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Examining the relationship between fear of COVID-19, intolerance for uncertainty, and cyberloafing: A mediational model

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ABSTRACT

After the COVID-19 pandemic began, organizations had to pivot and move to online remote work. As companies moved to digital platforms and technologies for remote working, a key concern was the increase in workplace withdrawal behaviors during the pandemic, including cyberloafing, a form of workplace deviance. Cyberloafing can be described as the action of using the internet for non-work-related activities or personal use during working hours. Given its effect on organizational effectiveness and efficiency, organizations must take measures to minimize cyberloafing. We examined how two factors—fear of COVID-19 and intolerance for uncertainty—were related to cyberloafing during the third lockdown in Israel. A sample of 322 adults who were enrolled in professional courses at a university in Israel were surveyed. Based on Conservation of Resources Theory, our findings suggest that distress significantly mediated the relationship between fear of COVID-19, intolerance for uncertainty, and cyberloafing. In an attempt to deal with the stress and depletion of personal resources during the COVID-19 lockdown, individuals engaged in cyberloafing as a way to handle the stress. Our results suggest that organizations should take measures to reduce fear and uncertainty in order to decrease distress, which, in turn, will reduce cyberloafing.

1. Introduction

Advances in information technology and the availability of high-speed internet have led to considerable growth in remote work over the last decade. Reliance on remote work has further increased during the COVID-19 pandemic because organizations have been forced to practice physical distancing and avoid face-to-face meetings, which has led to remote work becoming the norm (Wang et al., 2021). Remote working is defined as a flexible work arrangement whereby employees work in locations which are remote from their central offices or production facilities and the worker has no personal contact with coworkers but is still able to communicate with them using technology (Soga et al., 2022; Di Martino & Wirth, 1990). Theorists suggest that the pandemic has created significant changes in work that will continue in the future, including the increased use of technology-related interfaces and online training (Vaziri et al., 2020). While remote work provides flexibility in work schedules (Allen et al., 2015), some scholars (e.g. Di

Martino & Wirth, 1990; Eurofound and the International Labour Office, 2017; Grant et al., 2013; Konradt et al., 2003; Kossek & Lautsch, 2018) have highlighted the challenges associated with remote work, including work-home interference and cyberloafing.

Employees who work outside conventional offices may be more vulnerable to working longer hours, work-home interference, and, in some cases, greater stress (Kim et al., 2016; Eurofound and the International Labour Office, 2017). In addition, employees who work from home may be more likely to engage in cyberloafing because it is easier to avoid being caught by supervisors and coworkers (O'Neil et al., 2014). In particular, given the increased reliance on technology and remote work during the pandemic and likely post-pandemic, cyberloafing has become an important topic for organizations (Oosthuizen et al., 2018).

Although many industries have been affected by the pandemic, service provider industries (e.g. hospitality and educational services), in particular, have had to adapt information technology and a remote working model given their reliance on face-to-face interactions; hence,

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these industries may have seen a greater rise in cyberloafing. To better understand cyberloafing in the hospitality industry during the COVID-19 pandemic, [Khawaja et al. \(2021\)](#) found that cyberloafing moderated the relationship between aggression and employee withdrawal behavior in the hospitality industry in Pakistan. Our study explores the antecedents of cyberloafing during remote work in an educational environment in Israel during the pandemic. To do so, we surveyed a sample of working adults who were studying at a university and using digital platforms and technologies while simultaneously working remotely.

The concept of cyberloafing was first operationalized by [Lim \(2002\)](#) who referred to cyberloafing as personal e-mailing and browsing activities that an employee voluntarily undertakes during work hours. Later, [Henle and Blanchard \(2008\)](#) extended this conceptualization by proposing that cyberloafing encompassed minor activities such as, browsing, e-mailing or shopping and major activities including, blogging, gambling and surfing adult websites activities. Cyberloafing is characterized as the personal use of technology to idle and for non-work purposes instead of work ([Lim, 2002](#)). It is considered a counterproductive and deviant behavior to use technology for personal purposes during working hours ([Askew et al., 2014](#)). Cyberloafing is a withdrawal behavior that can exist in various work contexts and includes behaviors such as online shopping in the office during work hours or downloading music during the workday at home. However, cyberloafing at home during the pandemic differs from our existing knowledge on cyberloafing in a work (office) context, largely because of the changing nature of remote work during the pandemic.

Cyberloafing is a major concern for organizations because it increases financial and efficiency losses ([Mashal, 2020; Zhou et al., 2021](#)), exposes organizations to liability and data security risks ([Mariani et al., 2021; Kim et al., 2015](#)), and is related to increased employee fatigue ([Wu et al., 2020](#)). Despite its importance, cyberloafing is a relatively unexplored construct, and little is known about the external stressors and underlying mechanisms that affect cyberloafing (for a *meta-analysis*, see [Mercado et al., 2017](#)). Given the heightened levels of stress during the pandemic, there is a need to understand how the pandemic context affects individuals' wellbeing and their ability to work effectively when working remotely ([Wang et al., 2021](#)).

The purpose of this study is to examine how two factors—fear of COVID-19 and intolerance for uncertainty—are related to distress, as well as their engagement in cyberloafing in a higher education setting. In this study, we ask the following research questions: Is there a relationship between fear of COVID-19 and intolerance for uncertainty and cyberloafing? Does distress mediate the relationship between fear of COVID-19, intolerance for uncertainty, and cyberloafing?

We suggest that psychological distress is a mechanism through which fears and uncertainties during COVID-19 relate to cyberloafing. We draw upon the theoretical perspective in the stress literature. According to the Conservation of Resources (COR; [Hobfoll, 1991](#)) theory, threatening and traumatic events result in a loss of personal resources. The theory also suggests that fears (e.g. fear of terror attack) and uncertainties (e.g. economic uncertainty) are potential stressors that can affect emotional and behavioral outcomes among employees (see [Halbesleben et al., 2014; Raja et al., 2020; Toker et al., 2015](#)). COR theory emphasizes that a major stressor has objective environmental elements ([Hobfoll et al., 2018](#)) that provide “shock(s) to one’s cognitive processing that forces the individual to carefully evaluate this new information” ([Halbesleben et al., 2014, p. 18](#)). Eventually the major stressor causes resource loss and distress. Specifically, the COVID-19 crisis can be considered an external traumatic event that dramatically changes both the ecological and organizational environments and depletes employees' resources ([Chong et al., 2020; Yang et al., 2021; Behl et al., 2021](#)). Building upon the COR perspective, researchers have uncovered that fear of COVID-19 can create sleep disturbances among employees because of the depletion of resources while facing pandemic threats ([De Clercq et al., 2021](#)).

A pre-COVID-19 *meta-analytic* study found that intolerance of uncertainty was positively associated with digital technology penetration ([Carleton et al., 2019](#)). More recently, COVID-19 worries were correlated with cyberloafing ([Khawaja et al., 2021](#)). Hence, it is important to understand these associations during a COVID-19 lockdown and to clarify the mechanism in the relationship. Our study provides valuable insights into this line of research by examining the relationship between fear of COVID-19, intolerance for uncertainty, and cyberloafing, and also contributes to the limited number of studies on cyberloafing during the pandemic (e.g. [Bendau et al., 2021; Khawaja et al., 2021; Turel & Ferguson, 2020; Zhong et al., 2022](#)). We also address the recent call of [Marsh et al. \(2022\)](#), who conducted an integrative review of the negative effect of technology on employees, to expand scholars' understanding of the antecedents and mediators of the dark side of technology use at work ([Kaur et al., 2020, 2021](#)).

First, we argue that fear of COVID-19 and perceived intolerance of uncertainty (IU) are two proximal factors during the pandemic ([Wu et al., 2021](#)) that represent life and health threats to one's personal resources, as well as potential threats while dealing with the unknown. That is, the higher the level of environmental fears, the more likely it is that employees will experience an increased threat to their valuable resources ([Toker et al., 2015](#)). Moreover, continuous threats outside the workplace deplete individuals' personal resources (both cognitive and emotional). This vicious loss cycle may lead to undermining employees' ability to assign significant energy to other cognitive consuming tasks and work assignments ([Hobfoll et al., 2000; Behl et al., 2021](#)). This, in turn, may increase counterproductive behaviors such as cyberloafing.

Second, we suggest that psychological distress is a mechanism through which fears and uncertainties during COVID-19 relate to cyberloafing. In the clinical domain, both fears of COVID-19 infection and IU have been identified as well-known risk factors for mental health indicators such as depression, generalized anxiety, hopelessness, and psychological distress ([Ahorsu et al., 2020; Rettie & Daniels, 2021; Satici et al., 2020](#)). In line with this perspective, we argue that individuals may risk a downward spiral; individuals' psychological distress from fear of COVID-19 and IU during the pandemic can drain their resource bases. As a result, employees will engage in cyberloafing as a coping mechanism. Specifically, fears and uncertainties will increase psychological distress, which may trigger an avoidance (“flight”) response ([Cannon, 1927](#)).

According to stress models, this avoidance action is triggered when one believes that the situation is too threatening ([Folkman & Lazarus, 1980](#)). The pandemic is considered a major traumatic and stressful life event ([Reizer et al., 2021](#)); therefore, it is likely to activate an avoidance (“flight”) response. Thus, we assume that the flight response will be activated in terms of cyberloafing behavior. The present study contributes to the literature because it clarifies how environmental pandemic stressors can change individuals' cyberloafing patterns. Our examination of fear of COVID-19 and IU as core determinants of cyberloafing is a significant shift from past work that has primarily focused on job-related stressors as predictors of cyberloafing ([Mercado et al., 2017](#)) rather than broader stressors on a global level. Consequently, the present study responds to the call by organizational researchers to provide more contingency-based approaches to the negative outcome of life-threatening stressors ([De Clercq et al., 2017; Raja et al., 2020; Toker et al., 2015](#)).

In addition, our study examines a relatively underexplored topic in the organizational domain—namely, the perception of IU ([Reizer et al., 2021](#)). Given the uncertain nature of the pandemic as it relates to various questions (e.g. severity of infection; economic, social, and organizational aspects), one would expect that individuals with higher levels of IU would suffer more from various aspects of COVID-19 uncertainties ([Rettie & Daniels, 2021](#)) compared with those with lower levels of IU. By focusing on the role of IU, the present study can shed light on the outcomes of resource loss uncertainty in different contexts ([Halbesleben et al., 2014](#)).

Finally, the data were collected during the 2020 lockdown period in

Israel, an additional stressor that forced a drastic change in people's daily lives and may have long-lasting effects on individuals' behavioral and emotional outcomes (Brooks et al., 2020). In line with the COR assumptions regarding the harmful consequences of the deprivation of individual vital resources (e.g. social support) on employee mental and behavioral outcomes (Hobfoll et al., 2018), social isolation during the lockdown likely placed an additional burden on psychosocial and behavioral consequences, which would have further influenced cyberloafing behavior. The theoretical framework is discussed below.

2. Theoretical framework

2.1. Cyberloafing

Cyberloafing is defined as “any voluntary act of employees' using their companies' internet access during office hours to surf non-job related web sites for personal purposes and constitute an unproductive use of time in that they detract employees from carrying out and completing their main job duties” (Lim, 2002, p. 677). It is considered a counterproductive and deviant behavior to use technology for personal purposes during working hours (Askew et al., 2014).

Studies have shown that 62% of US employees spend considerable time on social networking websites during work hours (Ethics Resource Center, 2012). Udemey (2018) found that 36% of employees spent more than two hours answering personal messages on their smartphones during work hours. Similarly, a survey by Salary.com in 2021 found that 57% of employees reported that they visit various websites for personal purposes for at least one hour each day.

The literature shows that both hourly and salaried workers engage in cyberloafing by attending to personal matters instead of accomplishing tasks. It was found that 60–80% of employees who spent time at work on the internet had nothing to do with work (Aku, 2017). More recently, research showed that 60% of people have checked their social media at work, and two-thirds said Facebook was the biggest intrusion.

Because of its prevalence, cyberloafing can be costly for organizations. It is estimated that cyberloafing costs organizations up to \$85 billion per year (Andel et al., 2019). Organizational leaders, practitioners, and researchers are constantly investing in preventing employees from engaging in cyberloafing (Pindek et al., 2018). With the increased use of technology, cyberloafing is expected to become even more common in the future.

The cyberloafing literature is a growing area of exploration. A limited number of personal and organizational antecedents have been examined, including personality traits (e.g. Big 5 and self-control) (Mashal, 2020; Mercado et al., 2017), job characteristics (Vitak et al., 2011), attitudes and intentions toward cyberloafing (Askew et al., 2014), and job burnout (Aghaz & Sheik, 2016). A limited but growing number of studies suggest a positive relationship between job stressors and cyberloafing. Empirical evidence mainly supports the view that role stressors (e.g. role ambiguity and role conflict) (Mashal, 2020; Varghese & Barber, 2017) and workplace ostracism (Koay, 2018) are positively related to cyberloafing. Recent studies on job stressors and cyberloafing examined the mediating path between workplace stressors and employees' cyberloafing (Zhou et al., 2021). For example, Zhou et al. (2021) found that hindrance stressors affect cyberloafing through the mediating role of emotional exhaustion. To the best of our knowledge, stressors related to COVID-19 and cyberloafing have not yet been examined; however, recent work by Ozdemir et al. (2021) and Chavan et al. (2021) suggests that cyberloafing is a common phenomenon among students during remote in the current pandemic.

2.2. Relationship between fear of COVID-19 and cyberloafing

A common theme in recent literature on the COVID-19 pandemic is the dominance of fear (Ahorsu et al., 2020; Garfin et al., 2020). People worldwide are experiencing fear of being infected, fear of social contact

with an infected individual, or fear regarding the death of a family member (Ahorsu et al., 2020). According to the COR theory, “individuals strive to obtain, retain and protect those things (resources) they most value, both material and psychosocial” (Hobfoll, 1989, p. 516). The “threat to life” associated with the pandemic may threaten self-preservation needs (i.e. fear of death) and the lives of close family, thus eliciting significant stress (Hobfoll et al., 2006). Similarly, terror management theory suggests that the self-preservation threat is a key motive that brings to the forefront the salience of mortality, which elicits intense fear (Pyszczynski et al., 1997). As such, when fear of COVID-19 is activated, it may affect all domains of life, leading to several maladaptive emotional and behavioral reactions because “with high levels of fear, individuals may not think clearly and rationally” (Ahorsu et al., 2020, p. 2). For example, fear of COVID-19 may lead to future career anxiety (Mahmud et al., 2021), additional media consumption (Bendau et al., 2021), and cyberchondria (fear and anxiety activated due to a health-related search online) (Wu et al., 2021).

The COR theory emphasizes that resource loss in one domain (e.g. situational or external stress) may lead to resource constraints in other domains (work or educational outcomes) due to a downward spiral (Hobfoll, 1989). For example, research has shown that employees who undergo gradual resource depletion because of the fear of a terror attack may develop job burnout (Toker et al., 2015) or have a loss of energy in productive job behaviors (Haq et al., 2019). One of the ways to cope with individual feelings of fear is through social media, the internet (Király et al., 2020) and the phone. These behaviors offer reassurance and safety relief (Carleton et al., 2019). Specifically, one way to cope with and alleviate work stress in the workplace is to participate in cyberloafing activities (Henle & Blanchard, 2008; Pindek et al., 2018). Cyberloafing may act as a coping strategy that distracts employees from the demands of stressful events during the pandemic (Khawaja et al., 2021). The literature suggests that the fear of being infected with COVID-19 may amplify problematic gaming, social media, and smartphone use as coping strategies for self-regulation among students (Chavan et al., 2021; Lin et al., 2020). Further, fear of COVID-19 was found to be positively related to withdrawal behaviors such as turnover intention among nurses during the pandemic (De los Santos & Labrague, 2021). In addition, a recent study found that COVID-19 worry was correlated with withdrawal behaviors and cyberloafing among hotel industry employees in Pakistan (Khawaja et al., 2021). To extend this research line, the present study examines the relationship between the role of fear of COVID-19 and cyberloafing.

Individuals who are concerned and fearful may use maladaptive “safety behaviors” (Rector et al., 2011) such as seeking reassurance in the social network, searching for information, and checking emails. That is, cyberloafing behaviors and technology use provide unrestricted access to safety cues intended to reduce distress (Carleton et al., 2019). It follows that individuals who must devote resources to deal with their fears of COVID-19 may be more likely to engage in cyberloafing because they seek to preserve their remaining resources and thus are unwilling to concentrate on other consuming behaviors such as working. Based on this theoretical reasoning, we hypothesize the following:

H1: Fear of COVID-19 will be positively related to cyberloafing.

2.3. Relationship between intolerance of uncertainty and cyberloafing

Another noteworthy characteristic of the pandemic is the IU—defined as the “individual's dispositional incapacity to endure the aversive response triggered by the perceived absence of salient, key, or sufficient information, and sustained by the associated perception of uncertainty” (Carleton, 2016, p. 31). IU is characterized as a discomfort toward uncertain future events (Grenier et al., 2005) and represents the belief that the unknown and uncertainty are dangerous and therefore intolerable (Rosser, 2019). The intolerance of uncertainty scale

comprises two factors: prospective IU (i.e. cognitive appraisals about uncertainty) and inhibitory IU (i.e. behavioral inhibition in the face of uncertainty; McEvoy et al., 2019). Both represent different and maladaptive responses that are aimed at either resolving or avoiding the aversive uncertainty circumstances (Carleton, 2016). However, empirical evidence indicates that it is appropriate to use a composite score of IU (McEvoy et al., 2019; Shihata et al., 2018).

The construct of IU first appeared in the clinical psychology literature and has been the focus of research in this area (e.g. Hillen et al., 2017; McEvoy et al., 2019). A rich body of work from clinical, medical, and healthcare domains has examined the effect of IU on psychopathological phenomena (e.g. Hillen et al., 2017; McEvoy et al., 2019). Substantial evidence indicates that IU is a potent stressor and predicts psychopathologies such as anxiety, depression, emotional disorders, and impact behavior (for meta-analyses, see Gentes & Ruscio, 2011; McEvoy et al., 2019). In addition, IU is a core predictor of maladaptive coping, such as worry, as well as avoidance of decision-making such as minimizing or ignoring uncertainty while focusing one's attention elsewhere (for additional reviews, see Hillen et al., 2017; McEvoy et al., 2019). IU has been correlated with problematic behaviors such as eating disorders and alcohol consumption (Kraemer et al., 2015), and phone and internet use (Carleton et al., 2019). For example, a meta-analytic study indicated that a statistically significant increase in IU levels in the past decade was associated with increased mobile phone penetration and internet usage (Carleton et al., 2019). During the COVID-19 pandemic, IU has become an even greater risk factor (Mariani et al., 2021; Reizer et al., 2021).

Research focusing on the role of IU in the organizational domain is less mature and relatively sporadic (Furnham & Marks, 2013). However, there are some indicators that IU may serve as a risk factor in the organizational domain. Organizational researchers have examined similar constructs relating to uncertainty. For example, Otto et al. (2010) found that uncertainty tolerance has been found to be positively related to occupational change considerations. Similarly, IU has been associated with more costly clinical decisions and poorer medical treatment among physicians in healthcare organizations (Wayne et al., 2011).

According to the COR theory, people feel threatened when they actually face loss or perceive the unknown potential for loss (Hobfoll et al., 2018). Valuable research on the role of uncertainty, using the lens of the COR theory, suggests that uncertainty causes a resource loss that may carry more significant importance than actual loss (Halbesleben et al., 2014). We assume that resource loss resulting from uncertainty would increase cyberloafing. Our argument relies on another COR principle (Hobfoll et al., 2018), which states that reduced resources (i.e. ego depletion) will trigger a defensive preserving behavior aimed at protecting the remaining resources. This built-in evolutionary strategy can be defensive (i.e. to conserve resources) or exploratory (i.e. to search for alternative survival or adaptation solutions).

While this is the least researched principle of the COR theory (Hobfoll et al., 2018), it has high explanatory power for our study. Individuals who experience an increased IU are motivated to reduce these threatening feelings (Carleton et al., 2019). In the present study, we examine cyberloafing as a withdrawal behavior because it offers an individual a temporary distraction and respite from stressors and prevents further loss of resources (Chong et al., 2020; Kiazad et al., 2014). However, a technological tool may serve as an alternative safety cue because it provides perceived certainty and security through seeking contact, support, and comfort with others, searching for additional information on the internet, and watching the news (Carleton et al., 2019; Rozgonjuk et al., 2019). Although the direct association between IU and cyberloafing has not yet been examined using COR principles, previous studies have examined the associations between IU and problematic smartphone use among college students (Rozgonjuk et al., 2019). Based on the COR theory (Hobfoll et al., 2018), we hypothesize the following:

H2: IU will be positively related to cyberloafing.

2.4. Mediating role of psychological distress

The COR theory supports the mediating role of psychological distress in the associations between fear, IU, and cyberloafing. According to the fundamental principle of COR, when resources are threatened, the individual experiences a lack of adaptation to the environment, which leads to distress, anxiety, and depression (Halbesleben et al., 2014; Hobfoll et al., 2018). An extensive body of research supports this assumption, indicating that resource loss is the main predictor of psychological distress following exposure to external traumatic events such as hurricanes (Zwiebach et al., 2010), shooting events (Littleton et al., 2011), and terror attacks (Toker et al., 2015). In the same manner, depletion of personal resources due to COVID-19 may lead to mental exhaustion (Chong et al., 2020) distress or discomfort under the threat of a lockdown (Merino et al., 2021). This distress may lead to defensive and preservation approaches such as workplace withdrawal (Chong et al., 2020). Indeed, Chong et al. (2020) suggested that employee emotional exhaustion has mediated the associations between task setback stressors and withdrawal behaviors during COVID-19. In the same vein, cyberloafing meets the definition of withdrawal behavior because the employee avoids working and spends less time working than they are expected to (Askew et al., 2014). In addition, cyberloafing, which is a form of withdrawal behavior from work, can buy employees time for their resource pool to replenish (Troughakos & Hideg, 2009).

Another theoretical framework that might explain the mediating role of distress in the associations between fear, IU, and cyberloafing is the Compensatory Internet Use Theory (CIUT; Kardefelt-Winther, 2014). According to this theory, people engage in excessive technology use as a compensatory and maladaptive behavior aimed at coping with and regulating distress and its negative effects (Kardefelt-Winther, 2014). CIUT posits that this compensatory and regulatory mechanism is not pathological in itself, but it may result in excessive internet usage (Elhai et al., 2018) and even problematic engagement in digital technology use in some individuals (Elhai et al., 2018; Wang et al., 2015; Zhitomirsky-Geffet & Blau, 2016). An expansion of the theory, the I-PACE (Interaction of Person-Affect-Cognition-Execution) (Brand et al., 2016, 2019), suggests that predisposing individual factors (e.g. cognitions, personality traits, and biopsychological factors) affect individuals' emotional response (e.g. psychological distress). Such emotional responses may facilitate prolonged time spent on internet-related activities (Young & Brand, 2017) and even problematic internet use (Squires et al., 2021). Studies based on both theories suggest that psychological distress is associated with increased time spent on internet-related activities in general (e.g. Elhai et al., 2018; Rozgonjuk & Elhai, 2021) and during the COVID-19 outbreak period in particular (Wang et al., 2021). Specifically, Rozgonjuk et al. (2019) suggested that psychological distress mediated the associations between IU and problematic smartphone use among students, suggesting that excessive cellular use can be conceptualized as a compensating strategy for regulating evoked distress and worry among individuals who are higher in IU.

From a COR perspective, we argue that fear of COVID-19 appears to correspond to primary resources (e.g. fears of death and dying) defined by COR. However, IU includes both the survival fear of the unknown and the loss of financial or social capital (e.g. losing one's job, handling family and work during lockdown), which reflects threats to secondary resources according to COR (Hobfoll et al., 2001). Both threats would evoke psychological distress, and several studies have supported this argument by suggesting that fear of COVID-19 (e.g. Ahorsu et al., 2020; Reizer et al., 2020) and IU (Rettie & Daniels, 2021; Reizer et al., 2021; Satici et al., 2020) predict anxiety, depression, and feelings of psychological distress. Distress can lead to distraction and impair one's efforts to focus on tasks or new challenges in the workplace (Haq et al., 2019; Toker et al., 2015), thereby increasing their desire to defend their remaining resource by participating in the "recovery" (Andel et al., 2019). By integrating both I-PACE and CIUT, we refer to cyberloafing as the technological compensation mechanism for ineffective managing of

this distress. Thus, we suggest that psychological distress may serve as a pathway through which COVID-19 concerns are related to cyberloafing. Based on the literature, we hypothesize the following:

- H3a: Fear of COVID-19 will be positively related to psychological distress; in turn, increased levels of psychological distress will be related to greater levels of cyberloafing.
- H3b: IU will be positively related to psychological distress; in turn, increased levels of psychological distress will be related to greater levels of cyberloafing.

3. Method

3.1. Participants and procedure

As a result of the COVID-19 lockdowns, education has been radically transformed. There has been an increase in e-learning, with teaching and learning being undertaken remotely and on digital platforms. Given the unexpected shift away from the classroom worldwide, as well as the persistence of the pandemic, it is anticipated that the adoption of online learning, which has disrupted the education system, will continue post-pandemic. This rapid shift to online learning has resulted in several challenges for instructor and learners, including poor user experience and increased stress (Li & Lalani, 2020). Hence, our sample consisted of employees taking classes at a university. A total of 332 Israeli participants were recruited to take part in the study. Ten participants missed more than 30% of the responses to the questionnaire items. Given that these missing data might bias the results (Schlomer et al., 2010), these cases were removed from the dataset; thus, the final sample comprised 322 participants (96% response rate). No significant differences were found between the excluded and the final groups in age ($t(329) = -0.40, p = .68$), cyberloafing ($t(320) = 0.07, p = .94$), psychological distress ($t(322) = 0.52, p = .50$), IU ($t(315) = 0.85, p = .39$) or fear of COVID-19 ($t(322) = -0.18, p = .855$). We used an alpha level of 0.05 (confidence level of 95%) for all statistical tests.

The final sample consisted of 322 individuals currently taking classes at a university in Israel. The participants' ages ranged from 18 to 51 years (mean age = 24, SD = 2.89), and 59% of the sample were female (41% were male). All measures were translated from English to Hebrew and then back-translated. Approximately 42% of the participants were working when the survey was completed during the third COVID-19 lockdown in Israel. On December 24, 2020, the Israeli government declared a third nationwide lockdown, which was then extended until the end of January. The survey link was available from December 28, 2020 to January 10, 2021, during the lockdown period.

3.2. Measurements

Cyberloafing was assessed using a six-item scale (Blanchard & Henle, 2008; Lim, 2002). Participants were asked to assess how frequently they had engaged in the following activities during online training in the last week (e.g. "social media surfing," "visiting news sites," "shop online," "sending personal e-mails"). Responses were ranked on a five-point Likert scale ranging from 1 ("never") to 5 ("constantly"). Cronbach's alpha was 0.80.

IU was assessed using the IUS-12 item scale (Carleton et al., 2007) to measure the intolerance of uncertainty. Participants indicated whether they agreed with propositions relating to IU during the pandemic using a scale ranging from 1 ("not at all characteristic of me") to 5 ("entirely characteristic of me"). In line with previous reviews (Carleton et al., 2007; Reizer et al., 2021), we computed a total score of IU (Cronbach's alpha was 0.85).

Fear of COVID-19 was assessed using a five-item scale (Ahorsu et al., 2020). A sample item was "I am most afraid of coronavirus-19." Participants indicated the degree of agreement using a five-item Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). Cronbach's

alpha coefficient was 0.85.

The Kessler Psychological Distress Scale (Kessler et al., 2002) measured the psychological distress construct (e.g. "About how often do you feel nervous?"). The response scale ranged from 1 ("none of the time") to 5 ("all of the time"). In the clinical literature, the K10 is presented as a valid diagnostic tool for psychological distress. It is a useful diagnostic screening instrument in general population samples (Donker et al., 2010). As a diagnostic tool, the K10 has a cut-off score for screening scale for psychological distress (Vasiliadis et al., 2015). The strict criterion reported by Donker et al. (2010) indicates that the optimal cut-off score based on any depressive or anxiety disorder for the K10 is 20. Overall, 42.90% expressed an indication of possible risk for mental distress (Cronbach's alpha coefficient was 0.92).

We added several control variables, including demographic variables, age, and gender, and one item that measured digital platform preference. Specifically, the participants were asked to rate their preference for digital remote training once the pandemic ends on a scale of 1 ("not at all") to 5 ("always").

4. Results

4.1. Preliminary analysis and descriptive statistics

Past researchers have discussed the importance of key informants in understanding organizational issues (Behl, 2020; Fosso-Wamba et al., 2019). The use of responses from respondents in organizations, collected empirically, often suffer from common method bias issues as suggested by Podsakoff et al. (2003) and Ketokivi and Schroeder (2004). To avoid the potential effect of bias on the results, we employed a series of analyses recommended by Jordan and Troth (2020). First, we used Harman's one-factor test by loading all of the measurement items in our study using exploratory factor analysis. The results confirmed that the variance explained by a single factor is 37.23%, thereby suggesting that our study does not suffer from common method bias. Next, we followed Lindell and Whitney (2001) and applied a marker variable test. We introduced an additional construct in the model that was potentially unrelated to the main constructs and did not find any potential effect that would deter the values of common method variance in the model. The Confirmatory Factor Analysis (CFA) marker technique uses a marker variable(s) in a CFA model to detect common method bias (Fuller et al., 2016). The results of the tests confirmed that the study was free from the issues of common method bias.

CFAs were conducted before testing the research model. It included the cyberloafing, fear of COVID-19, IU, and psychological distress variables. All items were loaded more than 0.40 on their latent factor, and the final measurement model showed an adequate fit [$\chi^2(541) = 935.023, p = 0.00, \chi^2/df = 1.728$, Comparative Fit Index (CFI) = 0.919, Tucker-Lewis index (TLI) = 0.911 and Root Mean Square Error of Approximation (RMSEA) = 0.048]. The single-factor measurement demonstrated poor fit with the data ($\chi^2(559) = 2817.989, p = 0.00, \chi^2/df = 5.041, CFI = 0.538, TLI = 0.509, RMSEA = 0.112$) (Kline, 2011). When we compared the four-factor model with the one-factor model, we also demonstrated a significant chi-square difference [$\Delta \chi^2(18) = 1992.966, p < .001$].

Table 1
Means, standard deviations, and zero-order bivariate correlations.

	Mean	SD	1	2	3	4
1. Cyberloafing	3.15	0.89	(.80)			
3. IU	2.64	0.71	.24***	(.85)		
2. Fear of COVID19	1.87	0.67	.11*	.36***	(.85)	
4. Psychological Distress	21.08	7.86	.25***	.53***	.16**	(.92)
5. Digital platform preference	2.81	1.17	.11*	-.05	-.18**	.06

Notes: * $p < .05$ ** $p < .01$, *** $p < .001$. Reliability coefficients are displayed in the parentheses.

Table 1 presents the means, SD, and correlations between our research variables. As indicated, IU and fear of COVID-19 were positively related to cyberloafing, thus supporting H1 and H2. In addition, psychological distress was positively related to cyberloafing. Finally, IU and fear of COVID-19 were positively associated with psychological distress. We followed the guidelines of Fornell and Larcker (1981) to test the discriminant validity. Additionally, referring to Fawcett et al. (2014), we note that the discriminant validity of all items should have higher loadings on their assigned construct when compared to other constructs. It is also noted that the mean shared variance should be below 0.5 and the square root of Average Variance Extracted (AVE) for each construct should be greater than any correlation estimates of the remaining pairs. Based on the listed criterion, we confirm discriminant validity.

4.2. Hypothesis analysis

We performed structural equation modeling (SEM) to test the hypotheses of the proposed model. A major advantage of covariance-based SEM (CB-SEM) is the ready accessibility to indirect and total effects, as well as the direct causal effects between the exogenous and endogenous constructs. In the case of CB-SEM, which is a confirmatory approach, the method requires the specification of the full theoretical model prior to data analysis. The model fit constraints of CB-SEM are more appropriate for established theory testing and confirmation (Astrachan et al., 2014; Rigdon et al., 2017). The present study abides by the requirements of CB-SEM when compared with other forms of SEM and regression.

First, we analyzed the direct associations between IU, fear of COVID-19 and cyberloafing. The results of the direct path provided a good model fit [$\chi^2(286) = 474.051; \chi^2/df = 1.65, p < .001; TLI = 0.922; CFI = 0.932; RMSEA = 0.045$]. However, while IU significantly predicted cyberloafing ($\beta=0.27, SE = 0.19, p = .0001$), fear of COVID-19 was not significantly associated with cyberloafing in the direct model ($\beta = 0.07, SE = .12, p = .31$). Therefore, the first model analysis supported H2 but did not support H1. While the association between IU and cyberloafing was mostly supported, the direct association between fear of COVID-19 and cyberloafing did not provide a conclusive support to the unique relationships. It has been strongly suggested that researchers may still proceed with mediation analysis, even when the direct relationships are non-significant as the indirect effects may be significant regardless of the lack of direct associations between the independent and dependent variables (Little et al., 2011, Reizer, 2019; Shrout & Bolger, 2002). Specifically, Shrout and Bolger (2002) supported testing the magnitude and significance of indirect effects, particularly if (1) there is a non-significant relationship between the independent and the dependent

variable or if (2) the relationship is supported by theory.

Second, we tested the mediation model. The model included direct and indirect paths between IU, fear of COVID-19, and cyberloafing through the mediating path of psychological distress, in addition to a direct path between IU, fear of COVID-19, and cyberloafing. We also controlled for digital platform preference. The results of the mediation model that included both direct and indirect path provided a good model fit [$\chi^2(571) = 943.006; \chi^2/df = 1.651, p < .001; TLI = 0.917; CFI = 0.924; RMSEA = 0.045$]. While performing the mediation model and including both direct and indirect path, the direct associations between fear of COVID-19 and cyberloafing ($\beta = 0.11, SE = 0.12, p = .15$), as well as between IU and cyberloafing ($\beta = 0.14, SE = 0.22, p = .13$) were non-significant. According to Hayes (2017), the non-significant associations between the independent and the dependent variable in the mediation model implies full mediation path. Therefore, the associations between IU, fear of COVID-19, and cyberloafing were found to be fully mediated by psychological distress. This final model is presented in Fig. 1.

To examine the mediation hypotheses, we used bootstrapping analysis based on the confidence interval method (Ryu & Cheong, 2017). The indirect effects of individual differences in IU and fear of COVID-19 on cyberloafing through the mediating role of psychological distress were significant. The findings of the hypothesized model supported the mediating role of psychological distress. Psychological distress mediated the effect of fear of COVID-19 on cyberloafing (*indirect effect* = 0.045, $p = .009, 95\% CI = [0.017, 0.151]$), thus supporting H3a. Psychological distress also mediated the effect of IU on cyberloafing (*indirect effect* = 0.148, $p = .001, 95\% CI = [0.169, 0.691]$), thus supporting H3b.

5. Discussion

The current study presents the challenges and consequences of working with digital platforms and technologies for remote working, specifically during the COVID-19 pandemic. Our study expands on the growing interest in the antecedents of cyberloafing behavior and contributes to the recent development in this topic of research (Mashal, 2020; Mercado et al., 2017). Specifically, our research presents an in-depth understanding of cyberloafing during the pandemic and highlights the detrimental effects of fear and uncertainty during the pandemic. Prior research confirms that fear of COVID-19 (e.g. Ahorsu et al., 2020) and IU (e.g. Rettie & Daniels, 2021) have had detrimental effects on people’s mental health during the pandemic. However, prior research has largely overlooked the behavioral consequences of the evoked reactions. Based on the COR, I-PACE, and CIUT theories, we discovered that resource-depleting fear of COVID-19 and intolerance of

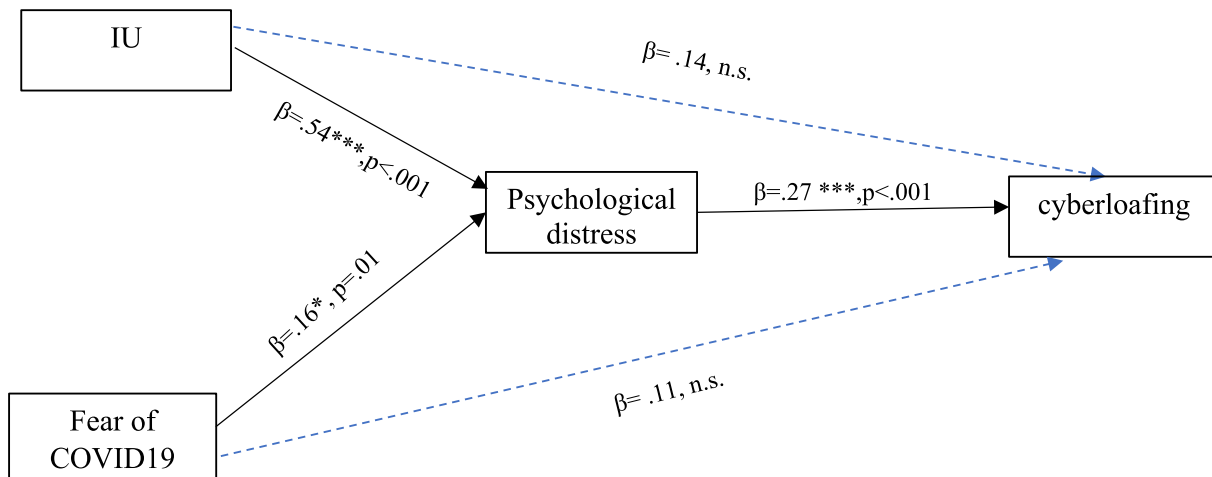


Fig. 1. Mediation effects of psychological distress in the associations between IU, fear of COVID-19 and cyberloafing. Note. * $p < .05$; *** $p < .001$.

uncertainty are positively related with cyberloafing through psychological distress concerns. Our hypotheses were empirically confirmed. The positive link between IU, fear of COVID-19, and cyberloafing, through psychological distress, illustrates how fears and uncertainties about a global virus can generate detrimental outcomes that affect behavioral outcomes. The mediating role of psychological distress indicated that individuals who found it difficult to avoid any COVID-19 concerns suffered from anxiety and distress, which eventually impaired their ability to focus on their assignments and escalated into diminished productive efforts, such as cyberloafing.

This study integrates different models to explain cyberloafing. Our findings relate to the COR theory, which suggests that the resource-draining experience of COVID-19 results in a state of ego depletion (Zhou et al., 2021). As a result, employees attempt to preserve their remaining regulatory resources. This resource protection mode manifests when employees experience a goal-inhibiting incident and subsequently work in a state of distractibility that inhibits them from work engagement (Leroy et al., 2020). In turn, states of psychological distress deplete regulatory resources and put employees into resource protection mode. Our results support Hobfoll et al.'s (2018) argument that threat and loss can both lead to strain and have motivating inhibition potential; however, the consequences of this effect are less well known.

Our findings also represent a valuable research avenue in the stress literature. While previous research has shown that both fear and uncertainty negatively affect one's personal distress (Reizer et al., 2021) and withdrawal behavior, the COR theory does not explicitly explain how this distress translates into cyberloafing. Based on the CIUT (Kardefelt-Winther et al., 2017) and I-PACE (Brand et al., 2016), we suggest that the psychological distress caused by these threats fuels a downward spiral or negative passageway to compensatory behavior—such as a cyberloafing behavior (or higher engagement in digital technology use during work)—to distract from and cope with this unpleasant state. This argument is also in line with COR spiraling nature assumptions that people with fewer resources are more vulnerable to further loss of resources (Hobfoll et al., 2018). Following this argument, these depleting activities might be expected to increase employees' vulnerability to cope with upcoming demands (Van Woerkom et al., 2016) and may decrease their work performance (Zhou et al., 2021).

5.1. Theoretical implications

The findings of this study make several contributions to the extant literature. First, our findings address the recent call to explore more potential antecedents of cyberloafing behavior (Mercado et al., 2017). Specifically, the present study reveals that exposure to COVID-19 concerns represents significant stressors that can spill over and escalate into cyberloafing. This spillover effect is consistent with previous applications of COR theory, indicating that resource loss in external domains (e.g. exposure to terror attacks) may drain one's resources in the workplace (Toker et al., 2015). In addition, according to the COR theory, the negative effect of external stressors can be buffered and mitigated if individuals use personal (e.g. optimism) or interpersonal (e.g. social support) resources (Hobfoll, 2001). These resources may help employees handle the pandemic stressors (Reizer et al., 2021, 2022).

Second, following previous scholars' calls to consider IU aspects in the social and organizational contexts, this study offers new insights into how IU might contribute to cyberloafing—an unexplored area of research. IU originated in clinical psychology with an emphasis on emotional disorders (Carleton, 2016); thus, it has rarely been explored in a non-clinical organizational, educational, or social context. However, there appears to be initial evidence that IU is steadily rising in the population and is significantly associated with increased smartphone use (Carleton et al., 2019). Our findings further strengthen the position of IU as a characteristic with clear manifestation of cyberloafing, which can provide a theoretical basis for further investigation of cyberloafing in a more theoretical context.

In addition, we applied the COR theory beyond the study of stress and strain. This study is important not only because it extends the reach of the COR theory, but because it provides unique opportunities to better understand how individuals allocate and conserve resources in the context of the pandemic and the behavioral outcomes of it. Much of the work has focused on the associations between stress and strain, such as burnout and emotional exhaustion (Hobfoll et al., 2018). Recently, this body of work has been expanded to other realms of employees' functioning during COVID-19, such as work withdrawal (Chong et al., 2020) and innovative performance (Zhong et al., 2022). Our work addresses Hobfoll et al.'s (2018) call to extend the line of thinking beyond stress, burnout, and strain to advance theory and practice in different contexts. Extending this line of thinking offers some interesting insights into the relationships with cyberloafing.

Finally, the results contribute to extending the understanding of COR by explaining the effect of psychological distress on the loss of resources during pandemics. The ongoing COVID-19 pandemic has disrupted many lives, and students are one of the most affected groups (Bendau et al., 2021; Chavan et al., 2021). The sudden switch to online learning, increasing leisure activities at home, and the substantial increase in mobile phone usage to play games or watch online content are some of the visible and reported changes during COVID-19 (Wu et al., 2021). According to recent studies, these changes have resulted in anxiety and depression among young people, which has, in turn, led to mental instability and deaths (Raja et al., 2020; Rettie & Daniels, 2021; Satici et al., 2020). Unlike the effects of an emergency or natural disaster on people's routines, COVID-19 is having prolonged effects.

As the world continues to deal with different COVID-19 variants, the perceived threat may further affect people's productivity, and they may resort to activities such as cyberloafing as they continue working at home (Tandon et al., 2021; Zhong et al., 2022). Recent reports on work productivity in developing and developed countries have confirmed that more than 64% of people working from home are 31% less productive, on average, compared with before COVID-19 (Chen et al., 2021; Usman et al., 2021). Of the many reasons reported, Zhu et al. (2021) found that the autonomous nature, unmonitored working environment, flexible deadlines, callous attitude toward work, and unnecessary use of mobile phones for unproductive tasks during work hours make people stressed, which further forces them to engage in cyberloafing. Thus, our study helps confirm our assertions during the pandemic.

5.2. Practical implications

Globally, cyberloafing is a significant organizational challenge (Kim et al., 2015; Mashal, 2020), and social distancing resulting from the pandemic has emphasized the phenomenon. Technological advancements have been rapid, and employees have unprecedented access to highly interactive, easily accessible, and convenient distractions. Specifically, smartphones and the internet allow constant access to broadband internet to stream content, communicate with others, shop online, and engage in social communication (e.g. Facebook and Instagram). These distracting features may be particularly appealing to individuals experiencing psychological distress who are seeking to ease negative emotional states (Squires et al., 2021). Based on our research findings, we suggest that some individuals are more prone to high levels of psychological distress, and they may be more tempted to cope with their negative emotions by using cyberloafing as a method of distraction. Understanding that cyberloafing may be a manifestation of underlying psychological distress, fear, and uncertainty may help with understanding why some people are not fully engaged in their tasks and opt for excessive cyberloafing behavior instead. This, in turn, may encourage organizations to focus on their employees' wellbeing and mental health as a protective shield from cyberloafing.

Recognizing the predictors of cyberloafing will enable practitioners to understand, guide, and control this behavior. Based on our research findings, we advise managers and human resource (HR) practitioners to

establish communication channels so employees can share their fears, concerns, and feelings of uncertainty about COVID-19 (Sanders et al., 2020). It has been suggested that employees who perceive organizational injustice also tend to increase their cyberloafing (Mashal, 2020; Mercado et al., 2017). Thus, fair organizational policies and practices can contribute to reducing COVID-19 concerns and increasing wellbeing and productive behaviors.

In addition, organizations should help employees to relieve anxiety by offering training and webinars on topics such as resilience, stress management, and the benefits of tolerance during uncertain times. Employees' participation in such programs might also improve the safety climate and have positive consequences for wellbeing, as well as lowering counterproductive behavior.

Finally, this study offers guidelines for organizations and institutions that continue to have a work-from-home culture in the midst of the COVID-19 pandemic. The issue of cyberloafing could be controlled by enabling people to work in teams to reduce individual stress and improve the participation of employees and students (Soga et al., 2022). Some organizations require their employees to report the status of their work too frequently, which can also lead to stress. Recent studies have reported that such frequent reporting behavior causes a reverse reaction of losing attention, and employees tend to distract themselves and become trapped by cyberloafing behavior. However, positive psychological changes adopted by firms and institutions could help combat the issue of cyberloafing. The recent adoption of mechanisms such as gamification have helped improve employees' motivation toward work and performance during COVID-19.

We also shed light on the use of cyberloafing as a crisis response. We believe that the causes of cyberloafing during the pandemic may differ from those that have been explored in the past in the context of remote work, largely because pre-pandemic remote work was optional. Remote working is now mandatory and the "new normal" during the pandemic, thus changing the nature of the workload and the time spent on tasks. Because many employees working from home during the pandemic had no previous experience (Kniffin et al., 2021), they faced several challenges related to remote work, including work-home interference, ineffective communication, procrastination, loneliness, lack of social support, job autonomy, monitoring, and an increase in workload and self-discipline, which has led to an increase in cyberloafing (Soga et al., 2022; Wang et al., 2021). Our results highlight the need to assist organizations and employees to transition smoothly and promptly to remote working without compromising on their wellbeing. This is especially relevant both during and after the pandemic because some organizations have expressed their intent to implement permanent telework for their employees after the pandemic (Chong et al., 2020). The COVID-19 pandemic has unearthed an unstudied domain within cyberloafing. Many organizations had little choice but to hastily transition to mandatory, full-time telework to counter the spread of COVID-19. This mandatory form of full-time telework has removed a large degree of flexibility or volition that telework previously offered to workers (Wang et al., 2021).

6. Limitations, future research Agenda, and conclusions

6.1. Limitations of the study

This study discussed the important topic of cyberloafing, which has gained more importance during the COVID-19 pandemic. While the results shined a positive light on the proposed relationships, the study suffered from some limitations. First, all measures were self-reported, which raised the potential for common method biases. To minimize the method bias, we undertook several actions (e.g. separating our survey measurements, assuring confidentiality, emphasizing anonymity) (Podsakoff et al., 2003). We also conducted CFA to demonstrate the discriminant validity of the measurements and indicate that common method bias was not a significant limitation. Second, the study

examined cyberloafing among relatively high-educated participants and was conducted among employees who study an academic course; therefore, it would be valuable to obtain more diverse samples. Third, our study was correlational in nature.

6.2. Future research agenda

Cyberloafing is an emergent topic; there is much scope to study cyberloafing and its mechanisms among different populations and settings. While our study provides an interesting and novel perspective, we drew on a limited number of respondents from the education sector. Future research should investigate other institutions, industries (e.g. military, police, hospitals, IT sector), variety of tasks (e.g. learning vs. performing routine tasks), age groups, genders, and demographic variables. Researchers should also further validate our findings in different cultural contexts, as proposed by Sobh and Perry (2006). For example, intercultural comparisons between Western and Eastern countries can be conducted to establish the generalizability of the results.

In addition, future studies could use other measurements, such as assessing cyberloafing using managerial reports or technological monitoring behaviors using phone applications. To understand causal relationships, we recommend that future studies examine our model using an experimental and longitudinal designs. The longitudinal design might also capture whether the COVID-19 environment, in general, and the lockdown periods, in particular, have long-lasting effects, as some researchers have argued (Brooks et al., 2020).

This study explored the relationships between distress, fear of COVID-19, and IU leading to cyberloafing from a psychological perspective. Future studies should expand on other aspects of COVID-19 related to cyberloafing behavior, such as confusion and loneliness, and sadness due to the loss of a family member or job. Future research could also examine the relationship between employees' attitudes and cyberloafing.

Our research highlights that organizations need to explore new methods for reducing the negative consequences of COVID-19. An immediate intervention could be to reduce the aversiveness of IU and fear of COVID-19 and to provide both a psychologically and physically safe environment. In addition, as remote work continues to become more ubiquitous, it will be valuable to study the benefits and challenges of cyberloafing during the pandemic in order to help remote workers. .

Finally, further research is needed to better understand the antecedents and consequences of cyberloafing. As technology continues to advance and present new features, the attraction to quick access to entertainment and diversions will further increase cyberloafing. Thus, organizations and institutions need to find ways to productively divert this energy toward work-oriented tasks through incentives and targets for work tasks online. Additional studies are needed to better understand the motivations of cyberloafing.

6.3. Conclusion

This study explored cyberloafing and identified some of the challenges and consequences of working with digital platforms and technologies while working remotely. Specifically, it highlighted concerns that have emerged during the COVID-19 pandemic in an educational setting. During this global crisis, many employees around the world have suffered from stress, anxiety, and uncertainties. While there is still much to be understood about the effect of the current pandemic on employees and organizations, the present study offers critical insights into people's cyberloafing during the lockdown phases of this crisis.

Our findings provide valuable information on the relationship of fear of COVID-19 and IU on cyberloafing, and the important mediating role of psychological distress. This study contributes to and advances research in this discipline by detailing how organizations can be more aware of the negative effect of fear and uncertainties during COVID-19 on the counter-behavioral aspect of cyberloafing. Because the pandemic

is still an ongoing phenomenon and its effects are likely to be long-standing (Brooks et al., 2020), managers and HR practitioners should be more aware of the pandemic's contextual risks and may need to change structures and organizational processes to mitigate its effects. Technology is a boon, but it can also be a bane if it is not used prudently.

CRedit authorship contribution statement

Abira Reizer: Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Bella L. Galperin:** Methodology, Resources, Supervision, Writing – original draft, Writing – review & editing, Conceptualization. **Meena Chavan:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Investigation, Conceptualization. **Abhishek Behl:** Conceptualization, Methodology, Writing – original draft, Writing – review & editing. **Vijay Pereira:** Writing – review & editing, Writing – original draft, Supervision, Project administration, Investigation, Conceptualization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

References

- Aghaz, A., & Sheikh, A. (2016). Cyberloafing and job burnout: An investigation in the knowledge-intensive sector. *Computers in Human Behavior*, 62(1), 51–60. <https://doi.org/10.1016/j.chb.2016.03.069>
- Aku, A. (2017). *Role of middle managers in mitigating employee cyberloafing in the workplace*. Walden University. Doctoral dissertation.
- Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The Fear of COVID-19 Scale: Development and initial validation. *International Journal of Mental Health and Addiction*, 1–9. <https://doi.org/10.1007/s11469-020-00270-8>
- Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How effective is telecommuting? Assessing the status of our scientific findings. *Psychological Science in the Public Interest*, 16(2), 40–68. <https://doi.org/10.1177/1529100615593273>
- Andel, S. A., Kessler, S. R., Pindek, S., Kleinman, G., & Spector, P. E. (2019). Is cyberloafing more complex than we originally thought? Cyberloafing as a coping response to workplace aggression exposure. *Computers in Human Behavior*, 101(1), 124–130. <https://doi.org/10.1016/j.chb.2019.07.013>
- Askew, K., Buckner, J. E., Taing, M. U., Ilie, A., Bauer, J. A., & Coovert, M. D. (2014). Explaining cyberloafing: The role of the theory of planned behavior. *Computers in Human Behavior*, 36, 510–519. <https://doi.org/10.1016/j.chb.2014.04.006>
- Astrachan, C. B., Patel, V. K., & Wanzennied, G. (2014). A comparative study of CB-SEM and PLS-SEM for theory development in family firm research. *Journal of Family Business Strategy*, 5(1), 116–128. <https://doi.org/10.1016/j.jfbs.2013.12.002>
- Behl, A. (2020). Antecedents to firm performance and competitiveness using the lens of big data analytics: A cross-cultural study. *Management Decision*, 60(2), 368–398. <https://doi.org/10.1108/MD-01-2020-0121>
- Behl, A., Chavan, M., Jain, K., Sharma, I., Pereira, V. E., & Zhang, J. Z. (2021). The role of organizational culture and voluntariness in the adoption of artificial intelligence for disaster relief operations. *International Journal of Manpower*.
- Behl, A., Sheorey, P., Jain, K., Chavan, M., Jajodia, I., & Zhang, Z. J. (2021). Gamifying the gig: Transitioning the dark side to bright side of online engagement. *Australasian Journal of Information Systems*, 25. <https://doi.org/10.3127/ajis.v25i0.2979>
- Bendau, A., Petzold, M. B., Pyrkosch, L., Maricic, L. M., Betzler, F., Rogoll, J., Große, J., Ströhle, A., & Plag, J. (2021). Associations between COVID-19 related media consumption and symptoms of anxiety, depression and COVID-19 related fear in the general population in Germany. *European Archives of Psychiatry and Clinical Neuroscience*, 271(2), 283–291. <https://doi.org/10.1007/s00406-020-01171-6>
- Blanchard, A. L., & Henle, C. A. (2008). Correlates of different forms of cyberloafing: The role of norms and external locus of control. *Computers in Human Behavior*, 24(3), 1067–1084. <https://doi.org/10.1016/j.chb.2007.03.008>
- Brand, M., Wegmann, E., Stark, R., Müller, A., Wölfling, K., Robbins, T. W., & Potenza, M. N. (2019). The Interaction of Person-Affect-Cognition-Execution (I-PACE) model for addictive behaviors: Update, generalization to addictive behaviors beyond internet-use disorders, and specification of the process character of addictive behaviors. *Neuroscience & Biobehavioral Reviews*, 104(1), 1–10. <https://doi.org/10.1016/j.neubiorev.2019.06.032>
- Brand, M., Young, K. S., Laier, C., Wölfling, K., & Potenza, M. N. (2016). Integrating psychological and neurobiological considerations regarding the development and maintenance of specific Internet-use disorders: An Interaction of Person-Affect-Cognition-Execution (I-PACE) model. *Neuroscience & Biobehavioral Reviews*, 71, 252–266. <https://doi.org/10.1016/j.neubiorev.2016.08.033>
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Cannon, W. B. (1927). The James-Lange theory of emotions: A critical examination and an alternative theory. *The American Journal of Psychology*, 39(4), 106–124. <https://doi.org/10.2307/1415404>
- Carleton, R. N. (2016). Into the unknown: A review and synthesis of contemporary models involving uncertainty. *Journal of Anxiety Disorders*, 39, 30–43. <https://doi.org/10.1016/j.janxdis.2016.02.007>
- Carleton, R. N., Desgagné, G., Krakauer, R., & Hong, R. Y. (2019). Increasing intolerance of uncertainty over time: The potential influence of increasing connectivity. *Cognitive Behaviour Therapy*, 48(2), 121–136. <https://doi.org/10.1080/16506073.2018.1476580>
- Carleton, R. N., Norton, M. P. J., & Asmundson, G. J. (2007). Fearing the unknown: A short version of the Intolerance of Uncertainty Scale. *Journal of Anxiety Disorders*, 21(1), 105–117. <https://doi.org/10.1016/j.janxdis.2006.03.014>
- Chavan, M., Galperin, B. L., Ostle, A., & Behl, A. (2021). Millennial's perception on cyberloafing: Workplace deviance or cultural norm? *Behaviour & Information Technology*. <https://doi.org/10.1080/0144929X.2021.1956588>
- Chen, Y., Chen, H., Andrasik, F., & Gu, C. (2021). Perceived stress and cyberloafing among college students: The mediating roles of fatigue and negative coping styles. *Sustainability*, 13(8). <https://doi.org/10.3390/su1308446>
- Chong, S., Huang, Y., & Chang, C. H. D. (2020). Supporting interdependent telework employees: A moderated-mediation model linking daily COVID-19 task setbacks to next-day work withdrawal. *Journal of Applied Psychology*, 105(12), 1408–1422. <https://doi.org/10.1037/apl0000843>
- De Clercq, D., Haq, I. U., & Azeem, M. U. (2017). Perceived threats of terrorism and job performance: The roles of job-related anxiety and religiousness. *Journal of Business Research*, 78, 23–32. <https://doi.org/10.1016/j.jbusres.2017.04.013>
- De Clercq, D., Haq, I. U., Azeem, M. U., & Khalid, S. (2021). The link between fear about COVID-19 and insomnia: Mediated by economic concerns and psychological distress, moderated by mindfulness. *Journal of Management & Organization*, 1, 1–19. <https://doi.org/10.1017/jmo.2021.3>
- De los Santos, J. A. A., & Labrague, L. J. (2021). The impact of fear of COVID-19 on job stress, and turnover intentions of frontline nurses in the community: A cross-sectional study in the Philippines. *Traumatology*, 27(1), 52–59. <https://doi.org/10.1037/trm0000294>
- Di Martino, V., & Wirth, L. (1990). Telework: A new way of working and living. *International Labour Review*, 129(5), 529–554.
- Donker, T., Comijs, H., Cuijpers, P., Terluin, B., Nolen, W., Zitman, F., & Penninx, B. (2010). The validity of the Dutch K10 and extended K10 screening scales for depressive and anxiety disorders. *Psychiatry Research*, 176(1), 45–50. <https://doi.org/10.1016/j.psychres.2009.01.012>
- Elhai, J. D., Tiamyiu, M. F., Weeks, J. W., Levine, J. C., Picard, K. J., & Hall, B. J. (2018). Depression and emotion regulation predict objective smartphone use measured over one week. *Personality and Individual Differences*, 133(3), 21–28. <https://doi.org/10.1016/j.paid.2017.04.051>
- Ethics Resource Center Inside the mind of a whistleblower Washington DC. 2012 Available at: <http://www.ethics.org/resource/inside-mind-whistleblower>. Accessed on 12 Jan 2021.
- Eurofound and the International Labour Office Working anytime, anywhere: The effects on the world of work 2017 <http://eurofound.link/ef1658>
- Fawcett, S. E., Waller, M. A., Miller, J. W., Schwieterman, M. A., Hazen, B. T., & Overstreet, R. E. (2014). A trail guide to publishing success: Tips on writing influential conceptual, qualitative, and survey research. *Journal of Business Logistics*, 35(1), 1–16. <https://doi.org/10.1111/jbl.12039>
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 50(5), 219–239. <https://doi.org/10.2307/2136617>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Fuller, C. M., Simmering, M. J., Atinc, G., Atinc, Y., & Babin, B. J. (2016). Common methods variance detection in business research. *Journal of Business Research*, 69(8), 3192–3198. <https://doi.org/10.1016/j.jbusres.2015.12.008>
- Furnham, A., & Marks, J. (2013). Tolerance of ambiguity: A review of the recent literature. *Psychology*, 4(9), 717–728. <https://doi.org/10.4236/psych.2013.49102>
- Garfin, D. R., Silver, R. C., & Holman, E. A. (2020). The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychology*, 39(5), 355–357. <https://doi.org/10.1037/hea0000875>
- Gentes, E. L., & Ruscio, A. M. (2011). A meta-analysis of the relation of intolerance of uncertainty to symptoms of generalized anxiety disorder, major depressive disorder, and obsessive-compulsive disorder. *Clinical Psychology Review*, 31(6), 923–933. <https://doi.org/10.1016/j.cpr.2011.05.001>
- Grant, C. A., Wallace, L. M., & Spurgeon, P. C. (2013). An exploration of the psychological factors affecting remote e-worker's job effectiveness, well-being and worklife balance. *Employee Relations*, 35(5), 527–546. <https://doi.org/10.1108/ER-08-2012-0059>

- Grenier, S., Barrette, A. M., & Ladouceur, R. (2005). Intolerance of uncertainty and intolerance of ambiguity: Similarities and differences. *Personality and Individual Differences*, 39(3), 593–600. <https://doi.org/10.1016/j.paid.2005.02.014>
- Halbesleben, J. R., Neveu, J. P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the “COR” understanding the role of resources in conservation of resources theory. *Journal of Management*, 40(5), 1334–1364. <https://doi.org/10.1177/0149206314527130>
- Haq, I. U., De Clercq, D., & Azeem, M. U. (2019). Can employees perform well if they fear for their lives? Yes—if they have a passion for work. *Personnel Review*, 49(2), 469–490. <https://doi.org/10.1108/PR-01-2019-0030>
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Henle, C. A., & Blanchard, A. L. (2008). The interaction of work stressors and organizational sanctions on cyberloafing. *Journal of Managerial Issues*, 20(3), 383–400. <https://doi.org/10.1037/t13460-000>
- Hillen, M. A., Guthel, C. M., Strout, T. D., Smets, E. M., & Han, P. K. (2017). Tolerance of uncertainty: Conceptual analysis, integrative model, and implications for healthcare. *Social Science & Medicine*, 180, 62–75. <https://doi.org/10.1016/j.socscimed.2017.03.024>
- 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>
- Hobfoll, S. E. (1991). Traumatic stress: A theory based on rapid loss of resources. *Anxiety Research*, 4(3), 187–197. <https://doi.org/10.1080/08917779108248773>
- Hobfoll, S. E., Canetti-Nisim, D., & Johnson, R. J. (2006). Exposure to terrorism, stress-related mental health symptoms, and defensive coping among Jews and Arabs in Israel. *Journal of Consulting and Clinical Psychology*, 74(2), 207–218. <https://doi.org/10.1037/0022-006X.74.2.207>
- Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, 5(1), 103–128. <https://doi.org/10.1146/annurev-orgpsych-032117-104640>
- Hobfoll, S. E., Shirom, A., & Golembiewski, R. (2001). Conservation of resources theory. In R. T. Golembiewski (Ed.), *Handbook of organizational behavior* (pp. 57–81). New York, NY: Routledge.
- Jordan, P. J., & Troth, A. C. (2020). Common method bias in applied settings: The dilemma of researching in organizations. *Australian Journal of Management*, 45(1), 3–14. <https://doi.org/10.1177/0312896219871976>
- Kardefelt-Winther, D. (2014). A conceptual and methodological critique of internet addiction research: Towards a model of compensatory internet use. *Computers in Human Behavior*, 31(1), 351–354. <https://doi.org/10.1016/j.chb.2013.10.059>
- Kardefelt-Winther, D. (2017). Conceptualizing internet use disorders: Addiction or coping process? *Psychiatry and Clinical Neurosciences*, 71(7), 459–466. <https://doi.org/10.1111/pcn.12413>
- Kaur, P., Dhir, A., Tandon, A., Alzeiby, E. A., & Abohassan, A. A. (2020). A systematic literature review on cyberstalking. An analysis of past achievements and future promises. *Technological Forecasting and Social Change*, 163(1), 1–15. <https://doi.org/10.1016/j.techfore.2020.120426>
- Kaur, P., Dhir, A., Alkhalifa, A. K., & Tandon, A. (2021). Social Media Platforms and Sleep Problems: A Systematic Literature Review, Synthesis and Framework for Future Research. *Internet Research, ahead-of-print*. <https://doi.org/10.1108/INTR-04-2020-0187>
- Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S.-L.-T., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. *Psychological Medicine*, 32(6), 959–976. <https://doi.org/10.1017/S0033291702006074>
- Khawaja, K. F., Sarfraz, M., Rashid, M., & Rashid, M. (2021). How is COVID-19 Pandemic Causing Employee Withdrawal Behavior In The Hospitality Industry? An Empirical Investigation. *Journal of Hospitality and Tourism Insights, ahead-of-print*. <https://doi.org/10.1108/JHTI-01-2021-0002>
- Kiaiad, K., Seibert, S. E., & Kraimer, M. L. (2014). Psychological contract breach and employee innovation: A conservation of resources perspective. *Journal of Occupational and Organizational Psychology*, 87(3), 535–556. <https://doi.org/10.1111/joop.12062>
- Kim, K., Triana, M., Chung, K., & Oh, N. (2015). When do employees cyberloaf? An interactionist perspective examining individual differences, justice, and empowerment. *Human Resource Management*, 55(6), 1041–1058. <https://doi.org/10.1002/hrm.21699>
- Kiraly, O., Potenza, M. N., Stein, D. J., King, D. L., Hodgins, D. C., Saunders, J. B., Griffiths, M. D., Gjonneska, B., Billieux, J., Brand, M., Abbott, M. W., Chamberlain, S. R., Corazza, O., Burkauskas, J., Sales, C. M. D., Montag, C., Lochner, C., Grünblatt, E., Wegmann, E., Martinotti, G., KookLee, H., Rumpf, H. J., Castro-Calvo, J., Rahimi-Movaghgar, A., Higuchi, S., Menchon, J. M., Zohar, J., Pellegri, L., Walitza, S., Fineberg, N. A., & Demetrovics, Z. (2020). Preventing problematic internet use during the COVID-19 pandemic: Consensus guidance. *Comprehensive Psychiatry*, 100. <https://doi.org/10.1016/j.comppsych.2020.152180>
- Ketokivi, M. A., & Schroeder, R. G. (2004). Strategic, structural contingency and institutional explanations in the adoption of innovative manufacturing practices. *Journal of Operations Management*, 22(1), 63–89. <https://doi.org/10.1016/j.jom.2003.12.002>
- Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. P., Bakker, A. B., Bamberger, P., Bapuji, H., Bhawe, D. P., Choi, V. K., Creary, S. J., Demerouti, E., Flynn, F. J., Gelfand, M. J., Greer, L. L., Johns, G., Kesebir, S., Klein, P. G., Lee, S. Y., Ozelik, S. Y., Petriglieri, H., Rothbard, J., Shaw, J., Whillans, C. R., Wilmot, A., & van Vugt, M. (2021). COVID-19 and the workplace: Implications, issues, and insights for future research and action. *American Psychologist*, 76(1), 63–77. <https://doi.org/10.1037/amp0000716>
- Koay, K. Y. (2018). Workplace ostracism and cyberloafing: A moderated-mediation model. *Internet Research*, 28(4), 1122–1141. <https://doi.org/10.1108/INTR-07-2017-0268>
- Konradt, U., Hertel, G., & Schmook, R. (2003). Quality of management by objectives, task-related stressors, and non-task-related stressors as predictors of stress and job satisfaction among teleworkers. *European Journal of Work and Organizational Psychology*, 12(1), 61–79. <https://doi.org/10.1080/13594320344000020>
- Kossek, E. E., & Lautsch, B. A. (2018). Work-life flexibility for whom? Occupational status and work-life inequality in upper, middle, and lower level jobs. *Academy of Management Annals*, 12(1), 5–36. <https://doi.org/10.5465/annals.2016.0059>
- Kraemer, K. M., McLeish, A. C., & O'Bryan, E. M. (2015). The role of intolerance of uncertainty in terms of alcohol use motives among college students. *Addictive Behaviors*, 42(2), 162–166. <https://doi.org/10.1016/j.addbeh.2014.11.033>
- Leroy, S., Schmidt, A. M., & Madjar, N. (2020). Interruptions and task transitions: Understanding their characteristics, processes, and consequences. *Academy of Management Annals*, 14(2), 661–694. <https://doi.org/10.5465/annals.2017.0146>
- Li, C., & Lalani, F. (2020). The COVID-19 pandemic has changed education forever. This is how. World Economic Forum. Accessed on 21st June 2021. <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>.
- Lim, V. K. (2002). The IT way of loafing on the job: Cyberloafing, neutralizing and organizational justice. *Journal of Organizational Behavior*, 23(5), 675–694. <https://doi.org/10.1002/job.161>
- Lin, C. Y., Broström, A., Griffiths, M. D., & Pakpour, A. H. (2020). Investigating mediated effects of fear of COVID-19 and COVID-19 misunderstanding in the association between problematic social media use, psychological distress, and insomnia. *Internet Interventions*, 21(3). <https://doi.org/10.1016/j.invent.2020.100345>
- Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, 86(1), 114–121. <https://doi.org/10.1037/0021-9010.86.1.114>
- Littleton, H., Kumpula, M., & Orcutt, H. (2011). Posttraumatic symptoms following a campus shooting: The role of psychosocial resource loss. *Violence and Victims*, 26(4), 461–476. <https://doi.org/10.1891/0886-6708.26.4.461>
- Mahmud, M. S., Talukder, M. U., & Rahman, S. M. (2021). Does ‘Fear of COVID-19’ trigger future career anxiety? An empirical investigation considering depression from COVID-19 as a mediator. *The International Journal of Social Psychiatry*, 67(1), 35–45. <https://doi.org/10.1177/0020764020935488>
- Marsh, E., Vallejos, E. P., & Spence, A. (2022). The digital workplace and its dark side: An integrative review. *Computers in Human Behavior*, 128(1), 1–21. <https://doi.org/10.1016/j.chb.2021.107118>
- Mashal, H. M. (2020). A review of cyberloafing predictors in literature. *Sustainable Business and Society in Emerging Economies*, 2(1), 21–27. <https://doi.org/10.26710/sbsce.v2i1.1196>
- Mariani, M. M., Ek Styven, M., & Teulon, F. (2021). Explaining the intention to use digital personal data stores: An empirical study. *Technological Forecasting and Social Change*, 166. <https://doi.org/10.1016/j.techfore.2021.120657>
- McEvoy, P. M., Hyett, M. P., Shihata, S., Price, J. E., & Strachan, L. (2019). The impact of methodological and measurement factors on transdiagnostic associations with intolerance of uncertainty: A meta-analysis. *Clinical Psychology Review*, 73(4). <https://doi.org/10.1016/j.cpr.2019.101778>
- Mercado, B. K., Giordano, C., & Dilchert, S. (2017). A meta-analytic investigation of cyberloafing. *Career Development International*, 22(5), 546–564. <https://doi.org/10.1108/CDI-08-2017-0142>
- Merino, M. D., Vallellano, M. D., Oliver, C., & Mateo, I. (2021). What makes one feel eustress or distress in quarantine? An analysis from conservation of resources (COR) theory. *British Journal of Health Psychology*, 26(2), 606–623. <https://doi.org/10.1111/bjhp.12501>
- O’Neil, T., Hambley, L. A., & Bercovich, A. (2014). Prediction of cyberslacking when employees are working away from the office. *Computers in Human Behavior*, 34(2), 291–298. <https://doi.org/10.1016/j.chb.2014.02.015>
- Otto, K., Dette-Hagenmeyer, D. E., & Dalbert, C. (2010). Occupational mobility in members of the labor force: Explaining the willingness to change occupations. *Journal of Career Development*, 36(3), 262–288. <https://doi.org/10.1177/0894845309345842>
- Oosthuizen, A., Rabie, G. H., & De Beer, L. T. (2018). Investigating cyberloafing, organisational justice, work engagement and organisational trust of South African retail and manufacturing employees. *SA Journal of Human Resource Management*, 16(1), 1–11. <https://hdl.handle.net/10520/EJC-ef4c1c2b5>
- Ozdemir, C., Yildiz, A., & Şahan, S. (2021). Cyberloafing behaviors of health professional students during distance education in the COVID-19 pandemic period. *Journal of Health Education*, 6(1), 1–6. <https://doi.org/10.15294/jhe.v6i1.45307>
- Pindek, S., Krajčevska, A., & Spector, P. E. (2018). Cyberloafing as a coping mechanism: Dealing with workplace boredom. *Computers in Human Behavior*, 86(3), 147–152. <https://doi.org/10.1016/j.chb.2018.04.040>
- P.M. Podsakoff S.B. MacKenzie J.Y. Lee N.P. Podsakoff Common method biases in behavioral research: A critical review of the literature and recommended remedies *Journal of applied psychology* 88 5 2003 879–903. <http://10.1037/0021-9010.88.5.879>
- Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why do we need what we need? A terror management perspective on the roots of human social motivation. *Psychological Inquiry*, 8(1), 1–20. https://doi.org/10.1207/s15327965pli0801_1
- Raja, U., Azeem, M. U., Haq, I. U., & Naseer, S. (2020). Perceived threat of terrorism and employee outcomes: The moderating role of negative affectivity and psychological

- capital. *Journal of Business Research*, 110(2), 316–326. <https://doi.org/10.1016/j.jbusres.2020.01.026>
- Rector, N. A., Kamkar, K., Cassin, S. E., Ayeart, L. E., & Laposa, J. M. (2011). Assessing excessive reassurance seeking in the anxiety disorders. *Journal of Anxiety Disorders*, 25(7), 911–917. <https://doi.org/10.1016/j.janxdis.2011.05.003>
- Reizer, A., Geffen, L., & Koslowsky, M. (2021). Life under the COVID-19 lockdown: On the relationship between intolerance of uncertainty and psychological distress. *Psychological Trauma: Theory, Research, Practice, and Policy*, 13(4), 432–437. <https://doi.org/10.1037/tra0001012>
- Reizer, A., Munk, Y., & Frankfurter, L. K. (2022). Laughing All The Way To The Lockdown: On Humor, Optimism, and Well-Being During COVID-19. *Personality and Individual Differences*, 184. <https://doi.org/10.1016/j.paid.2021.111164>
- Reizer, A., Koslowsky, M., & Geffen, L. (2020). Living in fear: The relationship between fear of COVID-19, distress, health, and marital satisfaction among Israeli women. *Health Care for Women International*, 41(11–12), 1273–1293. <https://doi.org/10.1080/07399332.2020.1829626>
- Rettie, H., & Daniels, J. (2021). Coping and tolerance of uncertainty: Predictors and mediators of mental health during the COVID-19 pandemic. *American Psychologist*, 76(3), 427–437. <https://doi.org/10.1037/amp0000710>
- Rigdon, E. E., Sarstedt, M., & Ringle, C. M. (2017). On comparing results from CB-SEM and PLS-SEM: Five perspectives and five recommendations. *Marketing: ZFP—Journal of Research and Management*, 39(3), 4–16. <https://www.jstor.org/stable/26426850>
- Rosser, B. A. (2019). Intolerance of uncertainty as a transdiagnostic mechanism of psychological difficulties: A systematic review of evidence pertaining to causality and temporal precedence. *Cognitive Therapy and Research*, 43(2), 438–463. <https://doi.org/10.1007/s10608-018-9964-z>
- Rozgonjuk, D., & Elhai, J. D. (2021). Emotion regulation in relation to smartphone use: Process smartphone use mediates the association between expressive suppression and problematic smartphone use. *Current Psychology*, 40(7), 3246–3255. <https://doi.org/10.1007/s12144-019-00271-4>
- Rozgonjuk, D., Elhai, J. D., Täht, K., Vassil, K., Levine, J. C., & Asmundson, G. J. (2019). Non-social smartphone use mediates the relationship between intolerance of uncertainty and problematic smartphone use: Evidence from a repeated-measures study. *Computers in Human Behavior*, 96(1), 56–62. <https://doi.org/10.1016/j.chb.2019.02.013>
- Ryu, E., & Cheong, J. (2017). Comparing indirect effects in different groups in single-group and multi-group structural equation models. *Frontiers in Psychology*, 8, 747. <https://doi.org/10.3389/fpsyg.2017.00747>
- Satici, B., Saricali, M., Satici, S. A., & Griffiths, M. D. (2020). Intolerance of uncertainty and mental wellbeing: Serial mediation by rumination and fear of COVID-19. *International Journal of Mental Health and Addiction*, 1–13. <https://doi.org/10.1007/s11469-020-00305-0>
- Schlomer, G. L., Bauman, S., & Card, N. A. (2010). Best practices for missing data management in counseling psychology. *Journal of Counseling Psychology*, 57(1), 1–10. <https://doi.org/10.1037/a0018082>
- Shihata, S., McEvoy, P. M., & Mullan, B. A. (2018). A bifactor model of intolerance of uncertainty in undergraduate and clinical samples: Do we need to reconsider the two-factor model? *Psychological Assessment*, 30(7), 893–903. <https://doi.org/10.1037/pas0000540>
- Sobh, R., & Perry, C. (2006). Research design and data analysis in realism research. *European Journal of Marketing*, 40(11/12), 1194–1209. <https://doi.org/10.1108/03090560610702777>
- Soga, L., Laker, B., Bolade-Ogunfodun, Y., & Mariani, M. (2022). Delegation strengthens teams working remotely. *MIT Sloan Management Review*. Available at <https://centaur.reading.ac.uk/102226/>.
- Soga, L. R., Bolade-Ogunfodun, Y., Mariani, M., Nasr, R., & Laker, B. (2022). Unmasking the other face of flexible working practices: A systematic literature review. *Journal of Business Research*, 142(2), 648–662. <https://doi.org/10.1016/j.jbusres.2022.01.024>
- Squires, L. R., Hollett, K. B., Hesson, J., & Harris, N. (2021). Psychological distress, emotion dysregulation, and coping behaviour: A theoretical perspective of problematic smartphone use. *International Journal of Mental Health and Addiction*, 19(4), 1284–1299. <https://doi.org/10.1007/s11469-020-00224-0>
- Tandon, A., Kaur, P., Ruparel, N., Islam, J. U., & Dhir, A. (2021). Cyberloafing and cyberslacking in the workplace: Systematic literature review of past achievements and future promises. *Internet Research*, 32(1), 55–89. <https://doi.org/10.1108/INTR-06-2020-0332>
- Toker, S., Laurence, G. A., & Fried, Y. (2015). Fear of terror and increased job burnout over time: Examining the mediating role of insomnia and the moderating role of work support. *Journal of Organizational Behavior*, 36(2), 272–291. <https://doi.org/10.1002/job.1980>
- Trougakos, J. P., & Hideg, I. (2009). Momentary work recovery: The role of within-day work breaks. In S. Sonnentag, P. L. Perrewé, & D. C. Ganster (Eds.), *Current perspectives on job-stress recovery* (pp. 37–84). Emerald Group.
- Turel, O., & Ferguson, C. (2020). Excessive use of technology: Can tech providers be the culprits? *Communications of the ACM*, 64(1), 42–44. <https://doi.org/10.1145/3392664>
- Udemy. (2018). Udemy Online Courses [Online]. <https://www.udemy.com>.
- Usman, M., Javed, U., Shoukat, A., & Bashir, N. A. (2021). Does meaningful work reduce cyberloafing? Important roles of affective commitment and leader-member exchange. *Behaviour & Information Technology*, 40(2), 206–220. <https://doi.org/10.1080/0144929X.2019.1683607>
- Van Woerkom, M., Bakker, A. B., & Nishii, L. H. (2016). Accumulative job demands and support for strength use: Fine-tuning the job demands-resources model using conservation of resources theory. *Journal of Applied Psychology*, 101(1), 141–150. <https://doi.org/10.1037/apl0000033>
- Varghese, L., & Barber, L. K. (2017). A preliminary study exploring moderating effects of role stressors on the relationship between Big Five personality traits and workplace cyberloafing. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 11(4), 1–18. <https://doi.org/10.5817/CP2017-4-4>
- Vasiliadis, H. M., Chudzinski, V., Gontijo-Guerra, S., & Prévile, M. (2015). Screening instruments for a population of older adults: The 10-item Kessler Psychological Distress Scale (K10) and the 7-item Generalized Anxiety Disorder Scale (GAD-7). *Psychiatry Research*, 228(1), 89–94. <https://doi.org/10.1016/j.psychres.2015.04.019>
- Vaziri, H., Casper, W. J., Wayne, J. H., & Matthews, R. A. (2020). Changes to the work-family interface during the COVID-19 pandemic: Examining predictors and implications using latent transition analysis. *Journal of Applied Psychology*, 105(10), 1073–1087. <https://doi.org/10.1037/apl0000819>
- Vitak, J., Crouse, J., & LaRose, R. (2011). Personal Internet use at work: Understanding cyberslacking. *Computers in Human Behavior*, 27(5), 1751–1759. <https://doi.org/10.1016/j.chb.2011.03.002>
- Wamba, S. F., Akter, S., Trinchera, L., & De Bourmont, M. (2019). Turning information quality into firm performance in the big data economy. *Management Decision*, 57(8), 1756–1783. <https://doi.org/10.1108/MD-04-2018-0394>
- Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2021). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied Psychology*, 70(1), 16–59. <https://doi.org/10.1111/apps.12290>
- Wayne, S., Dellmore, D., Serna, L., Jerabek, R., Timm, C., & Kalishman, S. (2011). The association between intolerance of ambiguity and decline in medical students' attitudes toward the underserved. *Academic Medicine*, 86(7), 877–882. <https://doi.org/10.1097/ACM.0b013e31821da01>
- Wu, J., Mei, W., Liu, L., & Ugrin, J. C. (2020). The bright and dark sides of social cyberloafing: Effects on employee mental health in China. *Journal of Business Research*, 112(3), 56–64. <https://doi.org/10.1016/j.jbusres.2020.02.043>
- Wu, X., Nazari, N., & Griffiths, M. D. (2021). Using fear and anxiety related to COVID-19 to predict cyberchondria: Cross-sectional survey study. *Journal of Medical Internet Research*, 23(6). <https://doi.org/10.2196/26285>
- Yang, M., Ramiah, V., Pereira, V., Temouri, Y., & Behl, A. (2021). Measuring the effectiveness and impact of COVID-19 health policies on firms and UNSDGs: Evidence from China. *Journal of Enterprise Information Management*.
- Young, K. S., & Brand, M. (2017). Merging theoretical models and therapy approaches in the context of Internet gaming disorder: A personal perspective. *Frontiers in Psychology*, 8, 1853. <https://doi.org/10.3389/fpsyg.2017.01853>
- Zhitomirsky-Geffet, M., & Blau, M. (2016). Cross-generational analysis of predictive factors of addictive behavior in smartphone usage. *Computers in Human Behavior*, 64(4), 682–693. <https://doi.org/10.1016/j.chb.2016.07.061>
- Zhong, J., Chen, Y., Yan, J., & Luo, J. (2022). The mixed blessing of cyberloafing on innovation performance during the COVID-19 pandemic. *Computers in Human Behavior*, 126(1), 1–12. <https://doi.org/10.1016/j.chb.2021.106982>
- Zhou, B., Li, Y., Hai, M., Wang, W., & Niu, B. (2021). Challenge-hindrance stressors and cyberloafing: A perspective of resource conservation versus resource acquisition. *Current Psychology*. <https://doi.org/10.1007/s12144-021-01505-0>
- Zhu, J., Wei, H., Li, H., & Osburn, H. (2021). The paradoxical effect of responsible leadership on employee cyberloafing: A moderated mediation model. *Human Resource Development Quarterly*, 32(4), 597–624. <https://doi.org/10.1002/hrdq.21432>
- Zwiebach, L., Rhodes, J., & Roemer, L. (2010). Resource loss, resource gain, and mental health among survivors of Hurricane Katrina. *Journal of Traumatic Stress*, 23(6), 751–758. <https://doi.org/10.1002/jts.20579>