The level of burnout and cognitive stress in managers when teleworking: the impact of psychosocial safety climate and the mediating role of demand-control-support

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Abstract

Purpose – The current research investigates the managers’ perception of teleworking and attempts to understand how the psychosocial safety climate and psychosocial job characteristics affect their levels of burnout and cognitive stress levels while teleworking.

Design/methodology/approach – This study used a survey, collecting data via questionnaires from five distinct organizations. N = 161 responses from managers were analyzed using the confirmatory factor analysis and regression analysis.

Findings – The findings show that managers who telework do not experience numerous psychosocial stressors. This means that they experience less burnout and cognitive stress. However, results also show that managers benefit from working in an environment with a high psychosocial safety climate.

Practical implications – Our study highlights the need to address managers’ working conditions and well-being in telework, given their unique challenges, by fostering a supportive psychosocial climate and providing resources to mitigate stress and burnout.

Originality/value – Previous studies have thoroughly examined the dynamics of telework employees, including the challenges they face and the strategies their immediate supervisors employ to foster a positive remote work environment. Such research has illuminated various stressors that these individuals may confront while teleworking. Despite this, scant attention has been paid to the experiences of managers themselves when they operate from home. The concept of psychosocial safety climate becomes crucial when considering managers grappling with high job demands, low control, and insufficient support from their own superiors and peers. This gap has prompted the present study to explore the unique experiences of managers in a teleworking context, particularly concerning cognitive stress and burnout.

Keywords Teleworking, Working from home, Managers experience, Psychosocial safety climate, Demand-control-support, Cognitive stress, Burnout

Paper type Research paper

Introduction

When a voluntary form of teleworking became mandatory because of the pandemic, adopting the use of digitalized tools and artifacts became more crucial for organizations, especially for

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creative meetings and management (Backström et al., 2022) and performing day-to-day job tasks. This meant that managers had to quickly learn how to lead remote teams using the new technologies and the difficulties associated with telecommuting environments (Kurland and Cooper, 2002), and employees and managers alike had to adapt quickly to the new situation and technologies needed to enhance job task seamlessly (Ipsen et al., 2021). Although there were benefits to teleworking and working from home during the pandemic,—such as the improvement in time management since little to no commuting was required and work-life balance was improved,—other aspects were not as positively experienced, especially in relation to the lack of interaction individuals encountered and a visible increase in physical and mental health conditions (Eurofound, 2020; Fransson and Lydell, 2023; Ipsen et al., 2021; Kirchner et al., 2021; Omorede et al., 2021, 2022).

Pertinent literature has highlighted the impact of teleworking on individuals’ health and well-being and suggested that workers experience teleworking differently. For instance, where some workers experienced less stress because of a higher range of autonomy (Dambrin, 2004; Kelliher and Anderson, 2010), others experienced an increase in jobs and plummeting mental wellbeing (Omorede et al., 2022). Further, research highlights that employees’ work-life balance was positively impacted because of the improvement in flexibility, which contributed to their well-being (Boden, 1999; Dimitrova, 2003). Other researchers found that work-life balance was distorted when employees teleworked or worked from home because it intensified their working hours, made it difficult to discontinue work, and resulted in a deteriorating quality of life (Kirchner et al., 2021; Åborg, 2002).

Research also highlights that managers’ experiences differ from their employees when teleworking. More specifically, they experienced more certainty with their job task compared to employees but experienced negative job efficiency and work-life balance (Ipsen et al., 2021). Further, when viewed mainly from the manager’s perspective, research shows that managers’ mental health did not diminish because they were better able to adapt to the forced working from home and teleworking. They also show to have higher perception of preparedness and readiness in relation to their work tasks (Pfeifer, 2021). Additionally, research shows that managers face more challenges when they work from home. These include increased working hours, more time spent on conflict management, support from their superiors, and their capabilities to lead at a distance (Kirchner et al., 2021).

These challenges faced by employees and managers when teleworking have been shown to increase stress levels, impacting negatively on physical and mental health and well-being (Åborg, 2002; Grant et al, 2013; Kompier et al., 2012; Kossek et al., 2009). During the pandemic, research also showed that employees may experience deteriorating mental health when they have high work demands with minimum support from their direct supervisors (Omorede et al., 2022). In part, the deterioration of health and wellbeing in employees could be a consequence of the imbalance in psychosocial work characteristics —Demand, control, support (DCS), and the employee’s skills and competence (Demerouti et al., 2001; Karasek et al., 1998). When Demands are high and control is low this can result in a condition called job strain which has repeatedly been found to negatively impact health (Sargent and Terry, 2000). In addition, the combination of high demands, low control, and low support (DCS) results in a physical condition called ISO strain, which over time leads to negative health outcomes such as an increased risk of cardiovascular disease and mental health problems (Karasek and Theorell, 1990; Kivimäki et al., 2012, 2015; Min et al., 2022). Low levels of social support are argued to amplify this negative effect because it cannot buffer the negative impact of the imbalance between demands and control, thus worsening worker welfare (Karasek and Theorell, 1990; Min et al., 2022). PSC is an upstream predictor of demand-control models (DCM) and aspects of support (Dollard and Bakker, 2010) and other psychosocial stressors (Dollard and Bakker, 2010) and predicts the way in which the organizational and social climate will develop over time and is, therefore, a suitable factor to monitor and address to promote worker health and prevent harm.
Research on psychosocial work characteristics in connection to DCS emphasizes that the risk for mental health hazards such as anxiety, depression, and stress increase when employees work in situations where there is high job demand, low job control, and low levels of support from colleagues or direct supervisors (Andrea et al., 2009; Sanne et al., 2005). Additionally, research on DCS among nurses shows that high job demands affect several dimensions of burnout (Rostamabadi et al., 2019). Moreover, studies show that employees exposed to the combination of low demands, high control, and high social support are less likely to experience presenteeism than groups experiencing high demands, low control, and low social support (Min and Hong, 2023; Saijo et al., 2017). Additionally, when there is very high job control, the likelihood of presenteeism increases as employees see this as a coping strategy aimed at overcoming a perceived threat of reduced productivity due to sickness (Gerich, 2019).

To counteract such stressors, research argues that senior management must not just consider psychosocial health and safety in the workplace but also take actions to ensure that worker psychological health is protected and prioritized as much as profit, thus preventing the emergence of harmful working conditions or “stressors” (Dollard and Bakker, 2010). By doing so, the organization must ensure managers’ and superiors’ support and commitment, priority, communication and participation, and involvement in relation to stress prevention and other psychological health hazards (Dollard, 2012; Hall et al., 2010). This becomes highly relevant for employees who are teleworking because of the different dynamics associated with ensuring a safe psychosocial work environment.

Thus far, several studies have explored employees’ teleworking experiences and the supportive roles of managers (Dambrin, 2004; Dimitrova, 2003; Poulsen and Ipsen, 2017), while others have compared the experiences of both employees and managers (e.g. Ipsen et al., 2021). Limited attention however, is given to the experience of managers and their psychosocial wellbeing while teleworking or working from home (Kirchner et al., 2021) and who supports them when they do not have the required skills or control to perform their work. In addition, only a few studies have investigated the relationships between PSC and psychosocial job characteristics using the DCS model to predict mental health, wellbeing, and other job stressors (Dollard et al., 2010). The current study explores these relationships in connection to burnout and cognitive stress by focusing on specific job stressors. Thus, the current study focuses on managers by investigating how the psychosocial safety climate and psychosocial job characteristics impact their burnout and cognitive stress levels. The research study contributes to teleworking and PSC by offering insights on how DCS can interplay with PSC to impact burnout and cognitive stress for managers working from home.

**Theoretical foundation and hypotheses**

*Psychosocial job characteristics and job stressors while teleworking*

Research in teleworking has highlighted several positive and negative consequences to individuals (managers and employees alike) and their work environment, specifically in connection with their job demands (which examine the workload, work pace, working hours, work pressure, and emotional demands), job control (which examines levels of skills and competence and how well individuals make decisions on how to conduct and carry out their job task), and the level of support they receive from supervisors and their colleagues (Karasek et al., 1998). Teleworking has been shown to improve mental health, life-work balance, job satisfaction, and an overall positive work environment (Dambrin, 2004; Tremblay and Thomsin, 2012; Maruyama and Tietze, 2012). When individuals telework, their levels of flexibility increase. The research argues that this increase in flexibility also increases the levels of control individuals have over their jobs (Maruyama and Tietze, 2012). Managers, more specifically, are also shown to have a significant level of control when teleworking (Kirchner et al., 2021). Additionally, teleworking is shown to reduce interruptions and helps
facilitate workflow, where individuals can manage their job demands and workload while working at a regular pace (Haddad et al., 2009). This leads to a reduction in the levels of stress and an increase in well-being. Further, research highlights that individuals who feel relaxed and can control their work pace and intensity perceive more positive effects and experience a better work environment (Anderson et al., 2015).

Research, however, also highlights the negative impacts of teleworking on individuals in situations when job tasks are high, unclear and there is limited knowledge and competence to carry out job demands, and little support from their immediate supervisors. Lack of communication and social support from colleagues and managers or direct supervisors while teleworking has been reported to lead to increased stress levels while teleworking (Gajendran and Harrison, 2007; Henke et al., 2016; Weinert et al., 2015). Research expresses that limited communication may lead to issues with isolation. In contrast, limited support and interaction from managers may increase cognitive stress, insomnia, fatigue, anxiety, and burnout and reduce work output quality (Waizenegger et al., 2020). More recent studies argue that individual’s levels of stress and burnout may increase when they work from home or telework for a prolonged period. This is because it may promote psychological distress and increase anxiety, depression, and negative well-being over time (Hamouche, 2020). Specific to managers, research also suggests that they may work more hours than their employees which can increase their risk of having a stroke (Kivimäki et al., 2015). Longer working hours can also contribute to increased levels of burnout and cognitive stress due to the fact they may spend more time having meetings with their employees, superiors, and stakeholders thereby taking fewer breaks and disconnecting from work (Kirchner et al., 2021). With limited studies from the managers’ experiences and in line with the DCS model, we hypothesize the following:

- **H1a.** High job demands will lead to high levels of burnout for managers when teleworking.
- **H1b.** High job demands will lead to high cognitive stress for managers when teleworking.
- **H1c.** Low job control will lead to high burnout for managers when teleworking.
- **H1d.** Low job control will lead to high cognitive stress for managers when teleworking.
- **H1e.** Low social support will lead to high levels of burnout for managers when teleworking.
- **H1f.** Low social support will lead to high cognitive stress for managers when teleworking.

The role of psychosocial safety climate (PSC) in relation to work stressors

PSC focuses on the role managers play in promoting a psychological health and safety climate (Dollard and Bakker, 2010; Dollard and Karasek, 2010; Dollard et al., 2012). As an antecedent, PSC has been shown to predict job stressors such as burnout, depression, and performance (Dollard et al., 2012; Parent-Lamarche and Biron, 2022; Zadow et al., 2021). PSC is low when the top management support and commitment to the manager is low; when organizational communication is limited; when participation and involvement between the top managers and the manager is minimal and when the levels of priority from management are low (Hall et al., 2010). When organizations and top management provide a stimulating and supportive environment through PSC, the level of PSC is high (Dollard et al., 2012; Dollard and Bakker, 2010). High levels of PSC can lead to increased work engagement and better performance for managers. When managers telework and are faced with multiple tasks such as organizing and managing several meetings, managing employees, overseeing employees’ daily tasks, and addressing employees’ emotional and physical needs, this could lead
managers to burnout and experience cognitive stress when they get little to no support from
their superiors (Ipsen et al., 2021; Kirchner et al., 2021). We predict that when there is low PSC, that is, the levels of cognitive stress and burnout experienced by managers when teleworking increases. Thus, we hypothesize the following:

H2a. PSC will be negatively related to the burnout of managers when teleworking.

H2b. PSC will be negatively related to the cognitive stress of managers when teleworking.

Psychosocial job characteristics and job stressors while working from home
Workflows are better when individuals have the right skills and competencies to carry out their jobs, on time and with the right tools and resources (Dollard et al., 2012; Dollard and Bakker, 2010). Situations when individuals are unable to meet the job demands when they are lagging either in the quantitative demands (job pace, longer hours for specific task, workload) or emotional demands, is indicative of the fact that there is little fit between the individual’s competence and task to be done. PSC proposes that in a high PSC context, managers take the wellbeing of the job and people doing the job into consideration by designing and matching work tasks to competence as well as monitoring and supervising job activities. In the event that workers are unable to carry out their tasks for any reason, high PSC proposes that it is the responsibility of the managers to provide resources and a training environment where the employees would have the opportunity and freedom to develop new skills and competencies (Demerouti et al., 2001; Dollard and Bakker, 2010; Idris et al., 2011). Further, in order to reduce the levels of stress and burnout of workers as well as promote the wellbeing of workers (managers and employees) in the organization, a high PSC environment would not just fit tasks to competence or provide a learning environment but also work proactively to provide several avenues where workers can be supported by their managers (Dollard and Bakker, 2010; Dollard et al., 2012; Idris et al., 2011). Consequently, in a low PSC context, it is probable that managers are unable to trigger and influence an environment where there is a presence of high work demands, low control, and low support (Leitão et al., 2018; Phipps et al., 2012). Positively influencing the workflow becomes important especially when individuals are working from home. For managers to be able to achieve high PSC and influence their employees, they themselves need to be able to have the right tools, skills, competencies, support, and resources to do their job. This generally means the managers should be provided with healthy psychological working conditions too – where demands are reasonable, control is high, and the support they need from their own superiors. Therefore, we hypothesize the following:

H3a. High PSC will be negatively related to high job demands for managers when teleworking.

H3b. High PSC will be negatively related to low job control for managers when teleworking.

H3c. High PSC will be negatively related to low social support for managers when teleworking.

Previous research proposes that job characteristics have the potential to mediate the relationship between psychosocial safety climate (PSC) and safety climate (SC) between different job stressors such as anxiety, psychological strain, and affective stress and wellbeing. This mediation hypothesis is supported by research showing that the job characteristics of the DCS mitigate work stressors when the PSC and SC are implemented within organizational units (Dollard et al., 2012; Leitão et al., 2018; Phipps et al., 2012). In line
with the above arguments for hypothesis 2 and 3, the relationship between PSC and burnout and cognitive stress will be mitigated by DCS. We therefore hypothesize the following:

**H4a.** Job demands will mediate the relationship between PSC and the levels of burnout when managers telework.

**H4b.** Job demands will mediate the relationship between PSC and cognitive stress when managers telework.

**H4c.** Job control will mediate the relationship between PSC and levels of burnout when managers telework.

**H4d.** Job control will mediate the relationship between PSC and cognitive stress when managers telework.

**H4e.** Social support will mediate the relationship between PSC and the levels of burnout when managers telework.

**H4f.** Social support will mediate the relationship between PSC and cognitive stress when managers telework.

We present a model that indicates the relationship between our variables. Figure 1 presents the hypothesized model for the study.

**Method**

**Procedure**

A quantitative research method was applied for this study and an online survey was utilized for gathering data. We recruited respondents by identifying organizations within different sectors that recently introduced working from home for their employees. We began by contacting the respective organizations and explaining the research purpose and target for the survey. Before the specific study was conducted and the survey distributed, approval was granted by the Swedish Ethical Review Authority because of the sensitivity of the data to be collected. We adopted two screening criteria for the selected organizations and respondents: (1) Employees and managers worked half-time or full-time from home, and (2) the respondents worked from home for at least six months. Since the survey distribution occurred one year after the national recommendation for organizations to telework where possible, the criteria for selecting participants were appropriately met.
**Sample and participants**

We distributed surveys via representatives to respondents in five Swedish organizational sectors between April and May 2021. These sectors comprised of a retail sector, banking, construction, municipalities, and members of the Swedish Institute for Quality Development (SIQ). These representatives sent out the survey link to their organization’s members. On sending out the survey, information concerning the study’s context, anonymity, and voluntary participation was explained and described, allowing those who did not want to participate to opt-out.

Additionally, the questions were available in Swedish and were translated into English during the analysis phase. One author of this paper translated the questions into English after transferring to the analytical software.

Sample description: Responses consisted of \( N = 1,039 \). \( N = 151 \) respondents were excluded from the study because they did not meet the working-from-home criteria and/or did not complete the survey. After the exclusion, the total number of respondents was \( N = 888 \), with \( N = 727 \) (81.9%) employees and \( N = 161 \) (18.1%) managers. Furthermore, for the purpose of this study, which is to focus on the managers’ perspective, employee data were removed from the analysis leaving a total of \( N = 161 \) respondents. Table 1 shows a representation of how the survey was distributed and the total number of respondents per organization’s sector.

Sample representation: From the survey of 161 managers, the average age was 43 years. \( N = 92 \) of them were women (57%) of them and \( N = 69 \) men (43%). 50 of them have worked for an average of 2 years in their respective organizations. \( N = 155 \) (98%) have a tenure contract for their job and \( N = 4 \) have no defined job contract (2%). Further, \( N = 85 \) (53%) of the managers have worked for the company between 6 to 10 years.

**Measures**

Items adopted for the survey are well established and were previously validated by the respective authors who developed them. For the current study, validated constructs from the Copenhagen Psychosocial Questionnaire (COPSOQ III) (Berthelsen et al., 2020a, b) and the PSC items (Dollard, 2019) were adopted for the study. The COPSOQ III measures assess the psychosocial conditions in the workplace while the PSC assesses psychological safety measures by an organization. All questions were adapted to working from home during the pandemic. Appendix presents the questions used for the survey.

**Independent variable.** Psychosocial safety climate (PSC). PSC was accessed using four items suggested by Dollard (2019). The items are management support and commitment; management priority; organizational commitment, and organizational involvement and

<table>
<thead>
<tr>
<th>Organisation’s sector</th>
<th>Number of participants who received the questionnaire</th>
<th>Number of total respondents</th>
<th>Number of employees who responded</th>
<th>Number of managers who responded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank</td>
<td>33</td>
<td>20</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Construction company</td>
<td>291</td>
<td>124</td>
<td>94</td>
<td>30</td>
</tr>
<tr>
<td>Institute for quality development</td>
<td>Sent to over 10,000 members</td>
<td>136</td>
<td>109</td>
<td>27</td>
</tr>
<tr>
<td>Municipality</td>
<td>448</td>
<td>288</td>
<td>255</td>
<td>33</td>
</tr>
<tr>
<td>Retail company</td>
<td>To all employees, about 9,000</td>
<td>320</td>
<td>260</td>
<td>60</td>
</tr>
</tbody>
</table>

**Table 1.** Organizations that participated in the survey

**Source(s):** The authors’ own work
participation. Examples of item are “Senior management shows support for stress prevention through involvement and commitment” and “In my organization prevention of stress involves all levels of the organization”. Items range from strongly agree (5) to strongly disagree (1). The items of PSC have been validated for use in Sweden (Berthelsen et al., 2020a, b).

Mediator variables. Demand. Demands were measured through three constructs from the COPSOQ III, using a 7-point scale (Berthelsen et al., 2020a, b), and one construct from Eurofound (2020), using a 7-point scale. Emotional demand, which measures how often one ends up in emotionally stressful situations at work; Work pace, which measures how fast one works; two items on Quantitative demands, which measures how much one can get done within a certain time and Working hours (Eurofound, 2020) which measures how often work is carried out in leisure time to meet work requirements. Examples of items are “Do you work at a high pace during the day?” and “Over the last month, how often have you worked in your free time to meet work demands”.

Control. Control was measured using COPSOQ III (Berthelsen et al., 2020a, b). Here an adaptation of Karasek’s (Karasek et al., 1998) original items were formulated. The items for control focus on influence at work and two items on possibilities for development. Examples of items are “Do you have a large degree of influence on the decisions concerning your work?” and “Do you have the possibility of learning new things through your work?”. Each question is answered on a 5-point Likert scale.

Support. Support was measured using three items from the COPSOQ III (Berthelsen et al., 2020a, b). Two items focused on social support from supervisors and one focused on social support from colleagues. Examples items are “In my organization prevention of stress involves all levels of the organization” and “How often do you get help and support from your immediate superior, if needed?”. Again, responses were given on a 5 point Likert scale.

Dependent variables. Burnout. Burnout was measured using four questions from COPSOQ III (Berthelsen et al., 2020a, b). A 5-point scale, ranging from 0 (not at all) to 100 (all the time) was used to examine burnout. Examples of items are “How often have you felt worn out?” and “How often have you been emotionally exhausted?”

Cognitive stress. Cognitive stress was measured using three items from COPSOQ III (Berthelsen et al., 2020a, b). A 5-point scale, ranging from 0 (not at all) to 100 (all the time) was used to examine cognitive stress. Examples of items are “How often have you had problems concentrating?” and “How often have you found it difficult to think clearly?”

Control variables. Respondents also answered questions about their age and gender which were controlled for in the analysis.

Analysis. Confirmatory factor analysis (CFA) and regression analysis using the Process macro (Hayes, 2022) were used to analyze the data. Given that the items for the current study have been previously validated by several authors (Berthelsen et al., 2020a, b; Eurofound, 2020; Dollard, 2019), CFA was used to thoroughly validate the measurement model (Hayes, 2022). Additionally, the CFA aimed to see how well the study’s model fit given the sample size to the number of variables (MacCallum et al., 1999). The CFA was conducted using maximum likelihood as the estimation method. Further, Process Macro was used to see the correlations as well as the direct and indirect effects of the observed variables.

Results

Confirmatory factor analysis (CFA) Prior to the main analysis, we validated our key constructs by employing confirmatory factor analysis (CFA) to evaluate the structure of the observed measures. The CFA was conducted using maximum likelihood (MIL) with Amos 28 to test the distinctiveness of the variables in the study and to assess the quality measurements and control for measurement errors simultaneously (Jourdain and Chenevert, 2010). To avoid aggregating variables, several
goodness of fit was evaluated. We assessed the model using several suggestions from previous research to assess the model fit for the study. The first calculation of fit was the chi-square test $\chi^2$. Generally, when an $\chi^2$ result is insignificant in a CFA, it is considered to indicate a good fit, by indicating minimal discrepancies in the samples and fit covariance matrix. For the CFA result, however, there was a significant value of ($p < 0.000$), $DF = 1.37$, which indicated poor fit. As regards the limitations of Hu and Bentler, (1999), that ignore the sensitive nature of the $\chi^2$ in the variation of the sample size (Kenny and McCoach, 2003). Thus, the study uses the alternative recommendation, where the normed $\chi^2$ is adopted. This alternative suggests that a $\text{CMIN}/DF$ value $\leq 5$ or $\chi^2/df$ value $\leq 2$ shows a reasonable and acceptable fit (Hair et al., 2009; Kline, 1998; Tabachnick and Fidell, 2007; Marsh and Hocevar, 1985). In consideration of the fact that $\chi^2/df$ is 1.37, the study’s model is considered acceptable. Additionally, the comparative fit index (CFI) and the Tucker-Lewis Index (TLI) are other models that indicate the model fit. The current study also shows a CFI of 0.96 and a TLI of 0.95, which indicates a superior model fit (Byrne, 2010). A final assessment for model fit was the root mean square approximation (RMSEA), with a value of 0.048, which indicates that the model for the current study is a close-fitting model (Kline, 2016). We further tested construct reliability and validity by conducting factor analysis in SPSS. 

**Table 2.**

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SocialSupportSC</td>
<td>0.828</td>
<td></td>
</tr>
<tr>
<td>CONTROL</td>
<td>0.822</td>
<td></td>
</tr>
<tr>
<td>PSC</td>
<td>0.801</td>
<td></td>
</tr>
<tr>
<td>BURNOUT</td>
<td></td>
<td>0.890</td>
</tr>
<tr>
<td>COGNITIVEStress</td>
<td></td>
<td>0.809</td>
</tr>
<tr>
<td>DEMAND</td>
<td></td>
<td>0.543</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization

**Note(s):** a. Rotation converged in 3 iterations

**Source(s):** The authors’ own work

**Figure 2.**

Result model
Process macro analysis

Our hypotheses were tested using the Process Macro model to run regression analysis (Hayes, 2022). We began by independently running a regression analysis for each of the dependent variables. Each analysis was followed by focusing on the direct relationship between the PSC and cognitive stress/burnout, where the total effect for each variable was analyzed. Second, the mediation relationships of demand, control, and support between PSC and cognitive stress/burnout were analyzed. Tables 3–5 show a summary of the output of the data for the regression analysis with the mediator variables of “Control”, “Demand”, “Support”, and the dependent variable of “burnout” and “cognitive stress”.

The result shows that several of our hypotheses are not supported by the data.

H1a predicts that high job demand will lead to high levels of burnout for managers when teleworking. The result for this hypothesis was supported by a significant value of b = 0.272, t = 3.103, p < 0.01 [2].

H1b predicts that high job demands will lead to high cognitive stress for managers when teleworking. This result was not supported, b = 0.131, t = 1.624, p ≥ 0.1.

H1c predicted that low job control will lead to high burnout for managers when teleworking. This was not supported, b = 0.001, t = −0.140, p < 0.98.

H1d predicts that low job control will lead to high cognitive stress for managers when teleworking. This was significant, b = −0.202, t = −0.323, p < 0.03.

H1e predicts that low social support will lead to high levels of burnout for managers when teleworking. This result was shown not to be significant with a value of stress b = −0.036, t = −0.3709, p < 0.7.

H1f predicts that low social support will lead to high cognitive stress for managers when teleworking. This is not significant with a value of b = −0.080, t = −0.9125, p < 0.36.

For our hypothesis 2, we predicted that PSC would be negatively related to burnout (a) and cognitive stress (b) for managers when teleworking; both hypotheses showed to be insignificant with values of H2a: b = −0.113, t = −1.448, p < 0.14 and H2b: b = 0.57, t = 0.788, p < 0.43.

Our data supports Hypothesis 3 which states that High PSC will be negatively related to high job demands (3a), low job control (3b), and low social support (3c) for managers when teleworking: H3a: b = −0.156, t = −2.577, p < 0.01. H3b: b = 0.359, t = 6.692, p < 0.001 and H3c: b = 0.435, t = 7.6103, p < 0.001.

After running the mediation analysis, only Hypothesis 4a, which predicts that job demand will mediate the relationship between PSC and the levels of burnout when managers telework (b = −0.0424) – and which predicts that job control will mediate the relationship between PSC and cognitive stress when managers telework (b = −0.0725) were significant and others proved insignificant. Furthermore, other relationships did not show a mediation effect. Figure 2 illustrates the significant result from the hypothesized model.

Discussion

Managerial experiences and psychosocial dynamics

In order to better understand how job characteristics and PSC affect managers’ degrees of burnout and cognitive stress, our research explores the teleworking experiences of managers. We propose that teleworking managers benefit significantly from having a high PSC, confirming the important influence of PSC on job characteristics as shown in other research (Dollard et al., 2010, 2012), our contribution emphasizes the significance of giving psychological health top priority through effective management support, communication, and engagement (Dollard and Bakker, 2010; Dollard and Karasek, 2010; Hall et al., 2010).
Table 3. Model coefficients for the simple mediation model

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>M1 (control)</th>
<th>M2 (demand)</th>
<th>M3 (support)</th>
<th>Y (burnout)</th>
<th>Y (cognitive stress)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSC (X)</td>
<td>Coef 0.359, SE 0.054, P 0.000</td>
<td>Coef -0.156, SE 0.060, P 0.010</td>
<td>Coef 0.435, SE 0.057, P 0.000</td>
<td>Coef -0.113, SE 0.078, P 0.149</td>
<td>Coef 0.057, SE 0.072, P 0.431</td>
</tr>
<tr>
<td>Control (M1)</td>
<td>Coef 0.156, SE 0.060, P 0.010</td>
<td>Coef 0.113, SE 0.078, P 0.149</td>
<td>Coef 0.036, SE 0.096, P 0.711</td>
<td>Coef -0.024, SE 0.006, P 0.000</td>
<td>Coef -0.018, SE 0.006, P 0.001</td>
</tr>
<tr>
<td>Demand (M2)</td>
<td>Coef 0.001, SE 0.102, P 0.980</td>
<td>Coef 0.072, SE 0.088, P 0.002</td>
<td>Coef 0.131, SE 0.080, P 0.106</td>
<td>Coef 0.018, SE 0.006, P 0.001</td>
<td>Coef 0.018, SE 0.006, P 0.001</td>
</tr>
<tr>
<td>Support (M3)</td>
<td>Coef 0.036, SE 0.096, P 0.711</td>
<td>Coef 0.131, SE 0.080, P 0.106</td>
<td>Coef 0.018, SE 0.006, P 0.001</td>
<td>Coef 0.018, SE 0.006, P 0.001</td>
<td>Coef 0.018, SE 0.006, P 0.001</td>
</tr>
<tr>
<td>Age</td>
<td>Coef 0.006, SE 0.005, P 0.233</td>
<td>Coef -0.001, SE 0.849, P 0.397</td>
<td>Coef 0.006, SE 0.006, P 0.253</td>
<td>Coef -0.024, SE 0.006, P 0.000</td>
<td>Coef -0.018, SE 0.006, P 0.001</td>
</tr>
<tr>
<td>Gender</td>
<td>Coef 0.078, SE 0.095, P 0.416</td>
<td>Coef 0.216, SE 0.107, P 0.046</td>
<td>Coef 0.116, SE 0.102, P 0.256</td>
<td>Coef 0.034, SE 0.115, P 0.768</td>
<td>Coef 0.005, SE 0.105, P 0.959</td>
</tr>
<tr>
<td>Constant</td>
<td>Coef 2.682, SE 0.334, P 0.000</td>
<td>Coef 4.124, SE 0.379, P 0.000</td>
<td>Coef 3.078, SE 0.359, P 0.000</td>
<td>Coef 2.937, SE 0.631, P 0.000</td>
<td>Coef 3.388, SE 0.578, P 0.000</td>
</tr>
</tbody>
</table>

R² = 0.491
F (3, 157) = 16.64, p < 0.001

R² = 0.266
F (3, 157) = 3.99, p < 0.01

R² = 0.539
F (3, 157) = 21.42, p < 0.001

R² = 0.459
F (6, 154) = 6.835, p < 0.001

R² = 0.386
F (6, 154) = 4.482, p < 0.001

Source(s): The authors’ own work
These factors also correlate with lower job demands and higher level of managerial control and support. We emphasize the psychological dynamic plays a crucial role in the well-being especially for managers who work from home, stressing our theoretical claim that managers need significant support and recognition from their supervisors.

Managing telework: navigating new norms and the cost of management adaptation

By analyzing the increased job expectations that resulted in stress and burnout during the pandemic, as shown by other studies (Leitão et al., 2018; Rostamabadi et al., 2019; Sanne et al., 2005), we extend knowledge regarding the impact of telework on managers. Our results are consistent with prior research (Skakon et al., 2011), in that they show no correlation with cognitive stress (H1b) and support the notion that managers become burned out in situations of excessive demand (H1a) (Demerouti et al., 2001). We propose that the necessity for managers to quickly adopt new technologies and encourage distant creative collaboration (Backström et al., 2022; Kirchner et al., 2021) – a notable departure from pre-pandemic norms was the reason behind the increase in these expectations. Due to adaptability, the workload has unintentionally grown, requiring longer workdays. There has not been much research on
this thorough adaptation process. Our contribution emphasizes that, in a home working situation, one of the main causes of manager burnout is the increase in job responsibilities. The reason for this phenomenon may be explained in two ways: first, managers had to adjust to new tools for their jobs; Second, a sizable portion of workforce was shifting to remote work at the same time, which required them to deal with new issues and obstacles that their staff members were facing.

Resilience of managers against work-related stressors in remote settings
Unlike previous studies (Leitão et al., 2018; Phipps et al., 2012; Saijo et al., 2017), our proposal presents a fresh viewpoint on management resilience in remote settings. Our contribution is to refute previous research (Leitão et al., 2018; Phipps et al., 2012) that argues that increased cognitive stress is caused by high drop demand and insufficient and low social support. Although Hamouche, 2020; Waizenegger et al. (2020) suggest that this may be true for remote employees, our study paints a different picture and found no significant evidence to support this (H1e, H1f). We emphasize that, despite high demand and low support, managers could not experience noticeably increased levels of cognitive stress or burnout. This disparity may be explained by managers’ current skill sets, which include their capacity for making decisions under pressure and their ability to lessen their reliance on direct supervisor support. The idea of management resilience in distance or remote work situations is highlighted in our contribution.

Notably, we found that low job control causes cognitive stress for managers who telework (Hd1), although it has no significant effect on burnout (H1c). This research deviates from the conventional perspective and emphasizes a crucial facet of managers’ experiences in remote work environments. Just as their subordinates had challenges (Phipps et al., 2012; Sanne et al., 2005), managers also encountered challenges while switching from office-based to remote work, which may lead to detrimental health consequences. The primary question is whether these managers had access to the equipment and materials needed to complete their task efficiently. Our contribution sheds light on an issue that has not received enough attention in the literature: the interaction between job control and cognitive stress in the context of managerial telework.

Furthermore, the results show insignificant results between the negative relationships between PSC and burnout (H2a) and PSC and cognitive stress (H2b). This result is in line with PSC given that PSC is a strong indicator of job performance and satisfaction (Dollard and Bakker, 2010; Dollard and Karasek, 2010; Dollard et al., 2012), where individual well-being is considered in the workplace and procedures are put in place to protect employees psychosocial health and safety (Demerouti et al., 2001; Dollard and Bakker, 2010; Idris et al., 2011). In the current study, the sudden shift from office space to the home office indicates that managers may have already experienced certain levels of stressors and burnout at the beginning of the pandemic. Since the data was collected in 2021, a time they started familiarizing themselves and adjusting to telework, new working conditions as well as new routines and strategies adopted may impact how much PSC impacts their levels of burnout and cognitive stress. Another reason for this result is that managers already adopted digital means/tools for innovative meetings and collaborations (Backström et al., 2022).

Finally, the research shows a significant relationship for H3a, H3b, and H3c, which indicates that High PSC will be negatively related to high job demands (3a), low job control (3b), and low social support (3c) for managers when teleworking. These findings are in line with previous research (Dollard and Bakker, 2010; Dollard et al., 2012; Idris et al., 2011) that highlight the need for PSC in facilitating a healthy work environment. An explanation of the insignificant effect for our study is that managers had some resources to work with
when they were forced to switch to teleworking. Moreover, they were also more aware of the challenges faced by employees in relation to isolation when teleworking, which may have mitigated the negative effect of high job demand, low job control and low social support.

**Psychosocial safety climate’s impact on managerial wellbeing: exploring key factors**

Our study delves into the intricate web of factors that influence the wellbeing of managers, particularly in remote work settings. To uncover these relationships, we have shed light on significant indirect effects, marking a pivotal contribution to the existing body of knowledge in this domain. One of the central findings of our study pertains to the mediating role of job demands in the relationship between Psychosocial Safety Climate (PSC) and burnout (H4a). We found compelling evidence to support this mediation, signifying that when job demands are high, PSC significantly influences the occurrence of burnout among managers. This revelation accentuates PSC’s critical role in shaping managers’ wellbeing, especially when they face elevated job demands.

For our mediation relationships, the study found significant indirect effect. More specifically, we found that job demands mediated the relationship between PSC and burnout (H4a) and was not significant for cognitive stress (H4b) and that job control mediated the relationship between PSC and cognitive stress. This was also related to our hypotheses 1a and 1d with the direct effect of burnout and cognitive stress. This thus means that PSC influences burnout when job demand is high. Likewise, PSC also influences cognitive stress when job control is low. This result is in line with the findings of Dollard and Bakker (2010), Dollard et al. (2012) and contributes to current literature on the link between PSC and DCS and shows that the stronger the managers feel positive about their work environment, the better their job satisfaction, organizational commitment and lower levels of their cognitive stress and burnout. Providing managers when the necessary support and resources when required will mitigate the effects of burnout and cognitive stress resulting from high job demand, low social support and low job control.

Furthermore, our investigation unveiled another vital mediation relationship: the role of job control in mediating the connection between PSC and cognitive stress (H4d) and had no significant effect for burnout (H4c). Similarly, the result shows no significant effect for social support in the connection between PSC and burnout (H4e) or cognitive stress (H4f). This finding has far-reaching implications as it elucidates how PSC impacts cognitive stress levels among managers, particularly when job control is limited, which also aligns with the discussion proposed by Dollard et al. (2012). The importance of job control in alleviating cognitive stress cannot be overstated, and our study underscores its significance in the context of PSC. Importantly, our research not only identified these mediation relationships but also substantiated our hypotheses 1a and 1d, which postulated direct connections between PSC and burnout, as well as cognitive stress. This empirical validation further strengthens the theoretical foundations of our study.

**Conclusion**

Our study delves into managers’ experiences with teleworking and the intricate interplay between the psychosocial safety climate and psychosocial job characteristics. Through a comprehensive survey involving 161 managers, our findings reveal that managers’ experiences of burnout and cognitive stress when teleworking are minimal. This outcome underscores the importance of fostering a healthy psychosocial safety climate within organizations, particularly in the relationships between top management and managers, for an overall positive impact on organizational wellbeing and protection during turbulent times.
Practical implications

Our research highlights the significance of not only studying the challenges and needs of employees when teleworking but also recognizing the unique challenges and needs managers face, which may differ. It suggests that top management should prioritize the job-related wellbeing of their line managers, especially concerning their levels of stress and burnout. Actions should be taken to enhance the psychosocial safety climate between top managers and line managers, thereby positively influencing relationships between managers and their subordinates or employees and improving the overall wellbeing of workers in the organization. Additionally, when managers work from home, top management should provide the necessary resources and tools to facilitate task performance and support their subordinates during periods of challenging job demands and limited control.

While our study indicates that managers do not experience significant levels of burnout and cognitive stress, it underscores the importance of preventive measures implemented by top management to minimize stress and burnout levels across the organization.

Finally, our research underscores the need for organizations to prioritize cultivating a positive psychosocial safety climate for managers. Managers who perceive their work environment positively are more likely to experience enhanced job satisfaction and greater organizational commitment while exhibiting lower levels of cognitive stress and burnout—issues that are prevalent challenges in contemporary work settings. To achieve this, it is imperative to provide managers with the necessary support and resources, especially when they face heightened job demands, diminished social support, or restricted job control. By doing so, organizations can effectively mitigate the detrimental impact of burnout and cognitive stress on managerial wellbeing.

Limitations and future research

The current study is not without limitations. First, the study focused on using the items from COPSOQ III (Berthelsen et al., 2020a, b) to measure all factors except PSC. We realize that other validated questionnaires could be used, such as the job content questionnaire (JCQ) (Karasek et al., 1998) to measure DCS and the burnout assessment tool (BAT) (Schaufeli et al., 2020) to measure burnout. For this study, COPSOQ III was adequate as it fit our theory and covered most aspects of our observed variables. Moreover, COPSOQ III’s items adopt similar items as those of BAT and JCQ. Future studies can adopt one of these alternative questionnaires, especially when they focus on one of the items for their studies. If similar items are measured as seen in the current study, for instance, COPSOQ may be most suitable.

Finally, the study is limited by its cross-sectional nature of examining managers who telework at a single point in time. Notwithstanding, the findings from this research are part of a larger research project, and more data was collected over time. This minimizes the limitations as further research is ongoing where data collected from managers and employees seek to evaluate and analyze similar research objectives. Future research will shed more light on the findings from the longitudinal study.

Notes

1. Normed $\chi^2$ divides the $\chi^2$ by the DF (degree of freedom).
2. $b =$ coefficient; $t =$ $t$-statistics; $p =$ significant value.
References


Appendix
Questions adopted for the survey

Dependent variables

**Burnout**

1. How often have you been emotionally exhausted?
2. How often have you been physically exhausted?
3. How often have you lacked strength and energy?
4. How often have you been tired?
5. How often have you felt worn-out?

**Cognitive stress**

1. How often have you had problems concentrating?
2. How often have you found it difficult to think clearly?
3. How often have you had difficulty in making decisions?

Independent variables

**Psychosocial safety climate (PSC)**

1. Senior management shows support for stress prevention through involvement and commitment
2. Senior management considers employee psychological health to be as important as productivity
3. There is good communication here about psychological safety issues which affects me
4. In my organization prevention of stress involves all levels of the organization

Mediator variables

**Demand**

**Quantitative demands.**

1. How often do you not have time to complete all your work tasks?
2. Do you get behind with your work?
Emotional demands.
(1) Does your work put you in emotionally stressful situations?

Pace of work.
(1) Do you work at a high pace throughout the day?

Working hours.
(1) Over the last month, how often have you worked in your free time to meet work demands?

Social support
(1) How often do you get help and support from your colleagues, if needed?
(2) How often do you get help and support from your immediate superior, if needed?
(3) How often is your immediate superior willing to listen to your problems at work, if needed?
(4) How often does your immediate superior talk with you about how well you carry out your work?

Control
(1) Do you sometimes have to do things that ought to have been done in a different way?
(2) Do you have the possibility of learning new things through your work?
(3) Do you have a large degree of influence on the decisions concerning your work?
(4) Can you use your skills or expertise in your work?

Source(s): The authors’ own work

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