Cyberslacking in digital workplaces: Viewpoints of technostress and employees' autonomy

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1. Introduction and motivation

Digital workplaces, defined as "the physical, cultural, and digital arrangements that simplify working life in complex, dynamic and often unstructured working environments" (Dery et al., 2017), allow employees to undertake work away from the traditional workplaces and conduct distributed collaboration in virtual environments (Sewell et al., 2015).

However, despite the advantages of digital workplaces, the challenges of such digital practices have been noticed by previous studies (Nusrat et al., 2021). Although the outbreak of COVID-19 accelerated the diffusion of digital workplaces, several organizations and employees have been prone to choose face-to-face after the pandemic periods (Chen et al., 2022; Tandon et al., 2022). One reason for decreasing the usage of the digital workplace is employees' cyberslacking (i.e., cyberloafing). Such a phenomenon is defined as employees' personal use of information technologies for non-work purposes (Khan et al., 2022; Peng et al., 2023; Vitak et al., 2011). For example, employees would play computer games during online meeting sessions, or chat with others when collaborating with their colleagues (Korzynski et al., 2022). Tandon et al. (2022) indicated that cyberslacking is considered a counterwork behavior, impeding the effectiveness of completing tasks within a given timeframe. Prior research has claimed that the rate of cyberslacking in the workplace is about 60–80%, leading to an approximately 30-40% decline in productivity (Alharthi et al., 2021; Tandon et al., 2022).

Regarding the negative effects of cyberslacking, researchers strived to identify the antecedents of this phenomenon. This study draws on the perspective of technostress as Güğercin (2020) indicated that working in digital workplaces would cause technostress, in turn causing employees' cyberslacking. Technostress refers to the stress and negative psychological impact caused by the use of technologies (Califf et al., 2020; Salo et al., 2022). Considering the development of digital working techniques, the technostress-related factors and relative influencing mechanism on cyberslacking requires further refinement in the digital workplace context (Bhattacharjee et al., 2023). Based on the discussion, the first research question of this study is as follows.

RQ1: How do the distinctive technostress creators influence cyberslacking?

In addition, this study attempts to investigate the moderating effects of employees’ autonomy. As a core concept of self-determination theory, autonomy is defined as "acting with a sense of volition and having the experience of choice" (Gagné et al., 2005). Autonomy is deemed as a basic psychological need enabling employees to arrange work flexibly and gain job satisfaction easily, in turn increasing employees' loyalty (Gagné et al.,
Regarding the significant effects of autonomy, research regards the role of autonomy on technostress and cyberslacking remains in its infancy. Accordingly, this study attempts to investigate the moderating role of employees' autonomy on employees' negative emotions triggered by technostress creators. The second research question of this research is as follows.

RQ2: How do the employees’ autonomy moderate the interrelationships between technostress creators and emotional exhaustion?

2. Literature review

2.1 Digital workplace and cyberslacking

Currently, digital workplaces are deemed keys to foster organization innovation. Working in digital workplaces is a vital strategy to foster digitalization and automation (Dery et al., 2017, Sewell et al., 2015). However, beyond the benefits of digital workplaces, prior studies also noticed the employees' cyberslacking in digital workplaces. Cyberslacking is the usage of the internet (or other technology devices) during work hours for personal reasons or entertainment (Bhattacharjee et al., 2023). Existing literature has focused on cyberslacking from the following perspectives. First, prior research focused on the diffusion level of technology usage in organizations to predict cyberslacking. For example, Vitak et al. (2011) highlighted that employees' use would cause cyberslacking. Second, existing studies have mainly focused on employees' personal characteristics to predict cyberslacking. For instance, O’Neill et al. (2014) identified the employees' cyberslacking in digital workplaces from the perspective of big-five personality traits. Specifically, several studies focused on individuals' stressful mental states. For example, Chiu et al. (2023) focused on the technostress perspective and indicated that the digital workplaces would instigate employees' stressful mental state, leading to cyberslacking. However, the stress-related factors and related mechanisms on cyberslacking need to be further illustrated in digital workplaces.

2.2 Technostress creators

Technostress is often theorized as a dark side of working in digital workplaces, highlighting the negative outcomes triggered by technology use (Chiu et al., 2023). Drawing on existing technostress research, there are five main technostress creators, namely the sources that contribute to the experience of technostress (Fu et al., 2022). First, techno-complexity is associated with employees' feeling that their technology skills are insufficient and forces them to put effort into learning and understanding technologies. Second, techno-invasion indicates employees' feelings of non-stop availability when technologies invade employees' personal time and blur the line between employees' work and private lives. Third, techno-insecurity refers to individuals' consistent concerns of losing their jobs as they would be replaced by advanced technologies or other employees with stronger technological skills. Fourth, techno-overload refers to employees' excessive workload and information overload triggered by digital workplaces. Fifth, techno-uncertainty emerges when continuing changes and rapid upgrading of service robots means that there is no time for employees to get used to a situation. This study focused on techno-complexity, techno-invasion, techno-insecurity, and techno-overload and overlook technostress creators.
uncertainty. This is because working in digital workplaces becomes a new norm for employees, and techno-uncertainty is not apparent with the increase in employees' learning capacity (Kumar et al., 2021).

3. Hypothesis development

Drawing on existing research regarding cyberslacking and technostress, the proposed research model (see Figure 1) attempt to discuss the influencing mechanism and moderating effects between technostress creators and cyberslacking.

3.1 The underlying mechanisms from technostress to cyberslacking

Current technostress research highlighted emotional exhaustion as one of the main employees' psychological responses to technostress (Zhang et al., 2022). Emotional exhaustion is defined as a feeling of fatigue and emotional deterioration (Azpiroz-Dorronsoro et al., 2023). Regarding previous technostress research, technostress creators would lead to employees' emotional exhaustion. Specifically, in digital workplaces, when employees encounter complex technology that is difficult to use, it can lead to increased emotional exhaustion. Furthermore, digital workplaces enable constant connectivity, blurring the boundaries between work and personal life. The imbalance between work and personal life can lead to chronic stress and emotional exhaustion. Besides, those employees who worry about being replaced by technologies or skillful persons would suffer from emotional exhaustion (Chiu et al., 2023). Therefore, this study proposes that:

H1(a-d): Techno-complexity (a), techno-invasion (b), techno-insecurity (c), and techno-overload (d) positively influence emotional exhaustion.

Employees' emotional exhaustion would cause employees to control their emotions by participating in cyberslacking rather than fully engaging in workloads (Khan et al., 2022). Prior research illustrated that negative emotions cause employees to become concerned about their capacity to take responsibility (Tandon et al., 2022). Therefore, it is common for employees to distance themselves from work to alleviate these negative emotions and use technologies for non-work purposes. Accordingly, this study proposes that:

H2: Emotional exhaustion positively influences cyberslacking.

3.2 The moderating effects of employees' autonomy on emotional exhaustion

Employees' autonomy is defined as the level of employees' independence and self-governance in work environments (Mankins et al., 2017). Existing studies highlighted that enhancing autonomy enables employees to actively manage the boundaries between work and private time, fostering employees' effectiveness (Sewell et al., 2015). Moreover, employees with higher autonomy generally have a greater sense of ownership and control over their work, leading to full engagement rather than cyberslacking (Alharthi et al., 2021). Furthermore, increasing employees' autonomy is deemed a strategy to generate employees' intrinsic motivations and psychological fulfillment, decreasing employees' emotional exhaustion and cyberslacking (Nusrat et al., 2021). Accordingly, this study proposes that higher autonomy would decrease employees' cyberslacking when employees experience technostress. This study hence develops the following hypothesis:
H3: Employees' autonomy mitigates the effects between technostress creators and cyberslacking.

Figure 1. The proposed model of this study

4. Discussion and implications

This study intends to provide several insights to current research of the changing nature of work. First, this study will contribute to current digital workplace research by clarifying the antecedents and influencing mechanism of technostress on cyberslacking. With the development of digital workplaces, the dark side of such advanced technologies in daily routines become severe (Chen et al., 2022). Therefore, this study contributes to current research of the Changing Nature of Work by comprehending the potential dark side of digital workplaces and further illustrating the antecedents and influencing mechanisms of the negative phenomenon impeding the creativity in virtual environments. Second, this study contributes to current cyberslacking research by proposing the mitigated role of employees' autonomy between technostress creators and cyberslacking.

Practically, this study provides several insights to conduct appropriate strategies to decrease the cyberslacking in digital workplaces. That is, organizations could (1) promote the professional training to dispel employees' techno-insecurity; (2) conduct clear collaboration procedures to decrease techno-overload, and (3) encourage work-life balance in digital workplaces to decrease techno-invasion. Moreover, organizations could increase employees' autonomy by motivating employees' self-controls or rewarding employees with strict self-regulations. For digital workplace designs, platform operators can also attempt to avoid excessive information and optimize the function design to foster employees' autonomy.

There exist several limitations of this study. For example, this study preliminarily discusses the dark side of cyberslacking in digital workplaces. However, given that technostress and cyberslacking could be helpful in improving employees' productivity to some extent (Tandon et al., 2022; Tarafdar et al., 2019), future studies could further justify the positive effects of technostress and cyberslacking in digital workplaces.


