The Workload-Burnout Link: Assessing the Moderating Power of Job Autonomy

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Abstract

Burnout is a significant issue in contemporary high-demand work environments, where it leads to significant negative outcomes such as reduced employee well-being and lower organizational performance. Despite increasing attention to burnout in the literature, strategies to mitigate its effects remain underexplored, particularly with regard to the role of job autonomy. This study examines the relationship between workload and burnout, and tests whether job autonomy moderates this relationship. Based on Karasek's Demand-Control Model (DCM), we propose that higher workload increases burnout levels and that job autonomy mitigate these effects of high workload on burnout. The current cross-sectional study, consisting of a baseline survey and daily questionnaires administered over a two-week period, was conducted (N = 168, working at least 20 hours a week) across various work industries. The moderation analysis revealed a significant positive relationship between workload and burnout, confirming that higher workloads are associated with increased burnout symptoms. However, results showed that job autonomy did not significantly moderate this relationship. These findings emphasize workload as a key predictor of burnout and suggest that job autonomy alone may not be sufficient to buffer the negative effects of high workload. Future research should investigate other factors that can effectively mitigate burnout, particularly in high-demand work environments.

Keywords: burnout, workload, job autonomy, workplace stress, mitigating factors

The Workload-Burnout Link: Assessing the Moderating Power of Job Autonomy

Burnout in employees has become a prominent issue in modern workplaces, with profound consequences for both employee well-being and organizational performance. According to the World Health Organization (2019), burnout is closely linked to chronic workplace stress, often resulting from excessive workload. Recent data from the State of Burnout Report (Human Leaders, 2023) reveals that globally, approximately 38.1% of workers report symptoms of burnout, marking a significant increase from previous years. The report further highlights the alarming impact of burnout on productivity, demonstrating a 50% decrease in output. Additionally, the global economic burden of burnout is estimated at 125 billion dollars annually, primarily attributed to decreased productivity, absenteeism, and elevated employee turnover (McKinsey Health Institute, 2022).

Despite growing recognition of burnout in the literature, strategies to mitigate its effects remain underexplored, particularly concerning the role of job autonomy. While much research has focused on the negative effects of workload on burnout (Sonnentag & Frese, 2012; Diehl et al., 2021; Maslach et al., 2001; Kivimäki et al., 2012), fewer studies have examined how job autonomy – the ability to control one's work environment – may buffer the negative effects of high workload on burnout. The existing literature presents mixed findings, with inconsistent conclusions. On the one hand, there are studies suggesting that job autonomy serves as a protective factor against burnout in high demanding environments (Bakker & Demerouti, 2007; Deci & Ryan, 2000; Kohnen et al., 2023; Schaufeli & Bakker, 2004). On the other hand, there are studies showing limited or no moderating effects (Trépanier et al., 2013; De Lange et al., 2003). This gap in the literature, in combination with the significant impact of burnout on both employee well-being and organizational outcomes, highlights the need for further investigation into whether job autonomy can moderate the relationship between workload and burnout. The rise of technological advancements, remote work, and shifting job expectations suggests that the dynamics between workload, job autonomy, and burnout may vary across different industries and work environments (Deloitte, 2021; Klein et al., 2019; Demerouti et al., 2001). Given the increasing prevalence of burnout in modern work environments and the evolving nature of work, it is critical to explore the mitigating factors against burnout.

Accordingly, in this research, we seek to explore the relationship between workload and burnout, with a focus on understanding whether job autonomy moderates this relationship, particularly in the context of modern high-demand work environments.

Defining the Concepts

Workload

Workload refers to the total amount of work assigned to an employee within a specific timeframe, including both the quantity and complexity of tasks (Van der Doef & Maes, 1999). This can be influenced by factors such as task volume, deadlines and the mental effort required to perform tasks (Sonnentag & Fresem 2012). High workload typically involves increased job demands (Karasek, 1979).

Burnout

Burnout is a psychological and physiological response to prolonged exposure to excessive workplace demands that exceed an individual's capacity to cope effectively (Lazarus & Folkman, 1984). This differs from stress, which can be understood as the short-term psychological and physiological response to a challenge. Positive stress, eustress, can motivate employees to overcome obstacles. However, if stress is too overwhelming, it turns into distress, a harmful form of stress (Sonnentag & Frese, 2012). In the case of burnout, one has been long-term exposed to distress, leading to feelings of emotional exhaustion, a decreased sense of achievement and a feeling of detachment from one's job (Maslach et al., 2001).

Job Autonomy

Job autonomy refers to the degree to which the job provided employees with the freedom to determine how to perform their job. This encompasses the degree of control employees have over their work processes, including decision-making, scheduling, and problem-solving tasks (Fried & Ferris, 1987).

The Link between Workload and Burnout

Workload is consistently identified as a primary contributor to burnout, with numerous studies establishing a well-defined relationship between elevated job demands and progressively increasing strain levels (Sonnentag & Frese, 2012; Diehl et al., 2021; Rotenstein et al., 2022)**.** A central component of burnout is emotional exhaustion, which is characterized

by feelings of being emotionally drained (Koutsimani et al., 2019). When employees are frequently exposed to demanding work conditions, they experience emotional depletion and reduced energy levels, which can lead to long-term stress (Maslach & Leiter, 2016). Furthermore, a decreased sense of achievement occurs when workers feel their efforts are ineffective and cannot meet the expectations of their job, contributing to reduced job satisfaction and motivation (Schaufeli & Taris, 2014).

While the workload-burnout relationship is well-established, the factors in the work environment that influence burnout symptoms require further exploration. Research suggests that employees are more vulnerable to burnout when they feel they lack the ability to manage high job demands effectively (Schaufeli & Taris, 2014). This emphasizes the need for investigating buffers that might alleviate the negative effects of high workload on employee well-being or burnout.

The Role of Job Autonomy

Job autonomy is a key factor that can influence the relationship between workload and burnout (Karasek, 1979; Bakker & Demerouti, 2007). The Demand-Control Model (DCM; Karasek, 1979) provides a framework for understanding how job autonomy acts as a critical resource in managing stress and burnout. High job demands combined with low job autonomy create an environment where stress levels are elevated, increasing the likelihood of burnout. When employees lack the flexibility to control their tasks, such as how or when they perform them, their ability to cope with these demands is significantly reduced. As a result, their stress increases, making them more vulnerable to burnout. According to the DCM (Karasek, 1979), psychological strain arises when employees feel overwhelmed by their responsibilities and lack the flexibility to adjust their tasks to cope with these demands.

In contrast, higher levels of job autonomy allow employees to adjust their work processes, minimizing the psychological strain caused by excessive job demands (Karasek, 1979;

Trépanier et al., 2013). When autonomy is low, employees are more prone to stress, as they cannot adjust the way they cope with workload to better suit their needs. Therefore, job autonomy could serve as a critical buffering resource against the negative impact of workload on burnout, by allowing employees to better manage their work environment and reduce the psychological strain induced by high job demands.

This buffering effect of job autonomy has been supported by multiple studies. Demerouti et al. (2001) found that job autonomy helps mitigate the negative effects of workload. Similarly, Deci & Ryan (2000) emphasized that employees with higher autonomy report lower levels of emotional strain, even in high-demand environments. Another study of Schaufeli & Bakker (2004) found that increased job control is linked to lower stress levels and reduced burnout. Furthermore, Kohnen et al. (2023) confirmed these findings by showing negative associations between job resources, including autonomy, and burnout. Job autonomy is therefore considered a critical job resource that helps reduce stress in the workplace (Bakker & Demerouti, 2007). Specifically, employees with a higher job autonomy have more control over how they approach their tasks, which can reduce the stress caused by high demands. As Marchand & Durand (2011) also found, employees with greater control over their work report better mental health outcomes.

Based on the theory outlined above and the findings of previous research, we hypothesize that:

Hypothesis 1: Workload predicts symptoms of burnout.

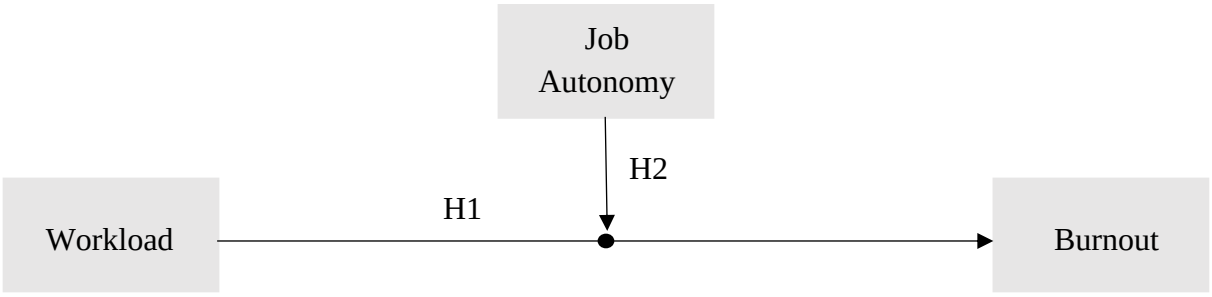
This suggests that higher levels of workload are associated with increased levels of burnout, as employees facing greater job demands may experience the core aspects of burnout.

Hypothesis 2: Job autonomy moderates the relationship between workload and burnout symptoms, such that employees with higher job autonomy will report less burnout in response to high workloads, compared to employees who report lower job autonomy.

This study aims to contribute to this research gap by examining whether job autonomy can buffer the effects of high workload on burnout across different industries.

Figure 1

Conceptualization of the Model



Method

Participants

All participants were employed and were required to work at least twenty hours a week to participate. Also, the minimum age was 18 years. The study included 168 participants (45.5% male, 54.5% female), with an age range from 18 to 64 years (M = 34.82, SD = 13.78). A majority of participants had a university degree (n = 110, 65.5%), followed by secondary school diploma (n = 19, 11.3%), technical secondary school diploma (n = 27, 16.1%), and doctorate degree (n = 5, 3.0%). The remaining participants (n = 7, 4.2%) reported an "Other" education category. The participants in this study represented a range of sectors, providing a diverse sample. The majority of participants worked in sectors such as health and social welfare (n = 33, 17.9%), education and instruction (n = 16, 8.9%), and financial industry (n = 14, 7.7%). Smaller sectors included administration (n = 8, 4.2%), trade (n = 8, 4.2%) and

hospitality, tourism, and culture (n = 9, 4.8%). The smallest representation came from the agrarian sector (n = 1, 0.6%).

Participants reported working an average of 38.17 hours per week (SD = 8.47). Additionally, the average number of hours worked per day was 8.20 hours (SD = 1.18), with a minimum of 4 hours and a maximum of 13 hours per day. Results showed that 37.5% (n = 63) never worked from home, 11.9% (n = 20) worked less than one day per week from home, 25.6% (n = 43) worked 1–2 days per week from home, 13.7% (n = 23) worked most days per week from home, and 11.3% (n = 19) worked every day from home. The organizational tenure was calculated by combining the years and months reported by participants, resulting in an average of 8 years and 11 months at their current organization. Similarly, occupational tenure was calculated by combining the years and months, yielding an average of 9 years and 5 months of total work experience.

Regarding the distribution of workdays during the week, the data showed that participants predominantly work throughout the entire work week, with nearly all respondents reporting working on Monday through Friday.

Research Design and Procedure

This study aimed to investigate the relationship between workload, job autonomy, and burnout in employees. The research used a cross-sectional design where participants were asked to complete online questionnaires. This study was part of a bigger daily diary study and was conducted in accordance with the Ethical Guidelines of the University of Groningen and was approved by the university's Ethics Committee. All participants provided informed consent and were before participation informed of their right to confidentiality, the voluntary nature of participation, and the option to withdraw at any time without penalty.

Participants had the option to take part in the survey in either English or Dutch, depending on their preference. For recruitment, a convenience sampling method was used.

We reached out to individuals within their personal and professional networks, including colleagues, friends, and connections on platforms such as LinkedIn. The survey link was distributed directly to these contacts, who were asked to share it with others meeting the eligibility criteria, thus employing a snowball sampling technique. This allowed for a wide distribution of the questionnaire, including participants from various sectors and job roles. Both versions of the questionnaire were translated back and forth by native Dutch speakers to ensure accuracy of the items across languages. Participants completed the baseline questionnaire at the beginning of the study, which took approximately 10 minutes to complete (M = 9.63). Then they completed two daily questionnaires over a 10-day period, with each questionnaire taking about three minutes to complete. It is important to note that, for the purposes of this research, only data from the baseline questionnaire were analyzed, as they provided the primary data on workload, job autonomy, and burnout, while the daily questionnaires focused on tracking daily fluctuations.

Participants were compensated for their time through the opportunity to win one of six €50 vouchers. This prize draw was designed to incentivize participation and encourage consistent responses. To be eligible for the prize draw, participants had to complete the baseline survey and at least 50% of the daily questionnaires (i.e., 10 out of 20). Participants who completed more than 80% of the daily questionnaires were entered into the prize draw twice, while those who completed over 90% were entered three times. The probability of winning a prize was at least 1 in 40. Additionally, participants received personalized feedback at the end of the study, which served as another form of valuable compensation.

Measures

Workload. Workload was assessed using a questionnaire consisting of three items. Each item was measured on a five-point Likert scale, ranging from "Strongly Disagree" (1) to

"Strongly Agree" (5). An example item is: "How often does your job leave you with little time to get things done?" The scale showed acceptable reliability with our sample (α = .77)

Burnout. Burnout was assessed using the Oldenburg Burnout Inventory scale (OLBI). The OLBI is a standardized questionnaire designed to assess both the positive and negative dimensions of burnout, namely work-related engagement and emotional exhaustion (Demerouti et al., 2010). Participants were asked to rate their agreement with each statement using a five-point Likert scale, ranging from "Strongly Disagree" (1) to "Strongly Agree" (5). An example item is: "During my work, I often feel emotionally drained" The scale showed questionable reliability (α = .68) for this sample. Items 1, 3, 6, and 8 were reversed coded to ensure consistency in the direction of the items.

Job autonomy. Job autonomy was measured using a five-point Likert scale that assesses the level of control employees perceive over their tasks, including how, when, and where they complete their work. An example item is "The job provides me with significant autonomy in making decisions." Participants rated each item from "Strongly Disagree" (1) to "Strongly Agree" (5). The scale showed good reliability with this sample (α = .83).

Statistical Analysis

A moderation regression analysis was conducted to explore whether job autonomy moderates the relationship between workload and burnout. This analysis was chosen since it allows for testing the interaction between the independent variable (workload) and the moderator (job autonomy), and whether this interaction affects the dependent variable (burnout). The Enter method was used, meaning that all predictors (workload, autonomy, and their interaction) were added to the model simultaneously. This approach allows for the examination of the joint effect of these variables on burnout.

The data were analyzed using JASP (version 0.17.2.1). To prepare the data for the moderation analysis, relevant variables were centered prior to analysis. This included the

independent variable workload and the moderator variable job autonomy. Centering was performed by subtracting the mean score from each individual score for the respective variables. This procedure was necessary to reduce multicollinearity between the variables and allow for a more accurate interpretation of the interaction term in the moderation analysis (Aiken & West, 1991). Statistical significance was determined at $p < .05$.

Results

Descriptive Statistics

Descriptive statistics were calculated for the three key continuous variables in this study: burnout, workload, and job autonomy, based on a sample of 168 participants. These statistics provide insights into the distribution and variability of the data. Listwise deletion was used, which involved removing participants with incomplete data on any of the variables. As a result, 22 of the 190 initial participants were removed and the final analysis included 168 participants.

Table 1 shows the means, standard deviations, and correlations between the core study variables: burnout, workload, and job autonomy. A moderate positive correlation was found between workload and burnout, indicating that higher levels of workload are associated with higher levels of burnout. Job autonomy and burnout, as well as job autonomy and workload, showed small negative correlations. These results suggest that greater job autonomy is associated with lower levels of burnout and lower perceived workload.

Table 1

Means, Standard Deviations, and Correlations Between Core Study Variables

Variable	Mean	SD	1.	2.	3.
1. Burnout	2.78	0.39	-		

2.	Workload	3.47	0.73	.429*	-	
3.	Autonomy	3.75	0.84	-.378*	-.279*	-

Assumption Testing

Prior to conducting the moderation regression analysis, several key assumptions were tested to ensure the appropriateness of the regression model. These assumptions included normality, homoscedasticity, linearity, and multicollinearity. To check the assumption of normality, the residuals from the regression analysis were examined using a Q-Q plot and a histogram. The Q-Q plot revealed that the residuals followed a nearly straight line, suggesting that the data were approximately normally distributed. Similarly, the histogram displayed a roughly symmetrical distribution, which further supported the conclusion that the normality assumption was not violated.

Next, homoscedasticity was tested by inspecting a scatterplot of the residuals against the fitted values. The scatterplot showed no clear pattern or funnel shape, indicating that the variance of the residuals was consistent across all levels of the predicted values. This finding suggests that the homoscedasticity assumption was met, meaning that the spread of residuals was equal across the entire range of fitted values.

For linearity, the relationship between the independent variables (workload and job autonomy) and the dependent variable (burnout) was assessed through scatterplots of the residuals against each predictor variable. The scatterplots revealed that the residuals did not display any non-linear patterns, suggesting that the relationship between the predictors and the dependent variable was linear, confirming that the linearity assumption was met.

Finally, multicollinearity was assessed by the variance inflation factors (VIF) for the predictor variables in the model. The VIF values for all predictors were below the commonly

accepted threshold of 10, indicating that multicollinearity was not an issue in this analysis and the predictors did not exhibit high correlations with each other.

In addition to these standard assumptions, potential influential data points were also considered. To identify such points, Cook's distance was used, with a threshold of 1 indicating influential cases. None of the cases in the analysis had a Cook's distance above this threshold, suggesting that no data points had undue influence on the regression results. Given that all assumptions were met, the regression analysis proceeded to explore whether job autonomy moderates the relationship between workload and burnout.

Main Analysis

A moderation regression analysis was conducted to explore the relationship between workload and burnout, and to examine whether job autonomy moderates this relationship. The analysis included centered values for workload, job autonomy, and the interaction term (centered workload*centered autonomy). The regression model tested both the main effects of workload and job autonomy, as well as their interaction effect on burnout.

Overall model

The overall model fit was significant, with $R^2 = .258$, $F(3, 164) = 18.980$, $p < .001$. The full model, which includes workload, autonomy, and their interaction term, explained 25.8% of the variance in burnout. This model was a substantial improvement over the null model ($R^2 = .000$), which only predicted burnout based on its mean. The increase in explained variance (25.8%) suggests that the combination of workload, autonomy, and their interaction significantly contributes to explaining burnout, beyond by what is explained by the mean alone.

Hypothesis 1

The first hypothesis predicted a positive relationship between workload and burnout, suggesting that higher levels of workload would be associated with increased levels of burnout. The results of the regression analysis supported this hypothesis. As shown in table 2,

workload was found to have a significant positive effect on burnout (b = 0.360, SE = p < .001). This indicates that as workload increases, burnout levels also increase, confirming the expected direction of the relationship. Thus, hypothesis 1 is supported.

The model testing only workload as the predictor of burnout yielded statistically significant results, with a strong effect size ($F(1, 166) = 28.935$, $p < .001$). This suggests that workload alone accounts for a substantial portion of the variance in burnout. The unstandardized coefficient of 0.360 indicates that for each unit increase in workload, burnout increases by 0.360 units, reflecting a moderate effect of workload on burnout (Table 2).

Hypothesis 2

The second hypothesis, which proposed that job autonomy would moderate the relationship between workload and burnout, was not supported by the results. Table 2 shows that the interaction term between workload and job autonomy was not statistically significant ($p > .05$), indicating that hypothesis 2 is rejected.

Table 2
Regression Analysis

Variable	**Unstandardized**	**Std. Error**	**95% CI**		**t-value**	**p-value**
			Lower	**Upper**		
Workload (centered)	.18	.04	.11	.26	4.81	<.001
Job autonomy (centered)	-.14	.03	-.20	-.07	-4.02	<.001
*Interaction (workload*autonomy)*	.03	.04	-.06	.11	.582	.561

Note. All values are rounded to two decimal places.

Discussion

This study examined the relationship between workload, job autonomy, and burnout, testing two hypotheses. The first hypothesis predicted that workload would be positively related to burnout, in line with the existing literature (Sonnentag & Frese, 2012; Diehl et al.,

2021; Maslach et al., 2001; Kivimäki et al., 2012). Looking at the findings of (Bakker & Demerouti, 2007; Deci & Ryan, 2000; Kohnen et al., 2023; Schaufeli & Bakker, 2004), the second hypothesis posited that job autonomy would moderate the relationship between workload and burnout. The results of the study provided support for Hypothesis 1. The moderation analysis revealed that workload is a significant predictor of burnout, with higher workload correlating with increased burnout levels. However, Hypothesis 2 was not supported. Job autonomy did not significantly buffer the relationship between workload and burnout in this study.

The results of this study corroborate previous research emphasizing the critical role of workload in contributing to burnout (Maslach & Leiter, 2016; Schaufeli & Bakker, 2004). As Sonnentag & Frese (2012) found, employees facing higher work demands are more likely to exhibit symptoms of burnout, such as emotional exhaustion, depersonalization and disengagement. This is consistent with the theoretical framework proposed by Maslach et al. (2001), which posits that burnout occurs when employees are consistently exposed to job demands that exceed their capacity to cope. The regression results suggest that workload accounts for a substantial portion of the variance in burnout, confirming the arguments of Maslach & Leiter (2016) and Schaufeli & Bakker (2004) that chronic exposure to high demands is the primary cause of burnout in the workplace. The absence of a significant moderating effect of job autonomy on the relationship between workload and burnout contrasts with the predictions from several theoretical perspectives (Bakker & Demerouti, 2007; Deci & Ryan, 2000; Kohnen et al., 2023; Schaufeli & Bakker, 2004). Also, the DCM (Karasek, 1979) argues that job autonomy reduces stress in high-demand jobs by enabling individuals to manage work pressures more effectively, and should act as a buffer against burnout. Similarly, Demerouti et al. (2001) found that higher job autonomy correlates with lower levels of burnout, in high-demanding jobs. Notably, despite the non-significant

moderating effect, the study observed a significant direct effect of autonomy on burnout, suggesting that employees with greater autonomy may experience lower levels of burnout, aligning with previous findings (Schaufeli & Bakker, 2004; Maslach & Leiter 2016; Taris et al., 2005).

In contrast, the findings of this study do align with previous research (Trépanier et al., 2013; De Lange et al., 2003), which also found no moderating effect of job autonomy on the relationship between high workload and burnout. These studies suggest that the absence of a buffering effect could be due to the complexity of how autonomy is conceptualized, as well as the possibility that other factors, such as job resources or individual coping mechanisms, may play a more significant role in mitigating the effects of high workload on burnout. The results of this study contribute to the ongoing debate in the literature regarding the complex role of job autonomy in moderating the relationship between workload and burnout.

One potential explanation for the non-significant result is the questionable reliability of the burnout measure, which had a Cronbach's α of .68. This suggests poor internal consistency and raises concerns about the measure's validity in capturing the intended construct (Taber, 2018). The reliability of the burnout scale is lower than that of the measures of workload and autonomy, suggesting that there is a higher level of measurement error in the burnout assessment. Measurement error can obscure relationships between variables, making it more difficult to detect significant effects, such as the moderation effect of job autonomy. This issue is particularly relevant when dealing with interaction terms, as the reliability of the interaction term is directly influenced by the reliability of the predictors involved. Even if workload and autonomy each have acceptable reliabilities, the interaction term – formed by the product of these predictors – will generally have a lower reliability. This occurs because the interaction term reflects the combined variability of both predictors, and as a result, its

reliability can be significantly reduced, making it harder to detect significant moderation effects (Aguinis et al., 2016).

Another potential explanation for the lack of a significant moderating effect of job autonomy on the relationship between workload and burnout could be the high dropout rate in this study. Specifically, 22 participants out of 190 were excluded due to missing data, resulting in a final sample of 168 participants, which represents a dropout rate of approximately 11.5%. This could have introduced bias if participants who experienced higher levels of burnout or workload were more likely to drop out, potentially influencing the results. Listwise deletion was used to handle missing data, but this method assumes that data is missing completely at random (MCAR). If the data were missing due to specific reasons (e.g., participants with high burnout levels dropping out), this could introduce bias and affect the generalizability of the findings (Schafer & Graham, 2002). The high dropout rate likely reduced the sample size and generalizability of the results, possibly making it more difficult to detect a significant moderating effect of job autonomy.

A final potential explanation for the absence of a significant moderating effect of job autonomy on the relationship between workload and burnout pertains to the conceptualization and measurement of autonomy this study, which contrasts with the framework provided by the DCM (Karasek, 1079). According to the DCM, job autonomy encompasses not only decision-making but also control over task management, work pacing and role clarity. In contrast, this study assessed job autonomy solely in terms of decision-making, which may not capture the full range of autonomy that can help employees cope with high workload demands. Given that the DCM emphasizes the importance of control over work processes – such as adjusting the pace of work or delegating responsibilities – the limited focus on decision-making autonomy might explain why job autonomy did not moderate the relationship between workload and burnout.

Limitations, Future Directions, and Strengths

One limitation of this study is its cross-sectional design, which limits the ability to establish causal relationships between workload, job autonomy and burnout. Future research should employ longitudinal designs to better understand the causal direction of these relationships. Another limitation is the questionable reliability of the burnout measure, with a Cronbach's α of .68. To improve measurement accuracy, future research studies should use more reliable tools, such as the Maslach Burnout Inventory (MBI), which offers higher reliability ($\alpha > .80$) (Maslach & Jackson, 1981). Additionally, the study faced challenges with sample size and dropout rates, which may have affected the generalizability and statistical power of the findings, particularly in detecting subtle moderating effects, such as that of job autonomy (Cohen, 1992). Larger sample sizes and advanced techniques, such as multiple imputation, could help mitigate biases and improve the statistical power in future research.

Furthermore, the conceptualization of job autonomy in this study was limited to decision-making autonomy, which may not fully capture the broader autonomy defined by the DCM (Karasek, 1979). Future research should expand this conceptualization to include control over work processes such as task management and pacing, to better understand its moderating role in high-workload environments. The Maastricht Autonomy List (MAL), which assesses autonomy more comprehensively, could be a useful tool for such studies (Taris et al., 2003). Despite these limitations, a strength of this study is the inclusion of participants from various sectors. This diversity adds robustness to the findings, making them applicable to a broader range of work environments.

Practical Implications

This study holds important implications for organizations facing rising burnout rates among employees or seeking to prevent burnout. The findings may provide valuable insights into how organizational management strategies can be most effectively implemented to

reduce burnout. Additionally, this research is also valuable for employees looking for effective strategies to mitigate burnout. Furthermore, this study contributes to the existing literature on the impact of job resources, in this case autonomy, on burnout. It underscores the importance of job design in reducing burnout and provides a more nuanced understanding of the complex relationship between workload, autonomy, and employee well-being.

Conclusion

This study highlights the significant role of workload as a predictor of burnout, emphasizing the need for effective workload management in preventing burnout. While job autonomy did not moderate the relationship the relationship between workload and burnout in this study, it remains a crucial job characteristic that warrants further exploration. Future research should investigate broader conceptualizations of job autonomy and examine its long-term effects in longitudinal studies to better understand its role in mitigating workout. These efforts will help refine strategies for improving employee well-being in high-demand work environments.

References

Aguinis, H., Edwards, J. R., & Bradley, K. J. (2016). Improving our understanding of moderation and mediation in strategic management research. *Organizational Research Methods*, 20(4), 665–685. https://doi.org/10.1177/1094428115627498

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage Publications.

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328. https://doi.org/10.1108/02683940710733115

Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.

Crane, M. F., Boga, D., Karin, E., Gucciardi, D. F., Rapport, F., Callen, J., & Sinclair, L. (2019). Strengthening resilience in military officer cadets: A group-randomized controlled trial of coping and emotion regulatory self-reflection training. *Journal of Consulting and Clinical Psychology, 87*(2), 125–140. https://doi.org/10.1037/ccp0000356

Deci, E. L., & Ryan, R. M. (2000). *The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior*. Psychological Inquiry, 11(4), 227-268.

De Lange, A. H., Taris, T. W., Kompier, M. A. J., Houtman, I. L. D., & Bongers, P. M. (2003). The effects of stable and changeable demand-control factors on burnout among Dutch employees. Work & Stress, 17(2), 173-189.

Deloitte. (2021). *2021 Global human capital trends: The social enterprise in a world disrupted*. Deloitte Insights.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499-512. https://doi.org/10.1037/0021-9010.86.3.499

Demerouti, E., Bakker, A. B., Vardaka, S., & van der Zee, K. I. (2010). The Oldenburg Burnout Inventory: A reliable tool for the assessment of burnout. *Journal of Occupational Health Psychology*, 15(2), 167-180. https://doi.org/10.1037/a0018447

Diehl, E., Rieger, S., Letzel, S., Schablon, A., Nienhaus, A., Escobar Pinzon, L. C., & Dietz, P. (2021). The relationship between workload and burnout among nurses: The buffering role of personal, social and organisational resources. *PLOS ONE*, 16(1), e0245798. https://doi.org/10.1371/journal.pone.0245798

Fried, Y., & Ferris, G. R. (1987). The validity of the Job Characteristics Model: A review and meta-analysis. Personnel Psychology, 40, 287–322.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior, 26*(4), 331-362. https://doi.org/10.1002/job.322

Hobfoll, S. E. (1989). *Conservation of resources: A new attempt at conceptualizing stress*. *American Psychologist, 44*(3), 513–524. https://doi.org/10.1037/0003-066X.44.3.513

Human Leaders - (2023). *State of Burnout Report 2023.*

Karasek, R.A. (1979) Job demands, job decision latitude, and mental strain: Implications for job redesign. Administrative Science Quarterly, 24, 285-307. http://dx.doi.org/10.2307/2392498

Kivimäki, M., Virtanen, M., Vahtera, J., Elovainio, M., & Koskinen, A. (2012). Workplace bullying and risk of cardiovascular disease and depression. Occupational and Environmental Medicine, 69(5), 343-347. https://doi.org/10.1136/oemed-2011-100384

Klein, G., Wang, E., & Zhang, D. (2019). Feeling Weary? Feeling Insecure? Are All Workplace Changes Bad News? International Journal of Environmental Research and Public Health, 16(10), 1842.

Koutsimani, P., Montgomery, A., & Georganta, K. (2019). The Relationship Between Burnout, Depression, and Anxiety: A Systematic Review and Meta-Analysis. Frontiers in Psychology, 10, 284.

Kohnen, D., De Witte, H., Schaufeli, W. B., Dello, S., Bruyneel, L., & Sermeus, W. (2023). What makes nurses flourish at work? How the perceived clinical work environment relates to nurse motivation and well-being: A cross-sectional study. *International Journal of Nursing Studies*, *148*, Article 104567. https://doi.org/10.1016/j.ijnurstu.2023.104567

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping.* Springer Publishing Company.

Marchand, A., & Durand, P. (2011). Psychological distress, depression, and burnout: Similar contribution of the job demand-control and job demand-control-support models. *Journal of Occupational and Environmental Medicine*, *53*(2), 185–189. https://doi-org.proxy-ub.rug.nl/10.1097/JOM.0b013e318206f0e9

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*(1), 397-422. https://doi.org/10.1146/annurev.psych.52.1.397

Maslach, C., & Leiter, M. P. (2016). *Burnout: A brief history and how to prevent it*. Harvard Business Review.

McKinsey Health Institute. (2022). *Addressing employee burnout: Are you solving the right problem?* McKinsey & Company. https://www.mckinsey.com/mhi/our-insights/addressing-employee-burnout-are-you-solving-the-right-problem

Nahrgang, J.D., Morgeson, F.P., & Hofman, D.A. (2011). Safety at work: A meta-analytic investigation of the link between job demands, job resources, burnout, engagement, and safety outcomes. Journal of Applied Psychology, 96(1), 71-94.

Rotenstein, L. S., Brown, R., Sinsky, C., & Linzer, M. (2022). The Association of Work Overload with Burnout and Intent to Leave the Profession Among U.S. Physicians. JAMA Internal Medicine, 182(5), 557–565.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25*(3), 293-315. https://doi.org/10.1002/job.248

Schaufeli, W. B., & Taris, T. W. (2014). A meta-analysis of the relationship between burnout and depression: A critical review. *Journal of Affective Disorders, 168*, 182-192. https://doi.org/10.1016/j.jad.2014.06.027

Salvagioni, D. A. J., Leão, F. M., Ribeiro, I. H. B., & D'Ávila, S. (2017). *Physical and psychological work demands, job autonomy and burnout: A study of health professionals.* International Journal of Environmental Research and Public Health, 14(1), 89. https://doi.org/10.3390/ijerph14010089

Sonnentag, S., & Frese, M. (2012). Stress in organizations. In N. W. Schmitt & S. Highhouse (Eds.), *Handbook of psychology, Vol. 12: Industrial and organizational psychology* (pp. 560-592). New York: Wiley. https://ebookcentral.proquest.com/lib/rug/reader.action?docID=918177&ppg=580

Taber, K. S. (2018). The use of Cronbach's Alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273-1296. https://doi.org/10.1007/s11165-016-9602-2

Taris, T. W., Schreurs, P. J. G., & Van Iersel, W. (2003). The Maastricht Autonomy List: A new measure of work autonomy. European Journal of Psychological Assessment, 19(2), 103-109. https://doi.org/10.1027/1015-5759.19.2.103

Trépanier, S.-G., Fernet, C., & Austin, S. (2013). The moderating role of autonomous motivation in the job demands-strain relation: A two-sample study. Motivation and Emotion, 37(1), 93–105.

Van der Doef, M., & Maes, S. (1999). "The Job Demand-Control (Support) model and psychological well-being: A review of 20 years of empirical research." *Work & Stress, 13*(2), 87-114.

World Health Organization. (2019). Burn-out an "occupational phenomenon": International Classification of Diseases. Retrieved from https://www.who.int/news/item/28-05-2019-burn-out-an-occupational-phenomenon-international-classification-of-diseases

Appendix A

The Appendices appear here (if applicable). If your paper has more than one Appendix, you label them "Appendix A", "Appendix B", etc. If there is only one Appendix, you just label it Appendix. There is no fixed format to use in the Appendices, as the content may vary. Where possible use APA7 style.