ( $R^2 = 0.24; p < 0.001$ )					
Constant	3.51 ***	0.04	82.79 ***	<0.001	[3.43, 3.60]
Managers	0.28 ***	0.04	4.04 ***	<0.001	[0.20, 0.35]
Identified motivation	−0.23 ***	0.03	−8.01 ***	<0.001	[−0.29, −0.17]
M*IdM	0.01	0.02	0.24	0.810	[−0.04, 0.05]

Table A1. Cont.

Variables	B	SE	t	p	95% CI
Colleagues → turnover intentions ( $R^2 = 0.23; p < 0.001$ )					
Constant	3.52 ***	0.04	85.47 ***	<0.001	[3.45, 3.61]
Colleagues	0.23 ***	0.03	5.96 ***	<0.001	[0.16, 0.31]
Identified motivation	-0.27 ***	0.03	-9.71 ***	<0.001	[-0.32, -0.21]
C*IdM	0.04	0.02	1.65	0.100	[-0.01, 0.09]
Overwork → turnover intentions ( $R^2 = 0.26; p < 0.001$ )					
Constant	3.52 ***	0.04	85.31 ***	<0.001	[3.44, 3.60]
Overwork	0.37 ***	0.05	7.84 ***	<0.001	[0.28, 0.47]
Identified motivation	-0.23 ***	0.03	-8.39 ***	<0.001	[-0.29, -0.18]
O*IdM	0.03	0.03	0.99	0.321	[-0.03, 0.09]
Career and pay → turnover intentions ( $R^2 = 0.21; p < 0.001$ )					
Constant	3.52 ***	0.05	77.23 ***	<0.001	[3.42, 3.60]
Career and pay	0.22 ***	0.05	4.07 ***	<0.001	[0.11, 0.32]
Identified motivation	-0.25 ***	0.03	-7.90 ***	<0.001	[-0.31, -0.19]
CP*IdM	0.01	0.03	0.17	0.862	[0.06, 0.07]
Family problems → Turnover Intentions ( $R^2 = 0.22; p < 0.001$ )					
Constant	3.52 ***	0.04	83.49 ***	<0.001	[3.45, 3.61]
Family problems	0.19 ***	0.03	4.85 ***	<0.001	[0.12, 0.27]
Identified motivation	-0.27 ***	0.03	-9.43 ***	<0.001	[-0.32, -0.21]
FP*IdM	0.03	0.02	1.37	0.173	[-0.01, 0.08]
Work conditions → turnover intentions ( $R^2 = 0.21; p < 0.001$ )					
Constant	3.52 ***	0.04	80.37 ***	<0.001	[3.44, 3.61]
Work conditions	0.21 ***	0.05	4.53 ***	<0.001	[0.12, 0.30]
Identified motivation	-0.26 ***	0.03	-8.60 ***	<0.001	[-0.31, -0.20]
WC*IdM	0.02	0.03	0.82	0.412	[-0.03, 0.08]

Note. \*\*\*  $p < 0.001$ .

## References

- Afonso, Jorge, and António Rui Gomes. 2012. Stress ocupacional na função pública: Um estudo comparativo entre colaboradores de uma autarquia local. In *Actas do 9º Congresso Nacional de Psicologia da Saúde*. Edited by José Luís Pais Ribeiro, Isabel Leal, Anabela Pereira, Ana Torres, Inês Direito and Paula Vagos. Lisboa: Placebo, Editora Lda, pp. 14–21.
- Ahn, Ji Young, and Chaoyu Wang. 2019. Job stress and turnover intention revisited: Evidence from Korean Firms. *Problems and Perspectives in Management* 17: 52–61. [CrossRef]
- Ajzen, Icek. 2012. The theory of planned behavior. In *The Handbook of Theories of Social Psychology*. Edited by Paul Lange, Arie Kruglanski and Tory Higgins. London: Sage Publications, pp. 438–59.
- Avey, James B., Fred Luthans, and Susan M. Jensen. 2009. Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management* 48: 677–93. [CrossRef]
- Bakker, Arnold B., and Evangelia Demerouti. 2008. Towards a model of work engagement. *Career Development International* 13: 209–23. [CrossRef]
- Baron, Reuben M., and David A. Kenny. 1986. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology* 51: 1173–82. [CrossRef] [PubMed]
- Benson, George S. 2006. Employee development, commitment and intention to turnover: A test of “employability” policies in action. *Human Resource Management Journal* 16: 173–92. [CrossRef]
- Bester, Janie, Marius Wilhelm Stander, and Llewellyn Ellardus Van Zyl. 2015. Leadership empowering behaviour, psychological empowerment, organisational citizenship behaviours and turnover intention in a manufacturing division: Original research. *SA Journal of Industrial Psychology* 41: 1–14. [CrossRef]
- Bicho, Leandro Manuel Dias, and Susete Rodrigues Pereira. 2007. *Stress Ocupacional*. Coimbra: Instituto Politécnico de Coimbra, Departamento de Engenharia Civil.
- Bozeman, Dennis P., and Pamela Perrewé. 2001. The effect of item content overlap on organizational commitment questionnaire—turnover cognitions relationships. *Journal of Applied Psychology* 86: 161–73. [CrossRef]
- Bryman, Alan, and Duncan Cramer. 2003. *Análise de Dados em Ciências Sociais. Introdução às Técnicas Utilizando o SPSS para Windows*, 3rd ed. Oeiras: Celta.
- Carod-Artal, Francisco J., and Carolina Vázquez-Cabrera. 2013. Burnout syndrome in an international setting. In *Burnout for Experts: Prevention in the Context of Living and Working*. Edited by Sabine Bährer-Kohler. Berlin: Springer Science + Business Media, pp. 15–35. [CrossRef]

- CNN Portugal. 2021. Available online: <https://cnnportugal.iol.pt/trabalhadores/autoridade-tributaria-e-aduaneira/greve-dos-trabalhadores-dos-impostos-e-alfandegas-encerra-70-dos-servicos-diz-sindicato/20271231/61a8eb890cf2cc58e7d5decc> (accessed on 22 November 2023).
- Deci, Eduard L., and Richard Ryan. 2008. Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology* 49: 182–85. [CrossRef]
- Deci, Eduard L., Anja H. Olafsen, and Richard Ryan. 2017. Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior* 4: 19–43. [CrossRef]
- Demerouti, Evangelia, and Friedhelm Nachreiner. 1998. Zur spezifität von burnout für dienstleistungsberufe: Fakt oder artefakt? [The specificity of burnout in human services: Fact or artifact?]. *Zeitschrift für Arbeitswissenschaft* 52: 82–89.
- Demerouti, Evangelia, Arnold B. Bakker, Ioanna Vardakou, and Aristotelis Kantas. 2003. The Convergent Validity of Two Burnout Instruments. *European Journal of Psychological Assessment* 19: 12–23. [CrossRef]
- Diário Digital de Castelo Branco. 2023. Available online: <https://www.diariodigitalcastelobranco.pt/noticia/62547/distrito-de-castelo-branco-protesta-contradegradacao-da-autoridade-tributaria-e-aduaneira--> (accessed on 22 November 2023).
- Fernet, Claude, Sarah-Geneviève Trépanier, Mireille Demers, and Stéphanie Austin. 2017. Motivational pathways of occupational and organizational turnover intention among newly registered nurses in Canada. *Nursing Outlook* 65: 444–54. [CrossRef]
- Fernet, Claude, Sarah-Geneviève Trépanier, Stéphanie Austin, Marylène Gagné, and Jacques Forest. 2015. Transformational leadership and optimal functioning at work: On the mediating role of employees' perceived job characteristics and motivation. *Work & Stress* 29: 11–31. [CrossRef]
- Fornell, Claes, and David F. Larcker. 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research* 18: 39–50. [CrossRef]
- Gagné, Marylène, Jacques Forest, Maarten Vansteenkiste, Laurence Crevier-Braud, Anja van den Broeck, Ann Kristin Aspeli, Jenny Bellerose, Charles Benabou, Emanuela Chemolli, Stefan Tomas Güntert, and et al. 2015. The Multidimensional Work Motivation Scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology* 24: 178–96. [CrossRef]
- Gagné, Marylène, Jacques Forest, Marie Hélène Gilbert, Caroline Aubé, Estelle Morin, and Angela Malorni. 2010. The Motivation at Work Scale: Validation Evidence in Two Languages. *Educational and Psychological Measurement* 70: 628–46. [CrossRef]
- Galanakis, Michael, Evangelia Alexandri, Kalliopi Kika, Xristofili Lelekanou, Margarita Papantonopoulou, Dimitra Stougiannou, and Melina Tzani. 2020. What Is the Source of Occupational Stress and Burnout? *Psychology* 11: 647–64. [CrossRef]
- Gautam, Dhruva, and Prakash Kumar Gautam. 2022. Occupational stress for employee turnover intention: Mediation effect of service climate and emotion regulation. *Asia-Pacific Journal of Business Administration*. [CrossRef]
- Gok, Ozge Adan, Yilmaz Akgunduz, and Ceylan Alkan. 2017. The effects of job stress and perceived organizational support on turnover intentions of hotel employees. *Journal of Tourismology* 3: 23–32.
- Gomes, Rui A. 2010. *Questionário de Stress Ocupacional—Versão Geral*. Relatório Técnico. Braga: Universidade do Minho.
- Griffeth, Rodger W., Peter W. Hom, and Stefan Gaertner. 2000. A Meta-Analysis of Antecedents and Correlates of Employee Turnover: Update, Moderator Tests, and Research Implications for the Next Millennium. *Journal of Management* 26: 463–88. [CrossRef]
- Grohmann, Márcia Zampieri, Lv da Cunha, and Jaqueline Silinske. 2013. Relações entre motivação, satisfação, comprometimento e desempenho no trabalho: Estudo em um Hospital Público. Paper presented at IV Encontro de Gestão de Pessoas e Relações de Trabalho, Brasília, Brazil, November 3–5.
- Hair, Joseph, Christian Ringle, and Marko Sarstedt. 2011. PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice* 19: 139–51. [CrossRef]
- Halbesleben, Jonathon R. B., and Evangelia Demerouti. 2005. The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work & Stress* 19: 208–20. [CrossRef]
- Han, Su Jin, Mark Bonn, and Meehee Cho. 2016. The relationship between customer incivility, restaurant frontline service employee burnout and turnover intention. *International Journal of Hospitality Management* 52: 97–106. [CrossRef]
- Hayes, Andrew F. 2013. *An Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York: Guilford Press.
- Hu, Li-tze, and Peter M. Bentler. 1999. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling* 6: 1–55. [CrossRef]
- Huang, In-Chung, Chih-Hsun Jason Chuang, and Hao-Chieh Lin. 2003. The role of burnout in the relationship between perceptions of organizational politics and turnover intentions. *Public Personnel Management* 32: 519–31. [CrossRef]
- Hussain, Syed Talib, Shen Lei, Tayyaba Akram, M. Jamal Haider, Syed Hadi Hussain, and Muhammad Ali. 2018. Kurt Lewin's Process Model for Organizational Change: The Role of Leadership and Employee Involvement: A Critical Review. *Journal of Innovation and Knowledge* 3: 123–27. [CrossRef]
- Imeokparia, Patience Osebhakhomen, and Kennedy Ediagbonya. 2013. Stress management: An approach to ensuring high academic performance of business education students. *European Journal of Educational Studies* 5: 167–76.
- Islam, Nazrul, Ekhtear Ahmed Zeesan, Debanik Chakraborty, Md. Nafizur Rahman, Syed Istiak Uddin Ahmed, Nowshin Nower, and Toufiq Nazrul. 2019. Relationship between Job Stress and the Turnover Intention of Private Sector Bank Employees in Bangladesh. *International Business Research* 12: 133–41. [CrossRef]

- Issever, Hallim, Kursat Ozdilli, Oguz Altunkaynak, Levent Onen, and Rian Disci. 2008. Depression in Tax Office Workers in Istanbul and its Affecting Factors. *Indoor and Built Environment* 17: 414–20. [CrossRef]
- Jabutay, Felicito, and Parisa Rungruang. 2020. Turnover intent of new workers: Social exchange perspectives. *Asia-Pacific Journal of Business Administration* 13: 60–79. [CrossRef]
- Jesus, Alexandra, Liliana Pitacho, and Ana Moreira. 2023. Burnout and Suicidal Behaviours in Health Professionals in Portugal: The Moderating Effect of Self-Esteem. *International Journal of Environmental Research and Public Health* 20: 4325. [CrossRef] [PubMed]
- Jiang, Nan, Hongling Zhang, Zhen Tan, Yanhong Gong, Mengge Tian, Yafei Wu, Jiali Zhang, Jing Wang, Zhenyuan Chen, Jianxiong Wu, and et al. 2022. The Relationship Between Occupational Stress and Turnover Intention Among Emergency Physicians: A Mediation Analysis. *Frontiers in Public Health* 10: 901251. [CrossRef] [PubMed]
- Jöreskog, Karl. G., and Dag Sörbom. 1993. *LISREL8: Structural Equation Modelling with the SIMPLIS Command Language*. Chicago: Scientific Software International.
- Khalid, Arslan, Fang Pan, Ping Li, Wei Wang, and Abdul Sattar Ghaffari. 2020. The impact of occupational stress on job burnout among bank employees in Pakistan, with psychological capital as a mediator. *Frontiers in Public Health* 7: 410–19. [CrossRef] [PubMed]
- Kartono, Kartono, and Hilmiana Hilmiana. 2018. Job Burnout: A Mediation between Emotional Intelligence and Turnover Intention. *Jurnal Bisnis Dan Manajemen* 19: 109–21. [CrossRef]
- Kim, Jungin. 2018. The contrary effects of intrinsic and extrinsic motivations on burnout and turnover intention in the public sector. *International Journal of Manpower, Emerald Group Publishing Limited* 39: 486–500. [CrossRef]
- Kline, Rex B. 2011. *Principles and Practice of Structural Equation Modeling*, 3rd ed. New York: Guilford Press.
- Kusy, Kevin, and Sara O’Leary-Driscoll. 2020. Combat Negativity, Exhaustion, and Burnout. Available online: <https://digitalcommons.imsa.edu/cgi/viewcontent.cgi?article=1398&=&context=proflearningday&=&sei> (accessed on 22 November 2023).
- Lee, Jung-Hoon, and Yeoungsuk Song. 2020. Mixed method research investigating turnover intention with ICU nurses. *Journal of Korean Academy of Fundamentals of Nursing* 27: 153–63. [CrossRef]
- Lee, Yee Hoon. 2019. Emotional labor, teacher burnout, and turnover intention in high-school physical education teaching. *European Physical Education Review* 25: 236–53. [CrossRef]
- Leiter, Michael P. 1988. Burnout as a Function of Communication Patterns: A Study of a Multidisciplinary Mental Health Team. *Group & Organization Management* 13: 111–28. [CrossRef]
- Leiter, Michael P., and Christina Maslach. 2016. Latent burnout profiles: A new approach to understanding the burnout experience. *Burnout Research* 3: 89–100. [CrossRef]
- Long, Choi Sang, Panniruky Perumal, and Musibau Akintunde Ajagbe. 2012. The impact of human resource management practices on employees’ turnover intention: A conceptual model. *Interdisciplinary Journal of Contemporary Research in Business* 4: 629–41.
- Lopes, Silvia, Ana Sabino, Paulo C. Dias, Anabela Rodrigues, Maria José Chambel, and Francisco Cesário. 2022. Through the Lens of Workers’ Motivation: Does It Relate to Work–Family Relationship Perceptions? *Sustainability* 14: 16117. [CrossRef]
- Marques-Pinto, Alexandra, Maria Luisa Lima, and Lopes da Silva. 2003. Stress Profissional em Professores Portugueses: Incidência, preditores e reação de burnout. *Psicologia* 33: 181–94.
- Maslach, Christina, and Michael P. Leiter. 2016. Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry* 15: 103–11. [CrossRef] [PubMed]
- Maslach, Christina, Wilmar B. Schaufeli, and Michael P. Leiter. 2001. Job Burnout. *Annual Review of Psychology* 52: 397–422. [CrossRef] [PubMed]
- Maslow, Abraham Harold. 2000. *Maslow No Gerenciamento*. Rio de Janeiro: Qualitymark Editora.
- Meier, Scott T. 1984. The construct validity of burnout. *Journal of Occupational Psychology* 57: 211–19. [CrossRef]
- Moreira, Ana, Maria José Sousa, and Francisco Cesário. 2022. Competencies development: The role of organizational commitment and the perception of employability. *Social Sciences* 11: 125. [CrossRef]
- Nishimura, Adriana Z. F. C., Ana Moreira, Maria José Sousa, and Manuel Au-Yong-Oliveira. 2021. Weaknesses in Motivation and in Establishing a Meritocratic System: A Portrait of the Portuguese Public Administration. *Administrative Sciences* 11: 87. [CrossRef]
- Olivares-Faúndez, Victor E., Pedro R. Gil-Monte, Luís Mena, Carolina Jélvez-Wilke, and Hugo Figueiredo-Ferraz. 2014. Relationships between burnout and role ambiguity, role conflict and employee absenteeism among health workers. *Terapia Psicológica* 32: 111–20. [CrossRef]
- Ordem dos Psicólogos Portugueses. 2023. II Relatório do Custo do Stresse e dos Problemas de Saúde Psicológica no Trabalho, em Portugal. Available online: <https://www.ordemdospsicologos.pt/pt/noticia/4466> (accessed on 22 November 2023).
- Özbağ, Gönül Kaya, Gökçe Çicek Ceyhun, and Hülya Gündüz Çekmecelioğlu. 2014. The Moderating Effects of Motivating Job Characteristics on the Relationship between Burnout and Turnover Intention. *Procedia-Social and Behavioral Sciences* 150: 438–46. [CrossRef]
- Padmasundari, S. 2019. A psychological study on burnout among school teachers. *Indian Journal of Applied Research* 9: 22–23. [CrossRef]
- Park, Tae-Youn, and Jason D. Shaw. 2013. Turnover rates and organizational performance: A meta-analysis. *Journal of Applied Psychology* 98: 268–309. [CrossRef] [PubMed]
- Pestana, Maria Helena, and João Nunes Gageiro. 2003. *Análise de Dados para Ciências Sociais—A Complementaridade do SPSS*, 3rd ed. Lisboa: Edições Sílabo.
- Podsakoff, Phillip M., Scott B. MacKenzie, Jeong Y. Lee, and Nathan P. Podsakoff. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology* 88: 879–903. [CrossRef] [PubMed]

- Poghosyan, Lusine, Sean P. Clarke, Mary Finlayson, and Linda H. Aiken. 2010. Nurse burnout and quality of care: Cross-national investigation in six countries. *Research in Nursing & Health* 33: 288–98. [\[CrossRef\]](#)
- Rahim, Afzalur, and Dana M. Cosby. 2016. A model of workplace incivility, job burnout, turnover intentions, and job performance. *Journal of Management Development* 35: 1255–65. [\[CrossRef\]](#)
- Regts, Gerdian, and Eric Molleman. 2013. To leave or not to leave: When receiving interpersonal citizenship behavior influences an employee's turnover intention. *Human Relations* 66: 193–218. [\[CrossRef\]](#)
- Reiche, B. Sebastian. 2008. The Configuration of Employee retention practices in multinational corporations' foreign subsidiaries. *International Business Review* 17: 676–87. [\[CrossRef\]](#)
- Salama, Wagid, Ahmed H. Abdou, Shaimaa A. K. Mohamed, and Hossam S. Shehata. 2022. Impact of Work Stress and Job Burnout on Turnover Intentions among Hotel Employees. *International Journal of Environmental Research and Public Health* 19: 9724. [\[CrossRef\]](#)
- Santos, Adriana, Ana Raquel Teixeira, and Cristina Queirós. 2018. Burnout and stress in teachers: A comparative study 2013–2017. *Psychology, Education and Culture* 22: 250–70.
- Sharma, Subhash. 1996. *Applied Multivariate Techniques*. New York: John Wiley and Sons Inc.
- Silva, Maria da Conceição M., and Rui Gomes. 2009. Stress ocupacional em profissionais de saúde: Um estudo com médicos e enfermeiros portugueses. *Estudos de Psicologia (Natal)* 14: 239–48. [\[CrossRef\]](#)
- Singh, Ankit, Ajeya Jha, and Shankar Purbey. 2020. Identification of Measures Affecting Job Satisfaction and Levels of Perceived Stress and Burnout among Home Health Nurses of a Developing Asian Country. *Hospital Topics* 99: 1–11. [\[CrossRef\]](#)
- Sinval, Jorge, Cristina Queirós, Sonia Pasian, and João Marôco. 2019. Transcultural Adaptation of the Oldenburg Burnout Inventory (OLBI) for Brazil and Portugal. *Frontiers in Psychology* 10: 338. [\[CrossRef\]](#)
- Tamayo, Álvaro, and Tatiane Paschoal. 2003. A relação da motivação para o trabalho com as metas do trabalhador. *Revista de Administração Contemporânea* 7: 33–54. [\[CrossRef\]](#)
- Trépanier, Sarah-Geneviève, Jacques Forest, Claude Fernet, and Stéphanie Austin. 2015. On the psychological and motivational processes linking job characteristics to employee functioning: Insights from self-determination theory. *Work & Stress* 29: 286–305. [\[CrossRef\]](#)
- Trochim, William. 2000. *The Research Methods Knowledge Base*, 2nd ed. Cincinnati: Atomic Dog Publishing.
- Tziner, Aharon, Edna Rabenu, Ruth Radomski, and Alexander Belkin. 2015. Work stress and turnover intentions among hospital physicians: The mediating role of burnout and work satisfaction. *Journal of Work and Organizational Psychology* 31: 207–13. [\[CrossRef\]](#)
- Urbanaviciute, Ieva, Jurjita Lazauskaite-Zabielske, Tine Vander Elst, and Hans De Witte. 2018. Qualitative job insecurity and turnover intention: The mediating role of basic psychological needs in public and private sectors. *Career Development International* 23: 274–90. [\[CrossRef\]](#)
- van Breukelen, Wim, René van der Vlist, and Herman Steensma. 2004. Voluntary employee turnover: Combining variables from the 'traditional' turnover literature with the theory of planned behavior. *Journal of Organizational Behavior* 25: 893–914. [\[CrossRef\]](#)
- Wang, Enjian, Hongwei Hu, Shan Mao, and Hongting Liu. 2019. Intrinsic motivation and turnover intention among geriatric nurses employed in nursing homes: The roles of job burnout and pay satisfaction. *Contemporary Nurse* 55: 195–210. [\[CrossRef\]](#)
- Wang, Yau-De, Chyan Yang, and Wang Kuei-Ying. 2012. Comparing public and private employees' job satisfaction and turnover. *Public Personnel Management* 41: 557–73. [\[CrossRef\]](#)
- Yao, Bo-Chen, Ling-Bing Meng, Meng-Lei Hao, Yuan-Meng Zhang, Tao Gong, and Zhi-Gang Guo. 2019. Chronic stress: A critical risk factor for atherosclerosis. *Journal of International Medical Research* 47: 1429–40. [\[CrossRef\]](#)
- Zheng, Junwei, Xueqin Gou, Hongyang Li, and Hongtao Xie. 2021. Differences in Mechanisms Linking Motivation and Turnover Intention for Public and Private Employees: Evidence From China. *SAGE Open* 11: 21582440211047567. [\[CrossRef\]](#)

**Disclaimer/Publisher's Note:** The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.