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General and Digital Job Demands and Occupational Burnout: Understanding the Role of Personal and Organizational Resources

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Abstract. The aim of this study is to assess the relationship between general job demands and digital job demands and occupational burnout and to identify protective factors for occupational burnout at work. The study involved 278 participants. All participants were actively employed. All participants completed a questionnaire consisting of items related to occupational burnout, quantitative job demands, qualitative job demands, technological overload, dependence on technology at work, communication overload, information overload, increasing learning needs, mastery at work, self-efficacy in adapting to technological progress, managerial support, and promotion of information literacy in the organization. The results showed that quantitative job demands, technological overload at work, and information overload at work predict occupational burnout at work. Finally, the results show that personal organizational resources do not moderate the association of occupational burnout with general and digital job demands, but personal and organizational resources negatively predict occupational burnout. The added value of this study for organizations is that it will enable them to encourage organizations to help employees develop personal resources, such as self-efficacy, to adapt to technological progress at work and job crafting, as well as to encourage organizations to focus on promoting managerial support for employees and information literacy training in the organization, which may reduce occupational burnout at work. Moreover, this study will allow organizations to pay attention to quantitative job demands, technological overload at work, and information overload at work as they can predict burnout at work.

Keywords: occupational burnout, general job demands, digital job demands, self-efficacy to adapt to technological progress at work, job crafting.

Bendri bei su skaitmenizacija susiję darbo reikalavimai ir profesinis perdegimas: asmeninių ir organizacinių išteklių vaidmuo

Santrauka. Tyrimo tikslas – įvertinti bendrų ir su skaitmenizacija susijusių darbo reikalavimų sąsajas su profesiniu perdegimu ir nustatyti veiksnius, galinčius apsaugoti nuo profesinio perdegimo darbe. Tyrime dalyvavo 278 dirbantys asmenys. Dalyviai pildė klausimyną, kuriame vertintas profesinis perdegimas, kiekybiniai ir kokybiniai darbo reikalavimai, technologinė, komunikacijos ir informacijos perkrova, priklausomybė nuo technologijų, didėjantys mokymosi poreikiai, meistriškumas dirbti, saviveiksmingumas prisitaikyti prie technologinės pažangos darbe, vadovo parama ir organizacijos informacinio raštingumo skatinimas.

Rezultatai parodė, kad profesinį perdegimą reikšmingai prognozuoja kiekybiniai darbo reikalavimai, technologinė ir informacijos perkrova. Nors asmeniniai ir organizaciniai ištekliai nesilpnina bendrų ir su skaitmenizacija susijusių

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darbo reikalavimų sąsajos su perdegimu, nustatyta, kad jie patys neigiamai prognozuoja perdegimą. Tai reiškia, kad asmeniniai ir organizacijos ištekliai gali sumažinti perdegimo riziką, net jei jie neveikia kaip moderuojantys veiksniai.

Šio tyrimo pridėtinė vertė organizacijoms yra ta, kad jis įkvėps paskatinti darbuotojus ugdyti asmeninius išteklius, tokius kaip saviveiksmingumas prisitaikyti prie technologinės pažangos darbe, ir didinti meistriškumą dirbti. Tyrimas taip pat paskatins organizacijas daugiau dėmesio skirti vadovų paramos stiprinimui ir informacinio raštingumo skatinimui, kurie gali padėti mažinti profesinio perdegimo riziką. Be to, tyrimas gali atkreipti organizacijų dėmesį į kiekybinius darbo reikalavimus, technologinę ir informacijos perkrovą darbe, nes būtent šie veiksniai prognozuoja perdegimą.

Pagrindiniai žodžiai: profesinis perdegimas, bendrieji darbo reikalavimai, skaitmeniniai darbo reikalavimai, saviveiksmingumas prisitaikyti prie technologinės pažangos, meistriškumas dirbti.

Introduction

Occupational burnout is often described as an occupational phenomenon characterised by persistent feelings of physical and emotional exhaustion, depersonalisation and occupational ineffectiveness. It can have a lasting impact on the physical and psychological exhaustion and well-being of employees, and can negatively affect the performance of work in an organization (SAMHSA, 2022). In this study, we will build on the recent concept of burnout presented by Schaufeli and colleagues (2023), who describe burnout as a syndrome resulting from a prolonged response to chronic stress at work.

The *Job Demands Resource Model* (JD-R) helps to understand how job demands and organizational resources affect performance in terms of employee well-being (including occupational burnout and job engagement), and how employees can influence job demands and resources through proactive and reactive work behaviours (Bakker et al., 2023). The key elements are job demands, and employees' personal and organizational resources. Job demands are defined as aspects of work that require physical, psychological, cognitive or emotional effort from employees (Demerouti et al., 2001). High job demands can lead to strain. If this tension persists long enough, the accumulation of tension can lead to occupational burnout (Bakker et al., 2023). Organizational resources are defined as the physical, psychological, social or organizational aspects of work that are needed to achieve work goals or perform tasks at work. Meanwhile, resources can reduce job demands (Demerouti et al., 2001).

Notably, when workers are faced with high job demands, they have to work harder to get the job done. Increased effort depletes the available resources (Li et al., 2022). Bakker et al. (2023) note that high job demands are particularly associated with burnout at work and are considered as adverse events that can lead to errors or injuries at work. Organizational resources (e.g., skill variety, social support from colleagues, feedback) meet employees' basic psychological needs. It is worth noting that if high job demands are seen as a disadvantage, then organizational resources may weaken or mitigate the impact of job demands. Organizational resources can change perceptions and attitudes towards work demands and moderate reactions following exposure to work demands. This, in turn, can have a moderating effect on occupational burnout. In the context of the JD-R model, it is noteworthy that employees can increase resources by enhancing their personal resources or by receiving more resources from the organization. (Bakker et al., 2023). All of this

is important because personal resources can coexist with organizational resources to counterbalance the demands of the job. In the following, this paper has chosen, within the framework of this theory, to look at general and digital job demands as job requirements, and to look at employees' personal and organizational resources as 'resources'. We will also look at the impact of these job requirements and resources on occupational burnout.

General and digital job demands

General job demands can be divided into two groups: (1) quantitative job demands: including high workload, insufficient workload, the pace of change in the organization and the perceived negative changes in the organization; (2) qualitative job demands: including emotional demands, mental demands, physical demands, and work-home interference (Jones, 2022). Although the relationship between general job demands and burnout has been extensively studied (Demerouti et al., 2001), less attention has so far been given to how digital job demands contribute to employee strain. However, research shows that challenges such as an increased use of information and communication technologies, constant availability, information overload, and pressure to adapt to new digital tools can create additional strain for employees (Sandoval-Reyes et al., 2019; Ma et al., 2021; Califf & Brooks, 2020). Investigating these digital job demands is therefore essential for understanding burnout in modern workplaces.

In the context of digitalization, job demands have become increasingly diverse and complex. One such demand is technological overload, which occurs when the addition of new technological tools begins to inhibit rather than enhance employee productivity. A paradox that has emerged in many modern organizations is that the increased use of digital technologies can actually decrease productivity – precisely because of technological overload. Importantly, this overload is not caused by the technology itself, but rather by how individuals interact with and use that technology (Karr-Wisniewski & Lu, 2010). Another relevant demand is dependence on technology at work, where the constant availability of work tools can lead to a permanent connection to work. This constant connectivity can gradually extend the working day, increase employees' workloads, reduce free time, and hinder effective recovery after work (Sandoval-Reyes et al., 2019; Ma et al., 2021). The demands associated with technology use thus often reach beyond standard working hours, draining recovery resources, and exposing workers to prolonged work-related stressors (Sandoval-Reyes et al., 2019). On top of that, communication overload is also a significant challenge. It emerges when frequent emails, messages, or calls interrupt employees, leading to decreased productivity. These frequent interruptions negatively affect recall, accuracy, task efficiency, stress levels, and the overall performance outcomes (Karr-Wisniewski & Lu, 2010). In addition, information overload arises when the volume of information that must be processed exceeds the employee's available time or cognitive capacity to make effective decisions or complete tasks (Eppler & Mengis, 2004). Finally, continuous learning demands are increasingly important in today's workplace. Employees are frequently expected to update their existing knowledge and acquire new

skills to remain effective in evolving job roles (Kubicek et al., 2015; Sandoval-Reyes et al., 2019). As job responsibilities become broader and more varied, the need for learning also intensifies (Loon & Casimir, 2008).

Emotional demands, while part of the JD-R model (Bakker & Demerouti, 2017), were not included in this study, as the focus was on cognitive, quantitative, and digital job demands. These were selected due to their particular relevance in modern, technology-driven work environments.

Although the JD-R model is widely used in burnout research, most studies still focus on the traditional job demands. This study contributes by explicitly integrating five distinct digital job demands (technological overload, information overload, communication overload, technology dependence) and increased learning demands into the JD-R model (Karr-Wisniewski & Lu, 2010; Kubicek et al., 2015). By doing so, it addresses the need to modernize burnout research in response to evolving digital work environments (Bakker et al., 2023; Califf & Brooks, 2020). This study examines both risk factors (general and digital job demands) and helpful resources (personal and organizational) that may reduce occupational burnout.

Personal and organizational resources

Personal resources, such as job mastery and self-efficacy to adapt to technological progress, play a key role in how employees manage job demands. Job mastery is understood as a bottom-up strategy for reorganizing work tasks with the aim of optimizing job characteristics, enhancing the person–job fit, and increasing work engagement (Tims et al., 2013). Oprea et al. (2019) found that employees can learn to apply job mastery strategies by setting clear mastery goals for themselves. Over time, pursuit of these goals leads to better work organization, improved performance, more meaningful work, reduced occupational burnout, higher engagement, and better outcomes. Through such strategies, employees actively build their personal resources and become more resilient to job-related stress. Another crucial personal resource is self-efficacy to adapt to technological progress. Ma et al. (2021) found that this form of self-efficacy helps employees form fewer negative perceptions toward digital job demands, thereby reducing resource strain. Employees with higher levels of self-efficacy to adapt to technological progress are better equipped to manage job demands and are more likely to be protected from occupational burnout as a result.

Organizational resources also contribute significantly to employees' ability to handle job demands. One such resource is managerial support. A lack of managerial support can be a contributing factor to occupational burnout (SAMHSA, 2022). According to Dollard and Bakker (2010), employees who receive support from their manager feel that they have more organizational resources available to them, which, in turn, helps them cope more effectively with job demands. Supportive managerial behavior can thus buffer the negative effects of demanding work environments and promote employee well-being. In addition, as digital technologies have been increasingly growing in workplaces, employees often face technology-related insecurity as well as overload, these factors can intensify

the occupational burnout (Califf & Brooks, 2020). Efforts to promote information literacy can reduce technological complexity and uncertainty. This includes provision of training, documentation, technical support, involving end-users early, and creating a culture that encourages innovation and experimentation. These practices help employees understand, adapt to, and benefit from technological change (Tarafdar et al., 2011).

In the JD-R model, personal and organizational resources can act not only as direct protective factors but also as moderators that buffer the negative effects of job demands on burnout (Bakker & Demerouti, 2017; Tummers & Bakker, 2021). This means that the impact of high demands may be weaker when resources like self-efficacy or managerial support are present at higher levels. Inclusion of moderation analysis in empirical research helps identify under which conditions and which job demands are most harmful.

Aim and objectives of the study

This study aims to assess the relationship between general job demands and digital job demands and occupational burnout, as well as to examine how personal and organizational resources are associated with occupational burnout. The objectives of the study are to examine the relationship between occupational burnout and both general job demands and digital job demands, and to investigate the role of personal resources (self-efficacy in adapting to technological advances, job mastery) and organizational resources (promotion of information literacy within the organization, managerial support) in moderating the relationship between job demands and occupational burnout.

Method

Participants

A total of 278 participants took part in the study. The participants were invited to this study by using a non-probability convenience sampling method. The main inclusion criterion was current employment. He participants were employed in various professional fields and were not selected based on a specific professional field. Participation in the study was voluntary and unpaid. The sample included individuals aged between 19 and 68 years ($M = 29.17$, $SD = 8.8$), with work tenure in their current organization ranging from 1 month to 40 years ($M = 3.64$, $SD = 5.9$). The majority of the participants were women (66.4%), worked full-time (76.6%), and held permanent employment contracts (89.9%). Most had a university-level education (65.1%) and worked either fully on-site or in a hybrid work model.

Measures

The respondents were asked to provide demographic data (age, gender, education, managerial status, job type, industry sector and type of employment). Moreover, the survey included measures of occupational burnout, job demands (both general and digital job demands), and job resources (personal and organizational). All scales used Likert-type

response formats and almost all demonstrated acceptable internal consistency (Cronbach $\alpha > 0.70$).

To assess the construct validity of the scales, exploratory factor analysis was performed. The scales were tested one by one, separately. All scales were tested except for the managerial support scale, as it consisted of only one item. One factor was extracted for each scale.

Occupational burnout was measured by using the *Burnout Assessment Tool* (Schaufeli et al., 2020). The scale includes 8 items (sample item: "I feel mentally exhausted from my work"), rated on a 5-point scale from '1' (never) to '5' (always or almost always). The scale showed good internal consistency (Cronbach $\alpha = 0.81$).

General job demands were assessed by using two subscales from Bakker (2014): *quantitative demands* (4 items, sample item: "Do you have to work at a high pace?"; Cronbach $\alpha = 0.88$) and *cognitive demands* (4 items, sample item: "Does your job require a lot of concentration?"; Cronbach $\alpha = 0.84$).

Digital job demands were measured by using five separate scales, all reflecting challenges specific to the modern digital work environment. The scales were developed by Karr-Wisniewski and Lu (2010): 1) *Information overload* (3 items; sample item: "When making decisions at work, I am often distracted by the overload of information available"; Cronbach $\alpha = 0.79$); *Communication overload* (4 items; sample item: "I feel that if I had less need to interact with people through technology at work, my attention would be less distracted and I would be more productive"; Cronbach $\alpha = 0.84$); *Technology dependence* (4 items; sample item: "I can't be productive if I don't have access to the information technology tools I need for my work"; Cronbach $\alpha = 0.89$). On top of that, increased learning demands were measured by using a scale developed by Kubicek et al. (2015) (3 items; sample item: "At work, I increasingly have to learn new things"; Cronbach $\alpha = 0.89$). Finally, *Technological overload* was explored (5 items; sample item: "The information technology I use at work forces me to work much faster"; Cronbach $\alpha = 0.91$).

Job mastery was measured with a 5-item scale developed by Demerouti and Peeters (2018), capturing employees' proactive work adjustment behaviors (sample item: "I improve work procedures to make work easier"; Cronbach $\alpha = 0.87$).

Self-efficacy in adapting to technological progress was assessed by using a 4-item scale developed by Urbanavičiūtė et al. (2023) (sample item: "No matter how my working conditions change, I am confident that I will adapt"; Cronbach $\alpha = 0.63$).

Managerial support was measured with a single-item scale (White, 2016), validated in a Lithuanian context by Urbanavičiūtė and Lazauskaitė-Zabielskė (2018) (sample item: "My manager shows that s/he appreciates my work").

Promotion of information literacy was measured with a 3-item scale by Ragu-Nathan et al. (2008) (sample item: "Before implementing new technologies, my organization offers trainings to employees"; Cronbach $\alpha = 0.85$).

It is worth noting that the data for this study were collected as part of the research project "Smart wear and employee well-being in a modern organization: an analysis of the synergy between work and personal resources" (*lt.* Išmanusis dėmuo ir darbuotojų gerovė

šiuolaikinėje organizacijoje: darbo ir asmeninių išteklių sinergijos analizė) (S-MIP-22-23) (Urbanavičiūtė et al., 2023). All scales also met the criteria for reliability and validity. The researchers also obtained the required ethics committee approval for the study. The survey was conducted by using a questionnaire prepared in the Lithuanian language.

Procedure

The data were collected via an online survey administered by using *LimeSurvey* (*https://www.limesurvey.org/*). The participants were asked to complete the survey in a quiet environment and to avoid completing it while feeling tired. The survey took approximately 40 minutes to complete.

Before participation, the respondents provided informed consent and were informed of their right to withdraw at any point. After two months of active data collection, the survey was closed to ensure data confidentiality.

Data analysis

The data were analysed by using *IBM SPSS Statistics 25* with the *PROCESS macro* by Hayes (2013). Descriptive statistics (means and standard deviations) and correlations were computed for almost all variables. While Pearson correlations were primarily computed, Spearman correlations were used for variables that did not meet normality assumptions, as noted in the Results section. The internal consistency of the scales was assessed by using Cronbach's alpha coefficients (α), all of which met the generally accepted threshold of 0.70, with the exception of the self-efficacy scale ($\alpha = 0.63$), which was considered acceptable for research purposes.

The normality of variable distributions was evaluated by using multiple criteria, including the Kolmogorov–Smirnov test, skewness, histograms, and Q–Q plots. All variables, except for dependence on technology at work, met the assumptions of normality.

To examine the predictive power of general and digital job demands on occupational burnout, multiple stepwise regression analyses were conducted. Finally, moderation analyses were performed by using PROCESS Model 1 to test whether job mastery, self-efficacy in adapting to technological progress, supervisor support, and promotion of information literacy moderated the relationship between job demands and burnout.

Results

Associations between occupational burnout and job demands

To examine the associations between occupational burnout and both general and digital job demands, Pearson correlation coefficients were computed. As shown in Table 1, occupational burnout was positively and significantly correlated with quantitative job demands, cognitive demands, technological overload, communication overload, and information overload. No significant correlations were found with increasing learning demands and technology dependence. No statistically significant correlation was found between burnout

at work and dependence on technology at work ($r_s = 0.02$, $p = 0.79$, Spearman correlation due to non-normal distribution).

Table 1.

Pearson correlations between occupational burnout and job demands

Variable	1	2	3	4	5	6	7
1. Occupational burnout	-	**0.55*** **	0.22***	**0.52*** **	**0.45*** **	**0.44*** **	0.11
2. Quantitative job demands		-	**0.48*** **	**0.5*** **	**0.37*** **	**0.45*** **	0.27***
3. Cognitive job demands			-	0.25***	0.12	**0.35*** **	**0.4*** **
4. Technological overload				-	**0.68*** **	**0.44*** **	0.03
5. Communication overload					-	**0.4*** **	0.05
6. Information overload						-	**0.32*** **
7. Increasing learning demands							-

Note: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Strong and medium correlations are shown in bold.

To identify the most relevant predictors of burnout, a stepwise multiple regression analysis was conducted with occupational burnout as the dependent variable. The following predictors were included in the analysis: quantitative and cognitive job demands, other general and digital job demands described earlier, as well as the education level and the type of employment. Only education and the employment level were included as control variables, as other sociodemographic variables did not show statistically significant differences in burnout or correlations with burnout in the preliminary analyses. The final model was significant. Three variables emerged as significant predictors: 1) Quantitative job demands ($\beta = 0.34$, $t = 5.73$, $p < 0.001$); 2) Technological overload ($\beta = 0.28$, $t = 4.68$, $p < 0.001$); 3) Information overload ($\beta = 0.17$, $t = 3.05$, $p = 0.003$). This means that the risk of occupational burnout at work will also increase with increasing quantitative work demands, technological overload and information overload. In this model, $R^2 = 0.407$, which means that the model explains and predicts 40.7% of the sample occupational burnout. No issues of multicollinearity were observed (all VIFs < 2). Variables that were excluded from the final model due to non-significant effects included cognitive job demands, communication overload, increasing learning demands, technology dependence, education, and employment type.

Table 2.
Predictors of occupational burnout at work

	B	β	t	p	VIF
Constant	0.98		7.66	<0.001	
Quantitative job demands	0.24	0.34	5.73	<0.001	1.44
Technological overload	0.19	0.28	4.68	<0.001	1.44
Information overload	0.12	0.17	3.05	0.003	1.35

Note: F (3.245) = 56.064, p < 0.001

Moderating role of personal and organizational resources

To address the third research objective, Pearson correlation analysis was first conducted between burnout and personal and organizational resources. As shown in Table 3, burnout was negatively and significantly associated with self-efficacy to adapt to technological progress ($r = –0.32$, $p < 0.001$), managerial support ($r = –0.28$, $p < 0.001$), and promotion of information literacy within the organization ($r = –0.27$, $p < 0.001$). Job mastery was not significantly correlated with burnout.

Table 3.
Pearson correlation analysis between burnout and personal and organizational resources

Variable	1	2	3	4	5
1. Occupational burnout	-	-0.02	**-0.32*** **	-0.28***	-0.27***
2. Job mastery		-	0.00	0.02	0.03
3. Self-efficacy to adapt to technological progress			-	0.00	0.19**
4. Managerial support				-	0.21**
5. Promotion of information literacy within the organization					-

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$. Strong and medium correlations are shown in bold.

To further examine whether these resources moderated the relationship between job demands and burnout, a total of 28 moderation models were tested by using PROCESS Model 1. Each model included burnout as the dependent variable, one job demand as the independent variable, one resource (personal or organizational) as the moderator, and all other job demands as covariates. All models were statistically significant ($p < 0.001$), explaining between 44% and 47% of the variance in burnout ($R^2 = 0.44–0.47$). However,

in none of the models was the interaction term (demand × resource) significant ($p > 0.05$), thereby indicating that neither personal nor organizational resources moderated the relationship between job demands and burnout. Although no moderation effects were found, several resources showed significant direct effects. Higher levels of self-efficacy to adapt to technological progress, job mastery, supervisor support, and promotion of information literacy were associated with lower levels of burnout. Meanwhile, higher quantitative job demands, technological overload, and information overload remained significant positive predictors of burnout. Although job crafting did not show a significant correlation with burnout, it negatively predicted burnout in the regression-based moderation models. This suggests that when controlling for other job demands and resources in the model, job crafting shows a unique contribution in explaining lower burnout, which may be suppressed in simple correlations due to shared variance with other variables. Detailed outputs of the moderation models are available from the authors upon request.

Discussion

The present study examined how various job demands, considered as risk factors, and selected personal and organizational resources, considered as potential mitigating factors, relate to occupational burnout. While the JD-R model is widely applied in burnout research, it often emphasizes general job demands. This study aimed to apply the JD-R model to the modern work context by including digital job demands. By doing so, the study provides insight into how both traditional and emerging job demands relate to burnout, and how personal and organizational resources may function as buffers or direct protective factors.

First, the study found a correlation between occupational burnout and quantitative job demands, a result that is supported by the JD-R model (Bakker et al., 2023). On top of that, the results support Maslach and Leiter's (2008) findings, where the authors discovered a correlation between workload and occupational burnout. In addition, burnout was positively associated with qualitative job demands, technological overload, communication overload, and information overload. These findings align with prior research linking cognitive and digital work stressors to burnout (Wilczek-Ruzyczka et al., 2019; Kaltenegger et al., 2023; Kronenwett & Rigotti, 2019). Notably, quantitative job demands, technological overload, and information overload emerged as significant predictors of burnout in the regression models. This highlights the importance of considering these specific demands when planning organizational changes, especially those related to digitalization. No significant relationship was found between burnout and learning demands at work. Based on the Job Demands – Resources model (Bakker et al., 2023), these results underline the need to maintain a balance between job demands and the available personal and organizational resources.

Moreover, occupational burnout has been found to have a negative association with job mastery (when controlling for other job demands and resources), as in the study by Bakker and colleagues (2023). Applying mastery strategies at work, as noted by Oprea

and colleagues (2019), may increase personal resources, thus negatively affecting occupational burnout. Occupational burnout is further found to also have negative associations with self-efficacy to adapt to technological progress. As Jex and colleagues (2001) note, employees with higher self-efficacy to adapt to technological progress are more likely to use face-to-face problem solving to solve problems they encounter at work, thus developing their ability to overcome these problems and, as a result, they are more confident in their ability to complete work tasks and solve related problems. These employees use self-efficacy to adapt to technological progress as a personal resource. Occupational burnout was further found to be negatively correlated with managerial support. Claeys et al.'s (2024) study reveals that managerial support for employees, through regular meetings with the manager and manager-initiated training, can reduce occupational burnout. Lack of managerial support may, conversely, increase burnout. Finally, burnout has been found to be negatively correlated with the promotion of information literacy, which is supported by the results of Califf and Brooks (2020) that the promotion of information literacy in an organization provides employees with knowledge that becomes a resource from the organization and helps them cope with the demands of digitalization at work.

Last but not least, a review of moderation analysis models showed that self-efficacy to adapt to technological progress, job mastery, managerial support and the promotion of information literacy in the organization, while not moderating the relationship and not amortising the negative effects of general and digital job demands, can themselves predict and reduce occupational burnout. These results are inconsistent with studies by other authors where personal resources of employees and organizational resources moderate the relationship between job demands and burnout (Tummers & Bakker, 2021; Bakker et al., 2023). This difference can be explained by the fact that the authors used different employee personal and organizational resources in their studies. For example, Tummers and Bakker (2021) chose various leadership styles, such as transformational leadership, as an organizational resource, while Bakker et al. (2023) chose employees' physical health as a personal resource. To summarise the results of the moderation analysis of this study, it can be concluded that although personal resources (self-efficacy to adapt to technological progress and job mastery) and organizational resources (managerial support and promotion of information literacy) did not moderate the relationship between the general (quantitative work, qualitative work) and digital (technological overload, technology dependency, communication overload, information overload, increasing learning demand) job demands and burnout, they were still negatively associated with burnout. Although this study did not test self-efficacy as a predictor of job demands, self-efficacy to adapt to technological progress was found to negatively predict burnout, even when controlling for both general and digital job demands. Thus, it might shape how employees interpret such demands and cope with them. For example, Ma et al. (2021) found that higher self-efficacy helps reduce negative attitudes toward technology-related demands at work.

Limitations and practical recommendations

While the used instruments seem to have good psychometric properties, the present study is not exempt from certain limitations. The heterogeneous sample included employees from various professions and industries, which may limit the generalizability of the findings. Future research could focus on specific occupational groups and tailor job demands and resources to their context (Winburn et al., 2023; SAMHSA, 2022; Madigan et al., 2023). Also, only a limited set of personal and organizational resources was examined. Expanding the resource pool, by including leadership style or resilience, would offer a broader perspective on how different resources interact with job demands and influence employee burnout (Tummers & Bakker, 2021; Bakker et al., 2023). The data were collected at a single point in time, which limits the ability to draw conclusions about the direction of the relationships between job demands, resources, and burnout. Future studies could use longitudinal designs to examine how these relationships evolve over time.

Practically, organizations should monitor and manage job demands that predict occupational burnout, especially workload, technological overload, and information overload. Supporting personal resources like job mastery and self-efficacy to adapt to technological progress through training or learning opportunities can help reduce occupational burnout (Oprea et al., 2019; Ma et al., 2021). Strengthening organizational resources such as managerial support and the promotion of information literacy also appears beneficial (Tummers & Bakker, 2021; Califf & Brooks, 2020). Also, the results of this study have practical implications that it is beneficial for employees to make a conscious effort to develop self-efficacy to adapt to technological progress at work and job mastery, and for organizations to devote resources to developing the ability of managers to support their subordinates and to promote the development of information literacy training programmes in organizations. The availability of these resources would help to reduce burnout at work. On top of this, this study's results suggest that both personal (self-efficacy to adapt to technological progress and job mastery) and organizational (managerial support and promotion of information literacy within the organization) resources are important for predicting and reducing burnout. It is therefore in the interest of employees themselves to increase these resources by developing personal resources such as job mastery and self-efficacy to adapt to technological progress. Whereas, it is useful for organizations to help and encourage employees to develop these personal resources. It is also beneficial for organizations to regularly monitor the effectiveness of information literacy training so that to ensure that it is up-to-date and to encourage employees to participate regularly in such activities and benefit from them. On top of that, the availability of personal and organizational resources reduces the job demands that lead to occupational burnout. For example, by increasing personal resources such as job mastery, employees can cope more effectively with job demands such as heavy workloads, which is important because the risk of occupational burnout is reduced by not having an excess workload.

Conclusions

The present study has identified quantitative job demands, technological overload, and information overload as significant predictors of occupational burnout. Employees working under heavy workloads frequently use digital technologies and feel overwhelmed by the amount of information they receive daily. Such employees are more likely to experience occupational burnout.

Although personal resources, such as self-efficacy to adapt to technological progress and job mastery, did not moderate the relationship between job demands and burnout, however, they were found to be negative predictors of burnout, which means that employees with higher self-efficacy and greater ability to optimize their work processes report lower levels of burnout.

Similarly, organizational resources, such as managerial support and the promotion of information literacy, also did not moderate the relationship between job demands and burnout. Nonetheless, they were found to negatively predict burnout, suggesting that when employees perceive their work as appreciated by their manager and receive clear guidance on how to use digital tools, the risk of burnout decreases.

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