

# Burnout Dimensions among Corporate Employees in Croatia: Differences by Gender, Working Hours, Job Position, and Company Size

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## Abstract

**Background:** Burnout syndrome, characterised by exhaustion, cynicism, and reduced professional efficacy, is a growing concern in contemporary fast-paced workplaces. In Croatia, research has mostly concentrated on helping professions, rarely focusing on the business sector. **Objectives:** This study aims to assess the extent of work-related burnout among Croatian corporate employees and examine whether individual and occupational characteristics are associated with significant differences across the three core burnout dimensions: exhaustion, cynicism, and professional efficacy. **Methods/Approach:** Using t-tests and one-way analysis of variance (ANOVA), burnout dimensions were compared across groups defined by gender, age, education, position, working hours, department, company size, and industry. **Results:** Although most employees did not exhibit severe manifestations of burnout, the findings indicate moderate levels of exhaustion, suggesting early signs of strain. Overall, respondents display patterns consistent with a mildly overextended profile, although threshold values for high burnout are not reached. Differences across groups were observed, with higher exhaustion reported among employees working longer hours and in larger companies, and differences in cynicism and professional efficacy across gender and job positions. **Conclusions:** The results highlight the importance of recognising early signs of burnout and understanding how burnout-related dimensions vary across employee groups. Such insights may support the design of more targeted organisational practices to promote employee well-being in the Croatian business sector.

**Keywords:** work-related burnout, professional efficacy, cynicism, exhaustion, demographic differences

**JEL classification:** J28, M12, M54

**Paper type:** Research article

**Received:** Jul 15, 2025

**Accepted:** Sep 5, 2025

**Citation:** Cvjetković, M., Primorac, D., Vargović, E. (2026). Burnout Dimensions among Corporate Employees in Croatia: Differences by Gender, Working Hours, Job Position, and Company Size. *Business Systems Research*, 17(1), 102-130.

**DOI:** <https://doi.org/10.2478/bsrj-2026-0006>

## Introduction

Work, health, and employee well-being are strongly connected. Work conditions and characteristics, such as a safe work environment, job demands, and resource availability, shape and influence employees' well-being (Saint-Martin et al., 2018). At the same time, employees' physical and mental health affects their attendance and productivity, ultimately contributing to the organisation's overall success. However, this seemingly simple equation is increasingly challenged in the contemporary business environment, shaped by complex, frequent changes and new forms of employment. One significant factor in this shift is rapid technological advancement (Pejic Bach et al., 2013; Talajic et al., 2024), which impacted the rise of telework and other work-from-home arrangements. These developments present both opportunities and challenges to employees' well-being and their work-life balance. Apart from internal challenges, businesses also face many other uncertainties from their external environment, such as the recession, rising interest rates, local supply disruptions, market imperfections, volatile customer demands, and growing competition- both local and global (United Nations, 2023). This has impacted employees' working patterns, leading to decreased job satisfaction, low self-esteem, and exhaustion (Kelly, 2023), which, in turn, has made them more susceptible to work-related stress and burnout.

Today, burnout is recognised as a severe occupational syndrome that develops because of poorly managed work-related stress and, as such, is defined by the World Health Organisation as a "problem associated with employment or unemployment" (World Health Organisation, 2019). It comprises several components: (1) lack of energy, (2) increased distancing from the job, and (3) reduced professional performance (Golonka & Gulla, 2021). The 40-plus years of ongoing research on burnout have examined many aspects of the syndrome, focusing on its antecedents, consequences, and solutions for overcoming it (Golonka & Gulla, 2021). Since the syndrome manifests as a result of a mismatch between the person's capabilities (resources) and the work requirements (workload, regulations, compensations, community, justice, and values) (Leiter & Maslach, 2004), it is important to study specific individual characteristics and differences that might contribute to its development (Golonka & Gulla, 2021). This can offer insights into how individuals react in specific work environments, helping clarify and predict their responses. However, most studies conducted so far focused mostly on identifying these factors within helping professions, mostly in medicine and education, but also among social workers, psychologists, and other care-related occupations (Lin et al., 2009; Capri & Guler, 2018; Antoniou et al., 2022; Van Hoy et al., 2022; Yu et al., 2022), while the research in the business sector is still scarce and requires greater attention.

A useful theoretical lens for interpreting burnout in contemporary business environments is the job demands-resources (JD-R) framework, which conceptualises burnout as an imbalance between job demands and available resources (Demerouti et al., 2001; Bakker & Demerouti, 2007). Job demands, such as long working hours, workload intensity, and organisational complexity, require sustained physical and psychological effort and are therefore associated with exhaustion and strain. In contrast, job resources, including autonomy, social support, and opportunities for development, can buffer these negative effects and foster professional efficacy. Importantly, the distribution of demands and resources is not uniform across employees but varies systematically with individual and organisational characteristics, such as position, company size, and employment conditions. In transitional economies such as Croatia, where organisational structures, labour market conditions, and work practices are still evolving, these imbalances may be particularly pronounced. This makes the JD-R framework especially suitable for examining how different groups of

employees experience distinct patterns of burnout dimensions. Additionally, most studies were conducted in developed countries, which provides a limited understanding of how the syndrome manifests among employees in developing countries.

Even though burnout is a global phenomenon, workers in developing and transitional economies might experience it differently and to a greater extent (Carod-Artal & Vázquez-Cabrera, 2013). In these markets, employees may not be familiar with strategies to prevent burnout and job-related stress (Houtman et al., 2007). These economies share characteristics such as the shift from rural to urban areas, reduced job security, and insufficient employment opportunities for certain groups, which can significantly impact employee well-being (Carod-Artal & Vázquez-Cabrera, 2013). Croatia is one such country that requires further research due to its specific labour market conditions and socioeconomic challenges. Even though labour market trends in Croatia show positive developments in the employment rate, several problems remain, such as difficulties in integrating disadvantaged groups and in reducing high unemployment rates among low-skilled workers (European Commission, 2023). There have been improvements in the gender employment gap and growth in nominal wages, but, in general, the strategies and policies in Croatia have demonstrated limited effectiveness in addressing labour market demands and shortages. These strategies have not been adequately synchronised with social policies and have struggled to reach marginalised groups (European Commission, 2023). In addition, a study conducted during the COVID-19 pandemic in 2021 found that more than 30% of employees in Croatia work in strained jobs that entail more job demands than job resources (Eurofound, 2022). By analysing in detail the degree of strain, the results indicated that 5% were in extremely strained jobs, around 12% in highly strained jobs, and around 20% in moderately strained jobs. Of the remaining 70%, those working in resourced jobs accounted for over 20%, and the remainder were employed in moderately or highly resourced jobs (Eurofound, 2022).

Based on the results of the presented studies, this research aims to assess burnout among Croatian corporate employees and examine whether individual and occupational characteristics are associated with differences across its three core dimensions: exhaustion, cynicism, and professional efficacy. The factors observed include gender, age, education, position, department, company size, industry, and working hours. The main contribution of this paper is twofold. First, it provides a rare empirical assessment of burnout among corporate employees in Croatia. In this transitional economy context, such research has so far been scarce and mostly limited to helping professions. Second, it examines how individual and occupational characteristics are linked to the three dimensions of burnout. Therefore, this study holds both theoretical and practical relevance. The findings can help organisations better understand which employee groups are more vulnerable to specific dimensions of burnout, thereby supporting the development of targeted prevention and intervention strategies. Moreover, the results may contribute to a broader understanding of how burnout develops in transitional economies, offering valuable insights for countries facing similar challenges.

Following the introduction, a theory review is presented that describes the study's context and theoretical approach and specifies the research questions. The methodology section that follows details the study sample and the research process, while the results section presents the study's findings. The discussion section elaborates on the results and offers theoretical and practical implications, while the conclusion systematises the paper's key points and outlines the research's limitations.

## Literature review

### *The antecedents and outcomes of workplace-related burnout*

The way individuals engage with their work and the challenges that may arise when the work-life balance becomes imbalanced have long been recognised as important aspects of human resource management (Maslach et al., 2001). One of the most prominent outcomes of such a disrupted relationship between employees and their work is burnout. This syndrome was first observed in the United States in the 1970s, particularly among individuals employed in human services. Today, burnout is defined as a psychological syndrome that develops from persistent job stress and is characterised by three main dimensions: exhaustion, cynicism, and a sense of professional inefficacy (De Beer et al., 2024). The exhaustion dimension is the core measurement of burnout, characterised by a feeling of being worn out and depleted of emotional and physical resources. The cynicism dimension captures the interpersonal aspect of burnout. It involves a pessimistic, indifferent, or overly distant reaction to different aspects of the job. The third dimension, reduced efficacy, relates to feelings of inadequacy and a sense of not being productive in the workplace (Ventura et al., 2015).

The antecedents of workplace-related burnout are numerous and can be categorised into environmental and individual (Lam et al., 2022). Environmental elements include the physical environment, work demands, workplace problems (e.g., injustice), or insufficient compensation packages. Personal elements relate to individual differences, such as personality or genetics, that may play an important role in burnout development. The consequences of burnout are numerous and can also be observed at an individual level, such as lower commitment or job satisfaction (Nagar, 2012; Tosun & Ulusoy, 2017), or the operational level, which reflects in larger turnovers (Rahim & Cosby, 2016), absenteeism (Demerouti et al., 2009; Dyrbye et al., 2019), or poorer job performance (Dyrbye et al., 2019). The symptoms encountered are multifaceted, manifesting as mental, physical, and social disruptions (Chen et al., 2012). They encompass headaches, tiredness, sleep disturbances, lower self-esteem, diminished focus, reduced patience with co-workers or clients, isolation, and potentially even drug misuse (Arches, 1991). This points to the fact that burnout is a serious syndrome that organisations cannot neglect. Since employees form a unique relationship with organisations and a special attachment to their work settings, it is necessary to achieve a balance in this relationship so that employees can bring their best to work (Biron & DeReuver, 2013).

### *Research on burnout in Croatia*

Croatia, a post-transition EU member state, faces many labour-market challenges. It stands out for its considerably high labour costs, which do not adequately correspond to its productivity levels (Cipic, 2019). Historically high unemployment rates, particularly among youth, coupled with low labour productivity, legislative and institutional inflexibility, lower wages, a relatively substantial portion of the workforce employed in the public sector, and other imbalances in the labour market, contribute to this scenario. Another concern is gender inequality. Scoring 59.7 out of 100 in 2024, Croatia ranks 24th in the EU according to the Gender Equality Index (European Institute for Gender Equality, 2024). Compared to other EU states, Croatia is progressing more slowly. That is due to several reasons. Women are more likely than men to be responsible for childcare and to provide informal long-term care for the elderly. There is also an uneven distribution of household responsibilities, with women

bearing a greater share than men. A persisting gender gap is also evident in terms of wages, with women earning less than their male counterparts.

Other problems in the labour market are also evident, such as illegal employment in the unofficial economy, which deprives workers of their rights (Racic et al., 2005). Moreover, a large share of employees in small and medium-sized enterprises seemingly receive the minimum wage as a strategy to minimise associated taxes and social welfare contributions, i.e., the labour-related expenses borne by employers. The public sector and larger enterprises, in general, offer more secure employment packages with higher job security and better employee rights, but exhibit hierarchical organisational structures with less flexibility (Palic et al., 2023).

Even though many challenges exist in the Croatian labour market, studies on burnout in business organisations are lacking. The research so far covered mostly helping professions (Martinko, 2010; Domovic et al., 2010; Hudek-Knezevic et al., 2011; Tomljenovic et al., 2014; Sviben et al., 2017; Tucak Junakovic et al., 2019), or students (Gradiski et al., 2025) with fragmented and specific studies in the business sector, such as sales professionals (Ruzic, 2013; Benazic & Ruzic, 2013), employees in the banking sector (Horvat et al., 2016; Horvat, 2018), or public relations field (Selimber & Milkovic Sipek, 2022). Tomas et al. (2024) have shown that, among the Croatian working population, employees working in demanding jobs and with inadequate job resources exhibit higher burnout levels, and that this is also correlated with a higher intention to leave. New studies conducted in the Croatian business sector in the post-pandemic period showed that information overload and work demand significantly influence the development of burnout, which, in turn, leads to a poor decision-making style (Moric Milovanovic & Cvjetkovic, 2024). Taken together, these findings point to the growing relevance of exploring burnout within the Croatian business context, particularly in terms of individual, job-related, and organisational factors.

## Development of a conceptual framework

### *Observing personal variables: Who is prone to burnout?*

Among the various demographic factors investigated, age is often the one most closely linked to burnout. In their meta-analysis of demographic differences and burnout, Brewer and Shapard (2004) found a negative correlation between employee age and burnout, indicating that younger workers tend to experience higher levels of burnout. The same study found a negative correlation between years of experience in certain occupational fields and burnout, meaning that employees with longer experience in a particular field exhibit less burnout than those with shorter experience. Since age is intertwined with work experience, burnout appears to be more prevalent during the early stages of a career (Maslach et al., 2001; Azam et al., 2017). On the other hand, Bravo et al. (2021) found no statistically significant differences across age groups in any of the burnout dimensions.

When examining gender, burnout was generally reported as more prevalent among women (Purvanova & Muros, 2010). Nevertheless, the results of several studies are inconsistent, and this relationship remains unclear. Some studies indicate higher burnout among women, some among men, and others show no significant differences overall (Maslach et al., 2001; Purvanova & Muros, 2010; Bravo et al., 2021). Certain studies have also shown that men tend to score higher on cynicism, and in some cases, women score slightly higher on exhaustion (Purvanova & Muros, 2010). Gender role stereotypes might influence these variations, but they could also be attributed to common occupational roles (e.g., more male police officers, more female nurses, etc.). Moreover, gender is intertwined with numerous other factors,



such as education, occupation, and even broader economic, political, and cultural circumstances (Sulsky & Smith, 2005), making the interpretation of this connection even more difficult.

Regarding education level, several studies have found that individuals with higher levels of education report higher levels of burnout than those with lower levels (Maslach & Jackson, 1984; Shepherd et al., 2011). Interpreting these findings is challenging because education is linked to other variables, such as occupation and status (Maslach et al., 2001). A higher level of education is often linked to job positions that carry greater responsibilities and, consequently, possibly even higher stress.

### *Occupational variables and company characteristics related to burnout*

Studies examining employees' positions and hierarchical levels also yield inconsistent results (Kim et al., 2017). For example, Weinberg et al. (1983) found no significant differences in burnout levels among employees in different job positions. In contrast, Kim et al. (2017) found that job level, the extent of managerial influence within a group or organisation, positively influences job burnout. This, in turn, significantly affects job satisfaction and task performance. On the other hand, Panic (2016) found no significant differences between managers and non-managerial employees in burnout or proneness to psychosomatic manifestations, suggesting that managers can handle challenging work situations. Other studies have even indicated that employees of higher ranks (e.g., managers) experience less burnout than employees of lower ranks within an organisation (Randall & Scott, 1988; Kanste et al., 2007; Bravo et al., 2021). This can be explained by the fact that employees at higher ranks have greater autonomy over their work; they can schedule and plan their day more effectively, reducing uncertainty and increasing their sense of control over their assignments.

Little attention has been paid to exploring burnout levels among employees in the private sector, considering company size, industry affiliation, and specific department, to determine whether differences exist across these variables. In their comparison of burnout levels among employees in the public and private sectors, Yeh et al. (2018) found that private-sector employees (both large and small and medium-sized companies) work longer hours than their public-sector counterparts. However, they were also more motivated and committed to their work. They work in a profit-oriented, highly competitive, and fast-changing environment (Yeh et al., 2018). This, on the one hand, makes them flexible and dynamic, but, on the other hand, can lead to greater daily stress.

Differences in how employees handle stress exist across companies of different sizes. In their study on how employees experience job stress in small and medium-sized enterprises (SMEs) and large firms, Lai et al. (2015) found that the way employees handle job stressors differs significantly by enterprise size. For example, qualitative workload challenges, inadequate job autonomy, and lower levels of employee engagement are significant sources of stress within larger companies. Cheng & Chen (2014) found that the association between low workplace justice, higher burnout levels, and poor self-rated health was strongest among female employees working in large companies. In the industry the company operates in, studies suggest that employees in the finance/insurance, trade, and manufacturing sectors experience the highest levels of burnout. At the same time, those in construction reported the lowest (Boceran et al., 2019).

Given the departmental nature of work, the available literature is scattered, and reports of burnout are mostly within specific departments, such as sales (Benazic & Ruzic, 2013; Ruzic, 2013), or information systems (Mak & Sockel, 2001). A study

conducted by Poloski Vokic & Bogdanic (2007) on a Croatian company found that employees in the marketing and procurement departments reported the highest occupational stress, while those in the finance and human resources departments reported the lowest. Another variable that is very often associated with work-related stress and burnout is working hours, due to their connection to excessive workload and their frequent impact on private and family life (Barnett et al., 1999). Ahola et al. (2006) found that longer working hours significantly affected burnout among both women and men.

### *Conceptual framework*

Building on the theoretical background and empirical findings discussed in the previous sections, the conceptual framework developed for this study assumes that burnout is shaped by the interaction between individual characteristics, occupational position, and organisational context. Rather than treating burnout as a uniform employee experience, the framework recognises that exhaustion, cynicism, and professional efficacy may vary across groups because employees are exposed to different levels of job demands, autonomy, responsibility, organisational support, and work-life pressure. Personal characteristics, such as gender, age, and education, may influence how employees perceive and cope with work-related stress. Occupational characteristics, including job position, department, and working hours, reflect differences in workload, role expectations, decision-making power, and exposure to operational pressures. Organisational characteristics, such as company size and industry sector, capture broader structural conditions under which work is performed, including hierarchy, formalisation, competitive pressure, and flexibility. Therefore, the proposed framework links these three groups of explanatory factors to the three core dimensions of burnout: exhaustion, cynicism, and professional efficacy.

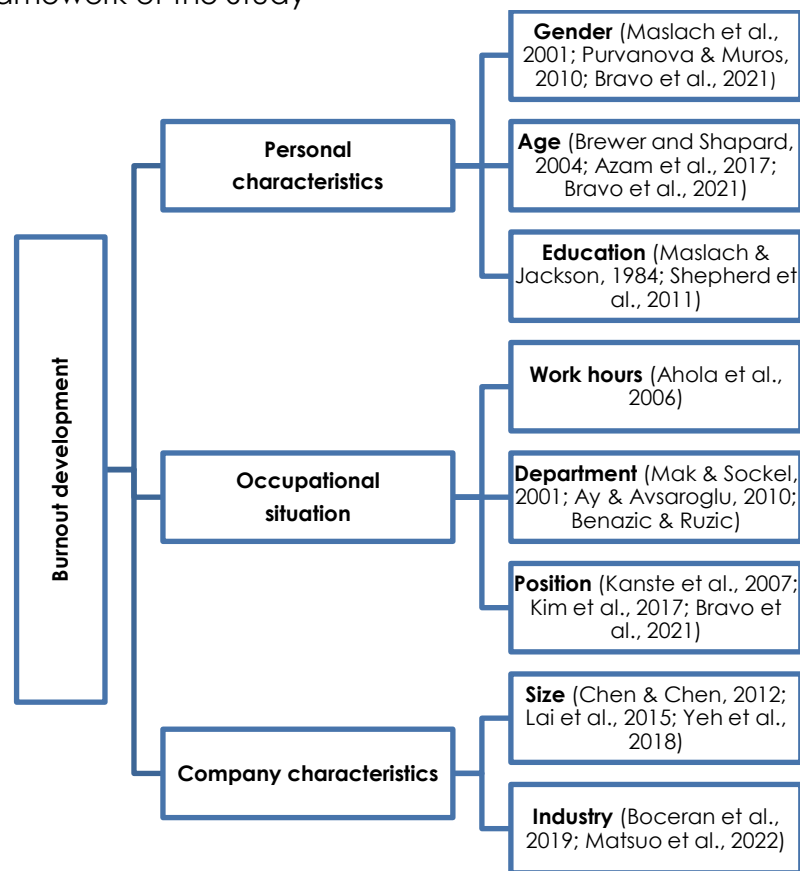
The framework is presented in Figure 1. As shown in the figure, the personal characteristics include gender, age, and education. The occupational situation concerns the department of employees, their positions, and the number of hours they work. At the same time, the company's characteristics include its size and the industry in which it operates.

Based on this framework, the following research questions were formulated to guide the empirical investigation:

- **RQ1.** What is the overall level of burnout among employees in the Croatian business sector?
- **RQ2.** Are there significant differences in burnout dimensions (exhaustion, cynicism, professional efficacy) across employee groups based on their personal characteristics such as gender, age, and education?
- **RQ3.** Are there significant differences in burnout dimensions across employees with different occupational characteristics, such as job position, department, and working hours?
- **RQ4.** Are there significant differences in burnout dimensions between employee groups defined by organisational characteristics, such as the company size and its industry sector?

To answer the research questions and achieve the study's goals, a survey research design was implemented, enabling the systematic quantification and comparison of employees' perceptions of burnout across different personal, occupational, and organisational groups. This approach provided an empirical basis for identifying patterns of exhaustion, cynicism, and professional efficacy within the Croatian business sector.

Figure 1  
Conceptual Framework of the Study



Source: Authors' work

## Methodology

### Population and sample

The sample for this study was drawn from the Finiinfo database, which provides structured business-related information on companies operating in Croatia (El koncept d.o.o., 2023). To ensure sectoral coverage of the Croatian business environment, a random sample of companies was selected to reflect the distribution of business entities across sectors of activity, based on Croatian Bureau of Statistics data (Croatian Bureau of Statistics, 2023). The survey questionnaire was distributed in March 2023 to approximately 3,000 email addresses.

Before completing the questionnaire, respondents were provided with a detailed introduction explaining the purpose of the research, the voluntary nature of participation, and the anonymity of their responses. This procedure was used to increase transparency and reduce potential response bias. It also formed part of an ex-ante approach to limiting common method bias, following recommendations that procedural remedies should be incorporated into the research design before data collection (Chang et al., 2020).

### Data collection process and sample characteristics

The data collection process lasted approximately 4 weeks and yielded 567 fully completed questionnaires, for a response rate of 18.9%. This response rate is acceptable for organisational survey research, particularly given the broad business-sector sampling frame and the use of an online questionnaire. The demographic



characteristics of the respondents are presented in Table 1, while their occupational and organisational characteristics are outlined in Table 2.

Table 1

Personal Characteristics of Respondents ( $n = 567$ )

| Variable         | Share                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------|
| <b>Gender</b>    | Female (59.3%); Male (40.7%)                                                                      |
| <b>Age</b>       | Under 25 (3%); 26-30 (13.6%); 31-40 (40.4%); 41-50 (29.6%); 51-60 (11.5%), over 61 (1.9%)         |
| <b>Education</b> | Elementary (0), high school (17.1%); undergraduate (21.7%); graduate (55.6%); postgraduate (5.6%) |

Source: Authors' work

Regarding personal characteristics, most participants were women (59.3%), while 40.7% were men. Moreover, 70% of respondents fell within the 31-51 age range, while over 60 % of participants held higher education qualifications.

Table 2

Job-Related and Company Characteristics ( $n=567$ )

| Variable                       | Share                                                                                                                                                                                                                                                                                            |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Position in the company</b> | Owner (12.4%); director (11.3%); manager (38.6%); administration (37.7%)                                                                                                                                                                                                                         |
| <b>Department</b>              | R&D (2.8 %), procurement (7.1%), production (8.5%), sales (28.9%), finance (13.2%), marketing (10.8%), human resources (5.3%), other (23.4%)                                                                                                                                                     |
| <b>Work hours</b>              | Less than 8 (13.1%); 8-9 (65.2%); over 9 (21.7%)                                                                                                                                                                                                                                                 |
| <b>Industry</b>                | Manufacturing (19.8%); construction (8.3%); trade (16.8%); energy sector (1.6%); logistics (3%); hospitality (4.4%); information & communication (10.4%); financial (8.1%); technical/scientific (6.5%); administrative services (2.5%), art, entertainment & recreation (1.2 %), other (17.2%). |
| <b>Size of the company</b>     | Micro (16.9%); small (19.2%), medium (33%); large (30.9%)                                                                                                                                                                                                                                        |

Source: Authors' work

When observing the occupational and organisational characteristics, most of the respondents hold managerial (38.6 %) and administrative (37.7%) positions in various departments, such as sales (28.9 %), finance (13.2%), or marketing (10.8%). Over 65% of them reported working for approximately 8 to 9 hours per day. They work for companies of different sizes and in different industries.

Overall, the sample includes respondents with diverse personal, occupational, and organisational characteristics, which enables comparisons across the main groups relevant to the conceptual framework. Women represent a somewhat larger share of the sample, and most respondents are between 31 and 50 years old. More than 60% of participants hold higher education qualifications. In terms of job-related characteristics, the sample is dominated by managers and administrative employees, while the largest departmental groups are sales, finance, and marketing. Most respondents work between eight and nine hours per day, and the sample includes employees from micro, small, medium-sized, and large companies across a range of industries.

## Measures and analyses

Burnout was measured using items from a questionnaire published by Bang and Reio Jr (2017), which is based on the Maslach Burnout Inventory - General Survey (Maslach et al., 1996). It is a self-report instrument that comprises three subscales: Exhaustion (5 items), Cynicism (5 items), and Professional Efficacy (6 items). In this study, each subscale was measured with 5 items using a seven-point Likert scale. One item from the Professional Efficacy subscale was omitted because it was conceptually like the remaining items. The internal consistency of these subscales, as measured by Cronbach's  $\alpha$ , is 0.93 for Exhaustion, 0.89 for Cynicism, and 0.77 for Professional Efficacy.

In the next step, mean values of each dimension were computed using SPSS software (IBM Corp, 2019). To determine the level of burnout, standardised ( $z$ ) values were calculated, based on three formulas (Hammond et al., 2020):

- High exhaustion for  $z = \text{mean} + (SD * 0.5)$
- High cynicism for  $z = \text{mean} + (SD * 1.25)$
- High professional efficacy for  $z = \text{mean} + (SD * 0.1)$

The interpretation of burnout levels is typically based on its core dimensions, in which high exhaustion and cynicism, combined with low professional efficacy, indicate a high level of burnout (Mohren et al., 2003; Ren et al., 2025). The calculated thresholds were used as interpretive reference points rather than as strict diagnostic cut-off values. The more nuanced interpretation takes into consideration the calculated  $z$ -values that present the thresholds for determining one of five burnout profiles: *burnout* (negative scores on all three dimensions), *overextended* (high exhaustion only), *ineffective* (low professional efficacy only), *disengaged* (high cynicism only), and *engaged* (positive scores on all three dimensions) (Maslach & Leiter, 2021). In the next step, the average values for each subscale were compared with demographic and occupational factors using a  $t$ -test and a one-way analysis of variance (ANOVA) to identify possible differences between groups.

## Results

Research results are presented in two sections to follow the research aims and objectives. First, the means and threshold values of the burnout subscales are calculated; in the second section, individual and occupational differences are examined to assess their significance.

### *Burnout levels of Croatian employees*

Table 3 presents the mean scores, standard deviations, and calculated threshold values for exhaustion, cynicism, and professional efficacy. The mean score for exhaustion is 4.21 ( $SD = 1.57$ ), with a threshold of 4.995; for cynicism, the mean is 3.47 ( $SD = 1.61$ ), with a threshold of 5.483; and for professional efficacy, the mean is 5.26 ( $SD = 1.36$ ), with a threshold of 5.396. This suggests that values above the calculated thresholds for exhaustion and cynicism indicate high levels of these dimensions, while values below the professional efficacy threshold indicate low professional efficacy.

Table 3

Mean, Standard Deviation, and Threshold Values for Burnout Profile ( $n = 567$ ); scale 1-7

| Measure               | Mean | SD   | Threshold | Interpretation      |
|-----------------------|------|------|-----------|---------------------|
| Exhaustion            | 4.21 | 1.57 | 4.995     | Moderately elevated |
| Cynicism              | 3.47 | 1.61 | 5.483     | Low                 |
| Professional Efficacy | 5.26 | 1.36 | 5.396     | Moderate to high    |

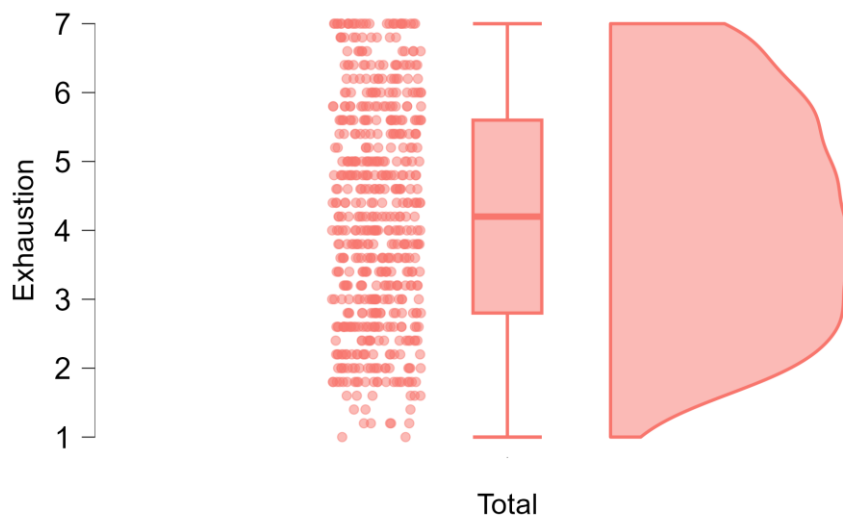
Source: Authors' work

When the mean approaches, but does not exceed the cut-off, the corresponding dimension can be described as moderately elevated. Based on the observed scores and threshold values, the profile of respondents most closely resembles the overextended type, characterised by moderately elevated exhaustion, low cynicism, and preserved professional efficacy. However, exhaustion does not fully reach the high threshold.

To visualise the distribution of scores among participants, raincloud plots were created in JASP (JASP Team, 2024) for all three dimensions. The plots in Figures 2, 3, and 4 combine a violin plot and a box plot to illustrate the central tendency, variability, and density of responses on a scale from 1 to 7 (Allen et al., 2021).

Figure 2

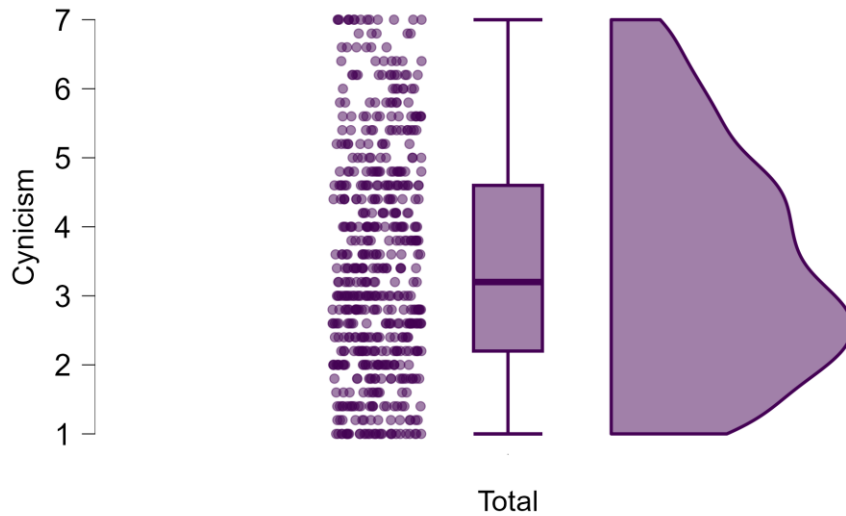
Raincloud Plot for Exhaustion



Source: Authors' work

Figure 2 shows that the distribution of exhaustion is relatively symmetric, with most responses clustering between 3 and 5, while extreme scores (very low/very high) are rare. This indicates a predominantly moderate to slightly elevated feeling of exhaustion among respondents.

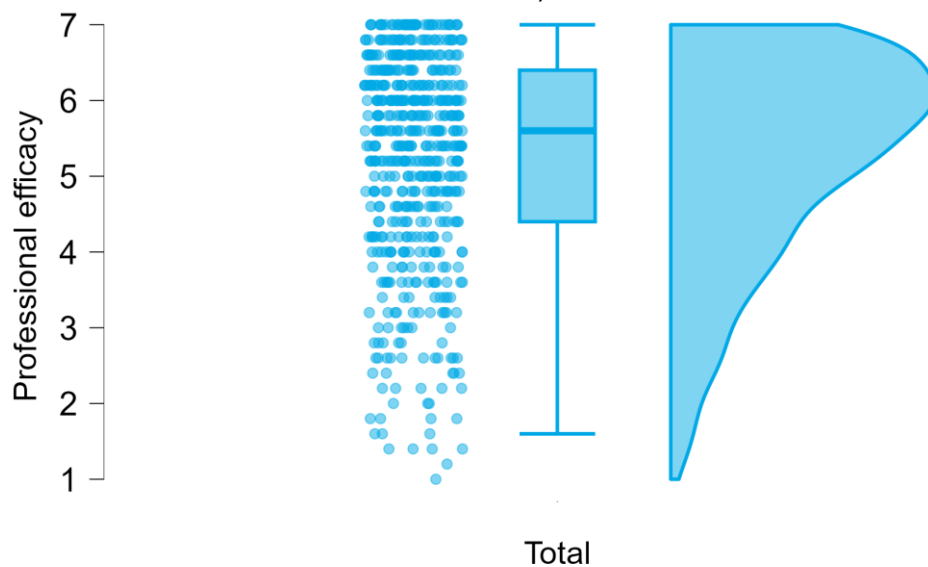
Figure 3  
Raincloud Plot for Cynicism



Source: Authors' work

In Figure 3, it is visible that most responses are concentrated between values 2 and 4. Extreme scores (very low or very high) are rare, suggesting a predominantly low-to-moderate level of cynicism among respondents.

Figure 4  
Raincloud Plot for Professional Efficacy



Source: Authors' work

Figure 4 shows that most responses cluster between values 5 and 7. The median is relatively high, indicating that most respondents perceive themselves as professionally effective. Very low scores are rare, suggesting that only a small portion of participants experience low professional efficacy.

## Relationship between individual characteristics and burnout dimensions

Tables 4 to 11 present the results of the t-test and the one-way ANOVA analysis conducted to identify significant differences related to the individual and occupational characteristics of employees regarding their level of perception of burnout dimensions. First, respondents' personal characteristics were analysed, followed by their occupational situation and their company's characteristics.

### Personal characteristics

The analysis begins with personal characteristics, that is, gender, age, and education, as these individual factors are often associated with varying levels of vulnerability to burnout. Results are presented in Tables 4, 5, and 6.

Table 4

T-Test Results for Burnout Dimensions by Gender ( $n = 567$ ; Likert scale = 1-7)

| Burnout dimension            | Gender | Mean (SD)   | t-test | P-value        |
|------------------------------|--------|-------------|--------|----------------|
| <b>Exhaustion</b>            | Female | 4.29 (1.63) | 2.489  | 0.115          |
|                              | Male   | 4.08 (1.48) |        |                |
| <b>Cynicism</b>              | Female | 3.60 (1.69) | 5.278  | <b>0.022**</b> |
|                              | Male   | 3.29 (1.47) |        |                |
| <b>Professional Efficacy</b> | Female | 5.17 (1.45) | 3.004  | <b>0.084*</b>  |
|                              | Male   | 5.38 (1.21) |        |                |

Note:  $p = *0.10$ ,  $**0.05$ ;  $***0.01$

Source: Authors' work

The results show a significant difference in the level of burnout dimensions perceived by men and women for two burnout dimensions: cynicism ( $p = 0.022$ ) and professional efficacy ( $p = 0.084$ ).

Table 5

One-Way ANOVA Results for Burnout Dimensions by Age ( $n = 567$ ; Likert scale = 1-7)

| Burnout dimension            | Age   | Mean (SD)   | f-ratio | P-value |
|------------------------------|-------|-------------|---------|---------|
| <b>Exhaustion</b>            | <25   | 4.34 (1.79) | 0.145   | 0.982   |
|                              | 26-30 | 4.23 (1.63) |         |         |
|                              | 31-40 | 4.19 (1.55) |         |         |
|                              | 41-50 | 4.17 (1.57) |         |         |
|                              | 51-60 | 4.33 (1.56) |         |         |
|                              | 61+   | 4.07 (1.69) |         |         |
| <b>Cynicism</b>              | <25   | 3.28 (1.67) | 1.552   | 0.172   |
|                              | 26-30 | 3.76 (1.73) |         |         |
|                              | 31-40 | 3.60 (1.56) |         |         |
|                              | 41-50 | 3.29 (1.54) |         |         |
|                              | 51-60 | 3.27 (1.76) |         |         |
|                              | 61+   | 3.14 (1.62) |         |         |
| <b>Professional Efficacy</b> | <25   | 5.15 (1.57) | 1.093   | 0.363   |
|                              | 26-30 | 5.44 (1.37) |         |         |
|                              | 31-40 | 5.12 (1.41) |         |         |
|                              | 41-50 | 5.39 (1.26) |         |         |
|                              | 51-60 | 5.21 (1.40) |         |         |
|                              | 61+   | 5.34 (1.27) |         |         |

Source: Authors' work



The results presented in Table 5 show no significant differences in employees' perceptions of burnout dimensions across age groups.

Table 6

One-Way ANOVA Results for Burnout Dimensions by Education ( $n = 567$ ; Likert scale = 1-7)

| Burnout dimension            | Education     | Mean (SD)   | f-ratio | P-value |
|------------------------------|---------------|-------------|---------|---------|
| <b>Exhaustion</b>            | Elementary    |             | 1.087   | 0.354   |
|                              | High school   | 4.43 (1.59) |         |         |
|                              | Undergraduate | 4.27 (1.48) |         |         |
|                              | Graduate      | 4.13 (1.62) |         |         |
|                              | Postgraduate  | 4.01 (1.27) |         |         |
| <b>Cynicism</b>              | Elementary    |             | 0.320   | 0.811   |
|                              | High school   | 3.50 (1.66) |         |         |
|                              | Undergraduate | 3.49 (1.62) |         |         |
|                              | Graduate      | 3.49 (1.59) |         |         |
|                              | Postgraduate  | 3.20 (1.71) |         |         |
| <b>Professional Efficacy</b> | Elementary    |             | 0.259   | 0.855   |
|                              | High school   | 5.23 (1.34) |         |         |
|                              | Undergraduate | 5.23 (1.34) |         |         |
|                              | Graduate      | 5.26 (1.37) |         |         |
|                              | Postgraduate  | 5.46 (1.50) |         |         |

Source: Authors' work

Results presented in Table 6 show no significant differences in employees' perceptions of burnout dimensions across education levels.

#### *Burnout Dimensions by occupation and company characteristics*

Further analysis continues with the occupational situation and the characteristics of the company that respondents work for. These are: position, department, working hours, company size and its industry. Results are presented in Tables 7 to 11.

Table 7

One-Way ANOVA Results for Burnout Dimensions by Position ( $n = 567$ ; Likert scale = 1-7)

| Burnout dimension            | Position       | Mean (SD)   | f-ratio | P-value         |
|------------------------------|----------------|-------------|---------|-----------------|
| <b>Exhaustion</b>            | Owner          | 3.88 (1.51) | 1.346   | 0.259           |
|                              | Director       | 4.14 (1.65) |         |                 |
|                              | Manager        | 4.24 (1.51) |         |                 |
|                              | Administration | 4.30 (1.63) |         |                 |
| <b>Cynicism</b>              | Owner          | 2.63 (1.18) | 15.483  | <b>0.000***</b> |
|                              | Director       | 3.09 (1.75) |         |                 |
|                              | Manager        | 3.38 (1.51) |         |                 |
|                              | Administration | 3.96 (1.64) |         |                 |
| <b>Professional Efficacy</b> | Owner          | 5.56 (1.10) | 4.020   | <b>0.008**</b>  |
|                              | Director       | 5.49 (1.34) |         |                 |
|                              | Manager        | 5.31 (1.33) |         |                 |
|                              | Administration | 5.03 (1.45) |         |                 |

Note:  $p = *0.10$ ,  $**0.05$ ;  $***0.01$

Source: Authors' work

Table 7 shows significant differences between employees in different positions in their perceptions of two burnout dimensions: cynicism ( $p = 0.000$ ) and professional efficacy ( $p = 0.008$ ).

Table 8

One-Way ANOVA Results for Burnout Dimensions by Department ( $n = 567$ ; Likert scale = 1-7)

| Burnout dimension            | Department     | Mean (SD)   | f-ratio | P-value |
|------------------------------|----------------|-------------|---------|---------|
| <b>Exhaustion</b>            | R&D            | 4.25 (1.68) | 1.572   | 0.130   |
|                              | Procurement    | 4.44 (1.60) |         |         |
|                              | Production     | 4.25 (1.40) |         |         |
|                              | Sales          | 4.45 (1.45) |         |         |
|                              | Finance        | 4.10 (1.56) |         |         |
|                              | Marketing      | 3.98 (1.69) |         |         |
|                              | Human Resource | 3.61 (1.69) |         |         |
| <b>Cynicism</b>              | R&D            | 3.55 (1.67) | 0.601   | 0.777   |
|                              | Procurement    | 3.72 (1.80) |         |         |
|                              | Production     | 3.25 (1.53) |         |         |
|                              | Sales          | 3.60 (1.53) |         |         |
|                              | Finance        | 3.46 (1.59) |         |         |
|                              | Marketing      | 3.56 (1.84) |         |         |
|                              | Human Resource | 3.23 (1.49) |         |         |
| <b>Professional Efficacy</b> | R&D            | 5.11 (1.82) | 0.844   | 0.564   |
|                              | Procurement    | 5.00 (1.82) |         |         |
|                              | Production     | 5.43 (1.19) |         |         |
|                              | Sales          | 5.17 (1.35) |         |         |
|                              | Finance        | 5.27 (1.35) |         |         |
|                              | Marketing      | 5.11 (1.42) |         |         |
|                              | Human Resource | 5.50 (1.29) |         |         |

Note: the category "other" was excluded from the analysis.

Source: Authors' work

Results presented in Table 8 show no significant differences in employees' perceptions of burnout dimensions across departments.

Table 9

One-Way ANOVA Results for Burnout Dimensions by Work Hours/Day ( $n = 567$ ; Likert scale = 1-7)

|                              | Work hours/day | Mean (SD)   | f-ratio | P-value         |
|------------------------------|----------------|-------------|---------|-----------------|
| <b>Exhaustion</b>            | Less than 8    | 3.65 (1.55) | 5.831   | <b>0.003**</b>  |
|                              | 8-9            | 4.25 (1.58) |         |                 |
|                              | Over 9         | 4.41 (1.52) |         |                 |
| <b>Cynicism</b>              | Less than 8    | 3.62 (1.59) | 7.473   | <b>0.001***</b> |
|                              | 8-9            | 3.61 (1.62) |         |                 |
|                              | Over 9         | 2.98 (1.51) |         |                 |
| <b>Professional Efficacy</b> | Less than 8    | 5.29 (1.35) | 2.324   | <b>0.099*</b>   |
|                              | 8-9            | 5.18 (1.37) |         |                 |
|                              | Over 9         | 5.48 (1.32) |         |                 |

Note:  $p = *0.10$ ,  $**0.05$ ;  $***0.01$

Source: Authors' work

Table 9 shows that the number of hours spent at work is significantly associated with employees' perceptions of all three burnout dimensions: exhaustion ( $p = 0.003$ ), cynicism ( $p = 0.001$ ), and professional efficacy ( $p = 0.099$ ).

Table 10

One-Way ANOVA Results for Burnout Dimensions by Industry ( $n = 567$ ; Likert scale = 1-7)

| Burnout dimension            | Industry                       | Mean (SD)   | f-value | P-value |
|------------------------------|--------------------------------|-------------|---------|---------|
| <b>Exhaustion</b>            | Manufacturing                  | 4.08 (1.59) | 0.888   | 0.560   |
|                              | Construction                   | 3.82 (1.53) |         |         |
|                              | Trade                          | 4.28 (1.66) |         |         |
|                              | Energy                         | 4.80 (1.96) |         |         |
|                              | Logistics                      | 4.37 (1.67) |         |         |
|                              | Hospitality                    | 4.53 (1.68) |         |         |
|                              | Inform. & Comm                 | 4.27 (1.47) |         |         |
|                              | Financial/Insurance            | 4.41 (1.51) |         |         |
|                              | Real Estate                    | 3.80 /      |         |         |
|                              | Technical/scientific           | 3.83 (1.60) |         |         |
|                              | Administrative                 | 4.42 (1.31) |         |         |
|                              | Art, entertainment, recreation | 3.68 (1.24) |         |         |
| <b>Cynicism</b>              | Manufacturing                  | 3.35 (1.60) | 1.287   | 0.222   |
|                              | Construction                   | 3.03 (1.35) |         |         |
|                              | Trade                          | 3.63 (1.65) |         |         |
|                              | Energy                         | 3.95 (2.19) |         |         |
|                              | Logistics                      | 3.00 (1.73) |         |         |
|                              | Hospitality                    | 3.64 (1.78) |         |         |
|                              | Inform. & Comm                 | 3.51 (1.48) |         |         |
|                              | Financial/Insurance            | 3.85 (1.65) |         |         |
|                              | Real Estate                    | 3.80 /      |         |         |
|                              | Technical/scientific           | 3.04 (1.45) |         |         |
|                              | Administrative services        | 3.50 (1.79) |         |         |
|                              | Art, entertainment, recreation | 2.85 (2.00) |         |         |
| <b>Professional Efficacy</b> | Manufacturing                  | 5.27 (1.30) | 1.161   | 0.308   |
|                              | Construction                   | 5.56 (1.14) |         |         |
|                              | Trade                          | 5.28 (1.42) |         |         |
|                              | Energy                         | 4.56 (1.94) |         |         |
|                              | Logistics                      | 5.65 (1.59) |         |         |
|                              | Hospitality                    | 4.84 (1.62) |         |         |
|                              | Inform. & Comm                 | 5.09 (1.25) |         |         |
|                              | Financial/Insurance            | 5.11 (1.18) |         |         |
|                              | Real Estate                    | 5.80 /      |         |         |
|                              | Technical/scientific           | 5.51 (1.19) |         |         |
|                              | Administrative                 | 4.78 (1.66) |         |         |
|                              | Art, entertainment, recreation | 5.71 (1.66) |         |         |

Note: the category "other" was excluded from the analysis.

Source: Authors' work

Results in Table 10 show no significant differences in employees' perceptions of burnout dimensions across companies in different industries.

Table 11

One-Way ANOVA Results for Burnout Dimensions by Company Size ( $n = 567$ ; Likert scale = 1-7)

| Burnout dimension            | Company Size | Mean (SD)   | f-value | P-value         |
|------------------------------|--------------|-------------|---------|-----------------|
| <b>Exhaustion</b>            | Micro        | 3.98 (1.66) | 3.473   | <b>0.016**</b>  |
|                              | Small        | 3.89 (1.44) |         |                 |
|                              | Medium       | 4.29 (1.54) |         |                 |
|                              | Large        | 4.43 (1.61) |         |                 |
| <b>Cynicism</b>              | Micro        | 2.91 (1.49) | 7.081   | <b>0.000***</b> |
|                              | Small        | 3.30 (1.47) |         |                 |
|                              | Medium       | 3.56 (1.65) |         |                 |
|                              | Large        | 3.80 (1.64) |         |                 |
| <b>Professional Efficacy</b> | Micro        | 5.56 (1.22) | 3.891   | <b>0.009**</b>  |
|                              | Small        | 5.44 (1.28) |         |                 |
|                              | Medium       | 5.20 (1.39) |         |                 |
|                              | Large        | 5.04 (1.42) |         |                 |

Note:  $p = *0.10$ ,  $**0.05$ ;  $***0.01$

Source: Authors' work

Table 11 shows that company size is significantly associated with employees' perception of all three burnout dimensions. Specifically, significant differences were found in levels of exhaustion ( $p = 0.016$ ), cynicism ( $p < 0.001$ ), and professional efficacy ( $p = 0.009$ ).

## Discussion and implications

This study aimed to determine burnout levels among Croatian employees in the business sector and to examine whether there are significant individual and occupational differences in perceived levels of the three burnout dimensions.

Four research questions were posed, followed by a statistical analysis to provide insights into employees' perceptions and experiences regarding their working conditions. The results indicate that most employees in this study do not meet the full criteria for the burnout profile, as indicated by the mean scores across the three burnout dimensions. Due to the slightly higher scores gained on exhaustion, they rather display mildly "overextended" profiles. This means that most likely, employees are experiencing tiredness, strain, and a lack of energy, yet they do not feel disconnected from the organisation and its values. Moreover, the results showed positive scores on professional efficacy, which means they feel competent in their work. These findings provide an answer to research question 1 and offer insight into the overall burnout profile of the sample.

To address the remaining three research questions, the results are presented in Table 12, which summarises the t-test and ANOVA analyses. Gender, position, working hours, and company size show statistically significant differences across burnout dimensions, while age, education, department, and industry are not significantly related to burnout. Specifically, women report higher cynicism and lower professional efficacy than men, while administrative workers show higher cynicism and lower professional efficacy than owners and managers. Additionally, employees working more than 9 hours a day report the highest levels of exhaustion and professional efficacy, while those working fewer than 8 hours report the highest levels of cynicism. Employees in large companies experience higher exhaustion and cynicism, and lower professional efficacy, than those in micro or small firms. These findings highlight the importance of both individual and organisational factors in shaping burnout experiences.

Table 12

Summary of Results for Burnout Dimensions by Individual, Occupational, and Organisational Characteristics

| Variable     | Exhaustion            | Cynicism                             | Professional efficacy                     |
|--------------|-----------------------|--------------------------------------|-------------------------------------------|
| Gender       | ns                    | Yes** (F > M)                        | Marginal* (F < M)                         |
| Age          | ns                    | ns                                   | ns                                        |
| Education    | ns                    | ns                                   | ns                                        |
| Position     | ns                    | Yes*** (Admin highest; Owner lowest) | Yes** (Owner highest; Admin lowest)       |
| Department   | ns                    | ns                                   | ns                                        |
| Work hours   | Yes** (>9h highest)   | Yes*** (<8h highest)                 | Marginal* (>9h highest)                   |
| Industry     | ns                    | ns                                   | ns                                        |
| Company size | Yes** (Large highest) | Yes*** (Large highest; Micro lowest) | Yes** (Large lowest; Micro/Small highest) |

Note: ns = no statistically significant group difference. \*  $p < 0.10$  indicates marginal significance; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ . The information in parentheses indicates the group with the highest or lowest mean score.

Source: Authors' work

The following sections provide a detailed breakdown of these results by subgroup and burnout dimension.

### *Burnout differences according to personal characteristics*

A one-way ANOVA was performed to explore the influence of personal characteristics on burnout dimensions, in line with research question 2. The findings indicate that there is a significant difference in the level of burnout dimensions perceived by men and women for two burnout dimensions: cynicism ( $p=0.022$ ) and professional efficacy ( $p=0.084$ ). In this study, women reported higher cynicism ( $m=3.60$  vs  $3.29$ ) and lower professional efficacy ( $m=5.17$  vs  $5.38$ ). These findings partially support the widely held belief that burnout is more common among women (Bakker et al., 2002; Ahola et al., 2006; Purvanova & Muros, 2010; Bravo et al., 2021). While both core components of burnout, exhaustion, and cynicism, were reported as higher among women, cynicism showed a statistically significant gender difference, which is consistent with Bravo et al. (2021) and partly consistent with Bakker et al. (2002). This contrasts with the findings of Purvanova & Muros (2010), who showed that men tend to score higher on cynicism, and, in some cases, women score slightly higher on exhaustion.

One possible explanation for these findings is that women in this sample may face higher demands, particularly in corporate environments where they often multitask and must balance work and home responsibilities. Increased exposure to such pressures could contribute to a greater sense of cynicism and lower perceived professional efficacy. Moreover, Croatia's post-pandemic period likely intensified these effects: job insecurity rose, and many women took on more unpaid care work, blurring work-life boundaries (World Bank, 2021). In Croatia's socio-cultural and institutional context, women hold only about 24% of managerial positions, among the lowest shares in the EU (Eurostat, 2021). This persistent "double burden" helps explain the pattern observed in the data: higher cynicism and lower perceived professional efficacy among women. Taken together, post-pandemic pressures and rooted structural-cultural asymmetries increase women's vulnerability to burnout relative to men (World Bank, 2021; Eurostat, 2021).

Contrary to prevailing research findings, this study found no significant differences in employees' perceptions of burnout dimensions across age groups. The results among respondents showed that employees younger than 25 reported the highest average grade for exhaustion ( $m = 4.34$ ) and the lowest average grade for professional efficacy ( $m = 5.15$ ), while employees in the age group 26-30 reported the highest average grade for cynicism ( $m = 3.76$ ). Nevertheless, the differences were not statistically significant. It should be noted that the age distribution in this study is unequal (especially among employees younger than 30 and older than 61), and this could be one of the factors that affected the results; therefore, other studies are encouraged to draw relevant conclusions. In general, younger employees are less experienced in handling stressful work situations (Bakker et al., 2002). In his study of sales professionals in Croatia, Ruzic (2013) found that age influences burnout levels, with younger employees scoring higher than older employees on all burnout dimensions. A study by Bravo et al. (2021) found no significant differences in burnout dimensions across age groups.

Education level also showed no relation to perceived burnout, and similar results were obtained in a study by Ruzic (2013) among Croatian sales professionals. According to Maslach, Schaufeli, and Leiter (2001), certain studies have suggested a positive correlation between higher levels of education and an increased risk of burnout. Shepherd, Taschian, and Ridnour (2011) argued that higher educational achievement can lead to increased expectations in individuals, which, in turn, explains the strong association between formal education and burnout. The results of this study point in the opposite direction: exhaustion and cynicism decrease as education level increases, while professional efficacy is highest among postgraduate employees ( $m = 5.46$ ). One possible explanation is that employees with higher education are more likely to obtain higher hierarchical positions that are professionally more satisfying and to feel more engaged, since they directly participate in their organisation's success. Moreover, throughout their education, students are given various assignments and learn to cope with increasing and simultaneous work demands, which can partially prepare them for the work environment, and this could also be one of the possible reasons for the results in this study.

### *Burnout differences according to occupational characteristics*

To answer research question 3, burnout levels were analysed in relation to occupational situation using one-way ANOVA. The findings showed that position significantly relates to perceptions of two burnout dimensions: cynicism ( $p = 0.000$ ) and professional efficacy ( $p = 0.008$ ). The administration workers demonstrated the highest levels of cynicism ( $m = 3.96$ ) and the lowest levels of professional efficacy ( $m = 5.03$ ). At the same time, the owners showed the lowest levels of cynicism ( $m = 2.63$ ) and the highest levels of professional efficacy ( $m = 5.56$ ), which was also demonstrated in previous studies (Boceran et al., 2019). Even though this difference was not statistically significant, employees in administrative positions also reported the highest levels of exhaustion ( $m = 4.30$ ). One possible explanation for these results is Croatia's cultural background, which is characterised by high power distance (Hofstede Insights, 2023). This means that employees accept a clear hierarchy and fixed roles, and expect explicit instructions from supervisors. Lower-ranked staff tend to defer to authority and avoid open conflict (Kim et al., 2017). This limits autonomy and reinforces formal procedures (Palic et al., 2023). In turn, such structural rigidity can raise cynicism and lower professional efficacy among lower-ranking employees compared with owners and managers. In addition, lower-ranking positions often experience the lowest levels of workplace justice (Cheng & Chen, 2014), which can add to their stress levels.



Directors and managers have more autonomy, which can strengthen their commitment (Kanste et al., 2007). As they are usually decision-makers, they are more directly involved in company success. Thus, they are better equipped to handle demands and are more likely to feel professionally efficient.

The department in which the respondent works does not significantly relate to the perceived levels of burnout dimensions. Results from this study showed that the highest levels of exhaustion were reported by employees in the sales department ( $m = 4.45$ ), and the lowest by employees in the human resources department ( $m = 3.61$ ). In contrast, the highest levels of cynicism were reported by employees in the procurement department ( $m = 3.72$ ), who also reported the lowest levels of professional efficacy ( $m = 5.00$ ). Employees expressed the highest level of professional efficacy in the human resource department ( $m = 5.50$ ). The results are consistent with a study by Poloski Vokic & Bogdanic (2007), which found that the highest occupational stress was reported by employees in marketing and procurement departments, while the lowest was reported by employees in finance and human resources departments.

Number of hours spent at work (less, equivalent, or more than 8 hours, which is required by law) is found to relate significantly to the perception of all three burnout dimensions ( $p$  (exhaustion) = 0.003;  $p$  (cynicism) = 0.001;  $p$  (prof. efficacy) = 0.099). In general, the longer the working hours, the more employees feel exhausted, with the highest exhaustion level being expressed by employees working over 9 hours a day ( $m = 4.41$ ). Cynicism levels are highest among employees working less than 8 hours a day ( $m = 3.62$ ), followed by those working 8-9 hours a day ( $m = 3.61$ ). In comparison, professional efficacy is highest among employees working over 9 hours a day ( $m = 5.48$ ). This finding reflects broader labour market regulations in Croatia, which allow overtime in defined cases: up to 10 hours per week on top of the 40-hour standard, and up to 180 hours per year (or 250 under a collective agreement) (CMS, 2025). By contrast, working less than 8 hours a day is not necessarily a sign of good work conditions; in transitional economies like Croatia, part-time and temporary contracts are more common and have increased in recent years (Tomic et al., 2019). Such arrangements can limit involvement in core processes and weaken attachment to the organisation, which helps explain why employees with reduced hours report the highest cynicism. To gain deeper insights into this connection, other organisational elements should be examined, such as internal culture, management practices, recognition practices, and job satisfaction, which might affect cynicism levels (Kakar et al., 2022).

### *Burnout differences according to company characteristics*

Finally, to answer research question 4 and determine whether there are significant differences in burnout dimensions across employee groups defined by organisational characteristics, the one-way ANOVA results are discussed below.

The company's industry does not significantly relate to perceptions of burnout levels. However, the results of this survey indicated the highest levels of exhaustion in the energy sector ( $m = 4.80$ ), the hospitality industry ( $m = 4.53$ ), and the financial/insurance sector ( $m = 4.41$ ). In contrast, the lowest levels of exhaustion were reported by employees working in the art, entertainment, and recreation sector ( $m = 3.68$ ), followed by employees in construction ( $m = 3.82$ ) and the technical/scientific sector ( $m = 3.83$ ). The highest levels of cynicism were reported by employees working in the energy sector ( $m = 3.95$ ), hospitality ( $m = 3.64$ ), and trade (wholesale/ retail) ( $m = 3.63$ ) industries, and the lowest levels of cynicism were reported in the art, entertainment, and recreation industry ( $m = 2.85$ ), followed by logistics ( $m = 3.00$ ),

construction ( $m=3.03$ ), and technical/scientific industries ( $m = 3.04$ ). The lowest levels of professional efficacy were found in the energy sector ( $m = 4.56$ ), administrative services ( $m = 4.78$ ), and hospitality ( $m = 4.84$ ), while the highest levels of professional efficacy were found in art, entertainment, and recreation ( $m = 5.71$ ), logistics ( $m = 5.65$ ), and construction ( $m = 5.56$ ) industries. These findings partially align with previous international research. For example, a study in Japan (Matsuo et al., 2022) found the highest burnout levels among employees in finance, trade, and manufacturing, and the lowest in construction. Similarly, research from France (Boceran et al., 2019) reported elevated exhaustion and cynicism in banking, insurance, and real estate, while lower levels were observed in construction and the public sector. Other studies have predominantly focused on individual industries, such as hospitality (Pienaar & Willemse, 2008; Ayachit & Chitta, 2022), construction (Liu et al., 2020), or information technology (Zaza et al., 2022). However, there remains a lack of comparative studies across multiple sectors, underscoring the need for further research to reach more generalizable conclusions.

Regarding company size, the results showed significant differences across all three burnout dimensions ( $p$  (exhaustion) = 0.016;  $p$  (cynicism) = 0.000;  $p$  (professional efficacy) = 0.009). Employees of large companies demonstrate the highest levels of exhaustion ( $m = 4.43$ ) and cynicism ( $m = 3.80$ ), and the lowest levels of professional efficacy ( $m = 5.04$ ), indicating they are most at risk of burnout. This result is consistent with the Croatian organisational and institutional context, where large enterprises are characterised by bureaucratic hierarchies, formalised procedures, and less flexible work arrangements (Palic et al., 2023). By contrast, employees in SMEs, which dominate the Croatian economy, usually experience flatter structures, closer relationships with management, and greater organisational identification, which can help reduce burnout risk despite higher external uncertainty.

The lowest levels of exhaustion were reported by employees of small companies ( $m = 3.89$ ). In contrast, the lowest levels of cynicism were found among employees of micro-enterprises ( $m = 2.91$ ), who also reported the highest levels of professional efficacy ( $m = 5.56$ ). These results are like those reported by Boceran et al. (2019), even though their results weren't statistically significant. The results align with the existing literature, which emphasises the main differences between SMEs and large companies (Yeh et al., 2018). Even though employees of small and medium-sized enterprises face greater uncertainty in their business environment, their work assignments are more closely tied to their personal experiences and the values of their employers. They also have simpler organisational structures characterised by open communication, which makes them more connected and engaged.

Based on the statistically significant group differences, less favourable burnout-related scores were observed among employees in administrative positions, employees in large companies, women, and individuals working more than 9 hours a day. Regarding cynicism specifically, employees working fewer than 8 hours a day also reported less favourable scores. Each of these factors, taken individually, increases the risk of burnout. The study contributes to the existing burnout theory by identifying specific individual and occupational differences among employees and their experience of burnout. This supports the multidimensional approach to understanding the syndrome. By situating the research within the Croatian business sector, this study extends and yields new findings to previous research that has focused predominantly on the helping professions and employees in developed countries.

The findings indicate that burnout is not solely an individual phenomenon but also develops in relation to other contextual factors, such as company size, working hours, and position. These results should also be viewed in the context of the Croatian labour

market, which reflects the characteristics of a transitional economy. The business environment is often shaped by hierarchical organisational cultures and formalised procedures, especially in large companies. At the same time, working arrangements remain marked by long or irregular hours, and in some sectors by an increasing reliance on temporary and part-time contracts (Tomic et al., 2019; CMS, 2025). Gender imbalances persist, with women occupying one of the lowest shares of managerial positions in the EU and frequently carrying a disproportionate share of domestic responsibilities (Eurostat, 2021; World Bank, 2021). Within this environment, burnout risks tend to be more pronounced for vulnerable groups, while SMEs, dominant in Croatia's economy, can sometimes offer a buffer through flatter hierarchies and closer ties between employees and management (Palic et al., 2023).

From a practical point of view, these results can help decision-makers across different organisations identify the specific group of employees who can benefit most from the different stress management training programs. The results of this study indicate that individual differences, such as gender, and occupational differences, such as work position, company size, and work hours, can influence how employees experience burnout and, as such, warrant special attention from companies. Creating training and coping programs to address these differences can make vulnerable employee groups more effective and inclusive. This is not only an ethical choice but also a strategic one that can lead to a healthier, more productive, and more sustainable workforce. The results of this study also carry implications for labour policies and legislation governing the work environment, especially in transitional economies.

## Conclusion

Given the increasing diversity of the workforce, organisations should develop a fundamental understanding of how demographic and occupational differences influence work-related stress and burnout. This study aimed to assess burnout among employees of Croatian companies and to discover demographic and occupational differences between them. The results indicate that Croatian employees exhibit signs of a mildly overextended profile, reflected in feelings of tiredness, strain, and low energy. Statistically significant individual differences were found by gender, and statistically significant occupational differences were found in work position, work hours, and company size. These results hold important theoretical and practical contributions.

There are several limitations of the study. First, it is cross-sectional, meaning it examines characteristics within a population at a single point in time. To achieve more precise results, a recommendation for future studies is to conduct a longitudinal study. Another limitation is the unequal representation of the participants in certain groups, for example, of employees younger than 25 and older than 61, as well as some industries (one employee from the real estate sector), which reduces the statistical power for the underrepresented groups and makes it challenging to generalise findings to the entire population. Thus, recommendations for future studies include collecting more responses from these employee groups to achieve more relevant results.

Online questionnaires also have their limitations, because not everyone knows how to use them, and they may not reach all the segments of the population. One item from the professional efficacy scale was omitted; however, the excluded item was conceptually like the remaining items. Therefore, the overall score is expected to remain largely unaffected, and any differences in results should be minimal. One limitation of the threshold method for classifying burnout profiles is that it may

oversimplify burnout and fail to fully capture its manifestations across individuals (Wong et al., 2025).

Additional recommendations include including other demographic and occupational differences, such as marital status, number of children, ethnicity, or the product/service type of companies. In general, more studies on burnout in Croatia are encouraged from all perspectives, as they highlight the importance of employee well-being, health, and productivity. Consequently, the issue deserves heightened attention not solely from an academic perspective, but also across various other domains, including organisational, societal, and legislative spheres. After all, only healthy and engaged employees can be truly motivated to excel, which directly influences all aspects of organisational performance and outcomes.

## References

1. Ahola, K., Honkonen, T., Isometsä, E., Kalimo, R., Nykyri, E., Koskinen, S., Aromaa, A., & Lönnqvist, J. (2006). Burnout in the general population: Results from the Finnish Health 2000 Study. *Social Psychiatry and Psychiatric Epidemiology*, 41(1), 11-17. <https://doi.org/10.1007/s00127-005-0011-5>
2. Allen, M., Poggiali, D., Whitaker, K., Marshall, T. R., van Langen, J., & Kievit, R. A. (2021). Raincloud plots: a multi-platform tool for robust data visualization. *Wellcome Open Research*, 4, 63. <https://doi.org/10.12688/wellcomeopenres.15191.2>
3. Antoniou, A.-S., Pavlidou, K., Charitaki, G., & Alevriadou, A. (2024). Profiles of Teachers' Work Engagement in Special Education: The Impact of Burnout and Job Satisfaction. *International Journal of Disability, Development and Education*, 71(4), 650-667. <https://doi.org/10.1080/1034912x.2022.2144810>
4. Arches, J. (1991). Social structure, burnout, and job satisfaction. *Social work*, 36(3), 202-206. <https://doi.org/10.1093/sw/36.3.202>
5. Ayachit, M., & Chitta, S. (2022). A systematic review of Burnout studies from the Hospitality literature. *Journal of Hospitality Marketing & Management*, 31(2), 125-144. <https://doi.org/10.1080/19368623.2021.1957743>
6. Azam, K., Khan, A., & Alam, M. T. (2017). Causes and adverse impact of physician burnout: a systematic review. *J Coll Physicians Surg Pak*, 27(8), 495-501.
7. Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2002). Validation of the Maslach Burnout Inventory - General Survey: An Internet Study. *Anxiety, Stress & Coping*, 15(3), 245-260. <https://doi.org/10.1080/1061580021000020716>
8. Bang, H., & Reio, T. G., Jr. (2017). Examining the role of cynicism in the relationships between burnout and employee behavior. *Journal of Work and Organizational Psychology*, 33(3), 217-227. <https://doi.org/10.1016/j.rpto.2017.07.002>
9. Barnett, R. C., Gareis, K. C., & Brennan, R. T. (1999). Fit as a mediator of the relationship between work hours and burnout. *Journal of Occupational Health Psychology*, 4(4), 307-317. <https://doi.org/10.1037//1076-8998.4.4.307>
10. Benazic, D., & Ruzic, E. (2013). Odnos između profesionalnog sagorijevanja i zadovoljstva poslom u osobnoj prodaji. *Ekonomski vjesnik*, XXVI (1), 92-92.
11. Biron, M., & De Reuver, R. (2013). Restoring balance? Status inconsistency, absenteeism, and HRM practices. *European Journal of Work and Organizational Psychology*, 22(6), 683-696. <https://doi.org/10.1080/1359432x.2012.694165>
12. Boceran, C., Dupret, E., & Feltrin, M. (2019). Maslach Burnout Inventory -General Survey: French validation in a representative sample of employees. *SCIREA Journal of Health*, 3 (2), 24-61. <https://www.scirea.org/journal/PaperInformation?PaperID=1148>
13. Bravo, D. M., Suárez-Falcón, J. C., Bianchi, J. M., Segura-Vargas, M. A., & Ruiz, F. J. (2021). Psychometric Properties and Measurement Invariance of the Maslach Burnout Inventory-General Survey in Colombia. *International Journal of Environmental Research and Public Health*, 18(10), 5118. <https://doi.org/10.3390/ijerph18105118>



14. Brewer, E. W., & Shapard, L. (2004). Employee Burnout: A Meta-Analysis of the Relationship Between Age or Years of Experience. *Human Resource Development Review*, 3(2), 102-123. <https://doi.org/10.1177/1534484304263335>
15. Capri, B., & Guler, M. (2018). Evaluation of Burnout Levels in Teachers regarding Socio-Demographic Variables, Job Satisfaction and General Self-Efficacy. *Eurasian Journal of Educational Research*, 18, 1-22. <https://doi.org/10.14689/ejer.2018.74.7>
16. Carod-Artal, F. J., & Vázquez-Cabrera, C. (2013). Burnout Syndrome in an International Setting. *Burnout for Experts*, 15-35. [https://doi.org/10.1007/978-1-4614-4391-9\\_2](https://doi.org/10.1007/978-1-4614-4391-9_2)
17. Chang, S.-J., van Witteloostuijn, A., & Eden, L. (2020). Common Method Variance in International Business Research. *JIBS Special Collections*, 385-398. [https://doi.org/10.1007/978-3-030-22113-3\\_20](https://doi.org/10.1007/978-3-030-22113-3_20)
18. Chen, H., Wu, P., & Wei, W. (2012). New Perspective on Job Burnout: Exploring the Root Cause beyond General Antecedents Analysis. *Psychological Reports*, 110(3), 801-819. <https://doi.org/10.2466/01.09.13.pr0.110.3.801-819>
19. Cheng, Y., & Chen, C.-J. (2014). Modifying effects of gender, age and enterprise size on the associations between workplace justice and health. *International Archives of Occupational and Environmental Health*, 87(1), 29-39. <https://doi.org/10.1007/s00420-012-0831-z>
20. Cipicic, M. L. (2019). Analysis of the labour market in Croatia. *Economic and Social Development: Book of Proceedings*, 371-380.
21. CMS. (2025). *Employment and social laws in Croatia: Working hours and overtime*. CMS Expert Guides. Retrieved from <https://www.cms.law/en/int/expert-guides/cms-expert-guide-to-labour-law-in-central-eastern-europe/croatia>
22. Croatian Bureau of Statistics. (2023). *Persons in paid employment, by activities*. <https://podaci.dzs.hr/2023/en/57988> (accessed April 4, 2023).
23. De Beer, L. T., van der Vaart, L., Escaffi-Schwarz, M., De Witte, H., & Schaufeli, W. B. (2024). Maslach Burnout Inventory - General Survey: A Systematic Review and Meta-Analysis of Measurement Properties. *European Journal of Psychological Assessment*, 40(5), 360-375. <https://doi.org/10.1027/1015-5759/a000797>
24. Demerouti, E., Le Blanc, P. M., Bakker, A. B., Schaufeli, W. B., & Hox, J. (2009). Present but sick: a three-wave study on job demands, presenteeism and burnout. *Career Development International*, 14(1), 50-68. <https://doi.org/10.1108/13620430910933574>
25. Domovic, V., Martinko, J., & Jurcec, L. (2010). Čimbenici učiteljskog sagorijevanja na poslu. *Napredak*, 151 (3-4), 350-359.
26. Dyrbye, L. N., Shanafelt, T. D., Johnson, P. O., Johnson, L. A., Satele, D., & West, C. P. (2019). A cross-sectional study exploring the relationship between burnout, absenteeism, and job performance among American nurses. *BMC nursing*, 18(1), 1-8. <https://doi.org/10.1186/s12912-019-0382-7>
27. El koncept d.o.o. (2023). *Finiinfo*. <https://www.fininfo.hr/>
28. Eurofound. (2022). *Working conditions in the time of COVID-19: Implications for the future*. European Working Conditions Telephone Survey 2021 series. Publications Office of the European Union, Luxembourg.
29. European Commission. (2023). *Commission staff working document. 2023 Country Report – Croatia*. Brussels, Belgium.
30. European Institute for Gender Equality. (2024). *Croatia: Gender Equality Index 2024*. [https://eige.europa.eu/modules/custom/eige\\_gei/app/content/downloads/factsheets/HR\\_2024\\_factsheet.pdf](https://eige.europa.eu/modules/custom/eige_gei/app/content/downloads/factsheets/HR_2024_factsheet.pdf)
31. Eurostat. (2021, March 5). *Women in management in the EU*. Retrieved from <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20210305-2>
32. Golonka, K., & Gulla, B. (2021). Individual Differences and Susceptibility to Burnout Syndrome: Sensory Processing Sensitivity and Its Relation to Exhaustion and Disengagement. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.751350>
33. Gradiski, I. P., Borovecki, A., Curkovic, M., García-Gómez, E., Bolton, R. C. D., & Vivanco, L. (2025). Factors Influencing Burnout in Croatian Medical Students: The roles of Lifelong Learning and Loneliness. *Perspectives on Medical Education*, 14(1). <https://doi.org/10.5334/pme.1468>

34. Hammond, D. A., Swanson, J. M., & Rech, M. A. (2020). The effect of burnout on postgraduate year-one pharmacy residents' pursuit of additional training. *JACCP: JOURNAL OF THE AMERICAN COLLEGE OF CLINICAL PHARMACY*, 3(3), 569-576. <https://doi.org/10.1002/jac5.1202>
35. Hofstede Insights. (2023). Country comparison tool. <https://www.hofstede-insights.com/country-comparison-tool?countries=croatia>
36. Horvat, G. (2018). Stress in the Public and Real Sector. *Socijalne teme*, 1 (5), 73-73
37. Horvat, G., Tomasevic, S., & Leutar, Z. (2016). Sindrom sagorijevanja na poslu djelatnika bankarskog sektora koji su u direktnom kontaktu s korisnicima. *Socijalne teme*, 1 (3), 31-47.
38. Houtman, I., Jettinghoff, K., & Cedillo, L. (2007). *Raising awareness of stress at work in developing countries: A modern hazard in a traditional working environment: Advice to employers and worker representatives* (Protecting Workers' Health Series No. 6). Geneva: World Health Organization.
39. Hudek-Knezevic, J., Kalebic Maglica, B., & Krapic, N. (2011). Personality, organizational stress, and attitudes toward work as prospective predictors of professional burnout in hospital nurses. *Croatian medical journal*, 52(4), 538-549.
40. IBM Corp. (2019). IBM SPSS Statistics for Windows (Version 26.0) [Computer software]. Armonk, NY: IBM Corp.
41. JASP Team (2024). JASP (Version 0.19.3) [Computer software].
42. Kakar, A. S., Kruger, N., Durrani, D. K., Khan, M. A., & Meyer, N. (2022). Work-life balance practices and organizational cynicism: The mediating role of person-job fit. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.979666>
43. Kanste, O., Kyngäs, H., & Nikkilä, J. (2007). The relationship between multidimensional leadership and burnout among nursing staff. *Journal of Nursing Management*, 15(7), 731-739. <https://doi.org/10.1111/j.1365-2934.2006.00741.x>
44. Kelly, J. (2023). For Many Workers, Burnout Is Worse Than During The Pandemic. <https://www.forbes.com/sites/jackkelly/2023/04/13/for-many-workers-burnout-is-worse-than-during-the-pandemic/?sh=2971cfa5213e>
45. Kim, W. H., Ra, Y.-A., Park, J. G., & Kwon, B. (2017). Role of burnout on job level, job satisfaction, and task performance. *Leadership & Organization Development Journal*, 38(5), 630-645. <https://doi.org/10.1108/lodj-11-2015-0249>
46. Lai, Y., Saridakis, G., & Blackburn, R. (2015). Job Stress in the United Kingdom: Are Small and Medium-Sized Enterprises and Large Enterprises Different? *Stress and Health*, 31(3), 222-235. <https://doi.org/10.1002/smi.2549>
47. Lam, L. T., Lam, M. K., Reddy, P., & Wong, P. (2022). Factors Associated with Work-Related Burnout among Corporate Employees Amidst COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, 19(3), 1295. <https://doi.org/10.3390/ijerph19031295>
48. Leiter, M. P., & Maslach, C. (2004). *Areas of worklife: A structured approach to organizational predictors of job burnout*. In P. Perrewe' & D. C. Ganster (Eds.), *Research in occupational stress and well being* (Vol. 3, pp. 91-134). Oxford, United Kingdom: Elsevier.
49. Lin, F., St John, W., & Mcveigh, C. (2009). Burnout among hospital nurses in China. *Journal of Nursing Management*, 17(3), 294-301, <https://doi.org/10.1111/j.1365-2834.2008.00914.x>
50. Liu, C., Cao, J., Zhang, P., & Wu, G. (2020). Investigating the relationship between work-to-family conflict, job burnout, job outcomes, and affective commitment in the construction industry. *International journal of environmental research and public health*, 17(16), 5995. <https://doi.org/10.3390/ijerph17165995>
51. Mak, B. L., & Sockel, H. (2001). A confirmatory factor analysis of IS employee motivation and retention. *Information & Management*, 38(5), 265-276. [https://doi.org/10.1016/s0378-7206\(00\)00055-0](https://doi.org/10.1016/s0378-7206(00)00055-0)
52. Martinko, J. (2010). Profesionalno sagorijevanje na poslu nastavnika u obrazovanju odraslih. *Andragoški glasnik: Glasilo Hrvatskog andragoškog društva*, 14(2.(25)), 99-109.



53. Maslach, C., & Jackson, S. E. (1984). Patterns of burnout among a national sample of public contact workers. *Journal of health and human resources administration*, 189-212.
54. Maslach, C., & Leiter, M. P. (2021, March 19). *How to measure burnout accurately and ethically*. Harvard Business Review. <https://hbr.org/2021/03/how-to-measure-burnout-accurately-and-ethically>
55. Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach burnout inventory manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press. Now published by Mind Garden.
56. Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology*, 52(1), 397-422.
57. Matsuo, T., Yoshioka, T., Okubo, R., Nagasaki, K., & Tabuchi, T. (2022). Burnout and its associated factors among healthcare workers and the general working population in Japan during the COVID-19 pandemic: a nationwide cross-sectional internet-based study. *BMJ Open*, 12(11), e064716. <https://doi.org/10.1136/bmjopen-2022-064716>
58. Mohren, D. C. L., Swaen, G. M. H., Kant, I., van Amelsvoort, L. G. P. M., Borm, P. J. A., & Galama, J. M. D. (2003). Common infections and the role of burnout in a Dutch working population. *Journal of Psychosomatic Research*, 55(3), 201-208. [https://doi.org/10.1016/s0022-3999\(02\)00517-2](https://doi.org/10.1016/s0022-3999(02)00517-2)
59. Moric Milovanovic, B., & Cvjetkovic, M. (2024). Analysis of antecedents and consequences of workplace-related burnout among Croatian employees in the post-COVID-19 era. *Business: Theory and Practice*, 25(1), 108-118. <https://doi.org/10.3846/btp.2024.19320>
60. Nagar, K. (2012). Organizational Commitment and Job Satisfaction among Teachers during Times of Burnout. *Vikalpa: The Journal for Decision Makers*, 37(2), 43-60. <https://doi.org/10.1177/0256090920120205>
61. Palic, M., Kozina, Z., & Tutek, N. (2023). Shaping Startup Culture in Croatia: The Role of Internal Marketing in Fostering Growth. *Business Systems Research*, 14(2), 44-60. <https://doi.org/10.2478/bsrj-2023-0011>
62. Panic, D. (2016). Psychophysics correlates of burnout in managers of small-sized enterprises. *Teme-Časopis za Društvene Nauke*, 40(2), 493-507.
63. Pienaar, J., & Willemse, S. A. (2008). Burnout, engagement, coping and general health of service employees in the hospitality industry. *Tourism Management*, 29(6), 1053-1063. <https://doi.org/10.1016/j.tourman.2008.01.006>
64. Poloski Vokic, N., & Bogdanic, A. (2007). Individual differences and occupational stress perceived: a Croatian survey. *EFZG working paper series*, (05), 1-15.
65. Purvanova, R. K., & Muros, J. P. (2010). Gender differences in burnout: A meta-analysis. *Journal of Vocational Behavior*, 77(2), 168-185. <https://doi.org/10.1016/j.jvb.2010.04.006>
66. Račić, D., Babić, Z., & Podrug, N. (2005). Segmentation of the Labour Market and Employee Rights in Croatia. *Revija za socijalnu politiku*, 12(1). <https://doi.org/10.3935/rsp.v12i1.20>
67. Rahim, A., & Cosby, D. M. (2016). A model of workplace incivility, job burnout, turnover intentions, and job performance. *Journal of Management Development*, 35(10), 1255-1265. <https://doi.org/10.1108/jmd-09-2015-0138>
68. Randall, M., & Scott, W. A. (1988). Burnout, job satisfaction, and job performance. *Australian Psychologist*, 23(3), 335-347. <https://doi.org/10.1080/00050068808255616>
69. Ren, W., Li, W., Ji, C., Kong, F., Chao, L., Yang, Q., Zhang, W., & Du, X. (2025). The association between sleep and burnout in psychiatric nurses: a survey from China. *BMC Nursing*, 24(1). <https://doi.org/10.1186/s12912-025-03238-y>
70. Ruzic, E. (2013). An investigation on the phenomenon of job burnout in the sales profession. *Ekonomika misao i praksa*, 22 (1), 79-96. <https://hrcak.srce.hr/104529>
71. Selimber, V., & Milkovic Sipek, S. (2022). Sindrom sagorijevanja kod zaposlenih u odnosima s javnošću u Hrvatskoj. *Communication Management Review*, 07 (01), 48-73

72. Shepherd, C. D., Tashchian, A., & Ridnour, R. E. (2011). An Investigation of the Job Burnout Syndrome in Personal Selling. *Journal of Personal Selling & Sales Management*, 31(4), 397-409. <https://doi.org/10.2753/pss0885-3134310403>
73. Sulsky, L., & Smith, C. (2005). *Work stress*. Belmont, CA: Thomson Wadsworth.
74. Sviben, R., Pukljak Iričanin, Z., Lauri Korajlija, A., & Čular Reljanović, I. (2017). Sindrom sagorijevanja i mentalno zdravlje kod medicinskog osoblja sa psihijatrijskog i nepsihijatrijskih odjela. *Journal of Applied Health Sciences*, 3(2), 169-181. <https://doi.org/10.24141/1/3/2/4>
75. Tomas, J., Maslić Seršić, D., Mikac, U., Rebernjak, B., Buško, V., & De Witte, H. (2024). Validation of the Croatian version of the short form of the Burnout Assessment Tool: Findings from a nationally representative sample. *International Journal of Selection and Assessment*, 32(1), 40-53. <https://doi.org/10.1111/ijasa.12447>
76. Tomic, I., Rubil, I., Nestic, D., & Stubbs, P. (2019). *The employment and social situation in Croatia*. Study for the Committee on Employment and Social Affairs, Policy Department for Economic, Scientific and Quality of Life Policies. European Parliament. [https://www.europarl.europa.eu/RegData/etudes/STUD/2019/642345/IPOL\\_STU\(2019\)642345\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2019/642345/IPOL_STU(2019)642345_EN.pdf)
77. Tomljenovic, M., Kolaric, B., Stajduhar, D. and Tesic, V. (2014), 'Stress, depression and burnout among hospital physicians in Rijeka, Croatia', *Psychiatria Danubina*, Vol. 26, Suppl. 3, pp. 450–458.
78. Tosun, N., & Ulusoy, H. (2017). The relationship of organizational commitment, job satisfaction and burnout on physicians and nurses?. *Journal of Economics and Management*, 28, 90-111. <https://doi.org/10.22367/jem.2017.28.06>
79. Tucak Junakovic, I., Macuka, I., & Skokandic, L. (2019). Profesionalni stres, zadovoljstvo poslom i sagorijevanje medicinskih sestara/tehničara zaposlenih u području palijativne skrbi. *Medica Jadertina*, 49(3-4), 157-171.
80. United Nations. (2023). *Post-pandemic world economy still feeling COVID-19's sting*. <https://news.un.org/en/story/2023/05/1136727>
81. Van Hoy, A., Rzeszutek, M., Pięta, M., Mestre, J. M., Rodríguez-Mora, Á., Midgley, N., Omylinska-Thurston, J., Dopierala, A., Falkenström, F., Ferlin, J., Gergov, V., Lazić, M., Ulberg, R., Røssberg, J. I., Hancheva, C., Stoyanova, S., Schmidt, S. J., Podina, I., Ferreira, N., ... Gruszczyńska, E. (2022). Burnout among psychotherapists: a cross-cultural value survey among 12 European countries during the coronavirus disease pandemic. *Scientific Reports*, 12(1). <https://doi.org/10.1038/s41598-022-17669-z>
82. Ventura, M., Salanova, M., & Llorens, S. (2015). Professional Self-Efficacy as a Predictor of Burnout and Engagement: The Role of Challenge and Hindrance Demands. *The Journal of Psychology*, 149(3), 277-302. <https://doi.org/10.1080/00223980.2013.876380>
83. Weinberg, S., Edwards, G., & Garove, W. E. (1983). Burnout among employees of state residential facilities serving developmentally disabled persons. *Children and Youth Services Review*, 5(3), 239-253. [https://doi.org/10.1016/0190-7409\(83\)90029-4](https://doi.org/10.1016/0190-7409(83)90029-4)
84. Wong, Y. K., Raj, L. R., & Chan, K. Y. E. (2025). Prevalence of burnout among chiropractic students in Malaysia. *The journal of chiropractic education*, 39, eJCE-24. <https://doi.org/10.7899/JCE-24-19>
85. World Bank. (2019). *Investments in gender equality in Croatia will increase opportunities for all, says World Bank report*. <https://www.worldbank.org/en/news/press-release/2019/03/22/investments-in-gender-equality-in-croatia-will-increase-opportunities-for-all-says-world-bank-report>
86. World Bank. (2021). *Croatian women and the COVID-19 Pandemic*, The coronavirus is not gender-blind. International Bank for Reconstruction and Development, Zagreb, Croatia
87. World Health Organisation. (2019). *Burn-out an "occupational phenomenon": International Classification of Diseases*. <https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases>
88. Yeh, W. Y., Yeh, C. Y., & Chen, C. J. (2018). Exploring the public-private and company size differences in employees' work characteristics and burnout: data analysis of a

- nationwide survey in Taiwan. *Industrial health*, 56(5), 452-463. <https://doi.org/10.2486/indhealth.2017-0182>
89. Yu, X., Sun, C., Sun, B., Yuan, X., Ding, F., & Zhang, M. (2022). The Cost of Caring: Compassion Fatigue Is a Special Form of Teacher Burnout. *Sustainability*, 14(10), 6071. <http://dx.doi.org/10.3390/su14106071>
90. Zaza, S., Riemenschneider, C. & Armstrong, D.J. (2022). The drivers and effects of burnout within an information technology work context: a job demands-resources framework. *Information Technology & People*, 35 (7), 2288-2313. <https://doi.org/10.1108/ITP-01-2021-0093>

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