The effects of abusive supervision, emotional exhaustion and organizational commitment on cyberloafing: a moderated-mediation examination

Pang Kiam Lim

Graduate School of Business, SEGi University, Kota Damansara, Petaling Jaya, Malaysia

Kian Yeik Koay

Department of Marketing, Sunway University, Subang Jaya, Malaysia, and

Wei Ying Chong

Graduate School of Business, SEGi University, Kota Damansara, Petaling Jaya, Malaysia

Abstract

Purpose – Cyberloafing (employees' non-work-related online activities at work) has become a common workplace problem for many organizations. Research investigating the underlying mechanisms and boundary conditions under which abusive supervision influences cyberloafing remains largely underdeveloped. Drawing from social exchange theory and conservation of resources theory, we developed a moderated-mediation model in which emotional exhaustion was theorized as a unique mechanism underlining why employees are more likely to engage in cyberloafing under the supervision of abusive leaders. In addition, we proposed that organizational commitment to be a relevant boundary condition to influence such a relationship.

Design/methodology/approach – We collected 255 data from employees working in public listed companies in Malaysia and used partial least squares structural equation modeling (PLS-SEM) to analyze the data.

Findings – The results showed that the influence of abusive supervision on cyberloafing through emotional exhaustion is only significant when organizational commitment is low.

Originality/value – This study constructed a moderated-mediation model by introducing the potential mediating effect of emotional exhaustion and the moderating effect of organizational commitment to reveal the mechanism through which abusive supervision related to cyberloafing.

Keywords Abusive supervision, Cyberloafing, Emotional exhaustion, Organizational commitment

Paper type Research paper

1. Introduction

Internet resources have become a necessity for all organizations to be a part of their business processes (Baturay and Toker, 2015). Effectively utilizing the Internet resource can lead to various positive ramifications such as reduced operational costs, effective communications among employees and better job performance (Anandarajan *et al.*, 2000). Ideally, the Internet is expected to be a tool for facilitating employees' job performance. However, the Internet can also be utilized as a medium to slack (Moody and Siponen, 2013). That is, employees are given the opportunities not to work by participating in online engagements unassociated with job tasks, like accessing YouTube, sending personal messages via WhatsApp and browsing non-work-related websites (Lim, 2002; Lim and Teo, 2005). The growing duration employees spend for online engagements unassociated with job tasks in the workplace has become an increasing concern for many organizations (Jandaghi *et al.*, 2015). Academic scholars have

used the term cyberloafing to describe employees' online engagements unassociated with job tasks during work (Koay and Soh, 2018). Cyberloafing is a form of production deviance behavior and organizations should not take it lightly because once employees have developed the habit of cyberloafing, organizations might have a hard time to eradicate such negative behavior (Moody and Siponen, 2013). Employees' time spent on online engagements unassociated with job tasks might benefit them but is harmful to their organizations because cyberloafing is a crime against productivity as the hours spent on cyberloafing should have been utilized for work responsibilities (Koay and Soh, 2019).

Cyberloafing is a prevalent management issue as a survey report showed that 60% of workers disclose how they had used the Internet for activities unassociated with job tasks (StaffMonitoring.com, 2015). Various similar reports also displayed the consistent results that employees spend about 40–60% of allocated work time on engagements unassociated with job tasks. For instance, a research which involved 226 Singaporean workers done by Lim and Teo (2005) showed their online engagements unassociated with job tasks for 2.7 hours per day. Furthermore, Restubog *et al.* (2011) reported that employees spend approximately 3 hours and 12 minutes on online engagements unassociated with job tasks throughout work duration. Anecdotal evidence suggested that employees waste about 5 hours per day on online activities which are unassociated with job tasks (Lim and Chen, 2012). These statistics might be under-reported, and the actual figures might be higher. For instance, it was found that employees are distracted by social media for every 10.5 minutes. To regain the full work momentum from the distraction, it takes about 23 minutes (Graves, 2013). Moreover, organizations suffer a loss of about $4500 per employee annually due to cyberloafing.

Cyberloafing has many negative consequences, apart from productivity loss. The reason why organizations are so concerned with employees' cyberloafing behavior is due to its association with various negative implications such as inefficient use of network resources (Moody and Siponen, 2013). Other negative impacts include the increased risks of legal liabilities as a result of illegal downloading, unlawful misconducts and network security breaches (Lim and Chen, 2012). For instance, employees might unintentionally download some illegal software or unknown attachments from harmful websites, which can lead to security breaches, risking the company's information being stolen or hacked by other parties. Although cyberloafing has many negative consequences, it also has some positive ramifications. Some scholars suggested the notion of cyberloafing as a good outlet for workers to cope with work stress (Koay *et al.*, 2017; Oravec, 2018). Furthermore, cyberloafing might spark new ideas to employees, acting as a source of idea generation. On top of that, Koay (2018) discovered that cyberloafing is a strategy for ostracized employees to avert losing personal resources to prevent being emotionally exhausted.

Past studies have investigated the antecedents of cyberloafing through different theoretical perspectives such as the theory of planned behavior (e.g., Askew *et al.*, 2014), the theory of interpersonal behavior (e.g., Moody and Siponen, 2013), social cognitive theory (Zhang *et al.*, 2019), uses and gratification theory (Chen *et al.*, 2011), neutralization theory (Cheng *et al.*, 2014), the big five personality model (Sheikh *et al.*, 2019) and containment theory (Soral *et al.*, 2020). However, several scholars have highlighted that research on cyberloafing is still at its infancy stage, which warrants more research to examine other potential antecedents. This study aims to understand cyberloafing from the theoretical viewpoint of social exchange theory (SET) and conservation of resource theory (COR), focusing on the influence of abusive supervision, which can be described as "subordinates' perceptions of the extent to which their supervisors engage in the sustained display of hostile verbal and nonverbal behaviors, excluding physical contact" (Tepper, 2000 p. 178) on cyberloafing through the mediating consequence of emotional exhaustion. The direct influence of abusive supervision on cyberloafing can be explained by SET because the theory posits that a relationship is maintained through a fair exchange of resources between two parties.

Therefore, it is argued that employees who are abused by their supervisors will withhold their effort at work by means of cyberloafing.

COR theory offers another possible explanation to link abusive supervision to cyberloafing through the mediating effect of emotional exhaustion, which has not been previously investigated in the past. COR theory describes stress processes, which assume that an individual has a limited amount of mental resources and is motivated to preserve and gain those depleted resources (Hobfoll, 1998). Abusive supervision is often regarded as a workplace stressor that consumes employees' personal resources (Agarwal and Avey, 2020; Akram *et al.*, 2019), resulting in emotional exhaustion, which can be described as an enduring condition of reduced bodily perseverance and emotions due to a disproportionate amount of work, personal needs and incessant pressure (Wright and Cropanzano, 1998). As a result, employees are motivated to reduce such exhaustion by engaging in cyberloafing (Aghaz and Sheikh, 2016; Henle and Blanchard, 2008). This argument is consistent with the findings of past studies. For instance, Koay (2018) found that workplace ostracism depletes employees' personal resources (e.g. time, energy), which leads to emotional exhaustion. Consequently, emotionally exhausted employees attempt to eradicate undesirable feelings caused by emotive fatigue by engaging in cyberloafing. Furthermore, Agarwal and Avey (2020) found that the relationship between abusive supervision and cyberloafing is mediated by psychological capital. In other words, abusive supervision drains employees' personal resources, which in turn causes high levels of stress, subsequently driving them to engage in cyberloafing to prevent further loss of resources or to replenish resources.

On top of that, this study further proposed organizational commitment as a boundary condition of the relationship between abusive supervision and cyberloafing through emotional exhaustion. Specifically, we argue that the influence of abusive supervision on cyberloafing through emotional exhaustion becomes weaker if the employee is committed to the organization because organizational commitment acts as a buffer against emotional exhaustion stemming from abusive supervision (Ogunfowora, 2013). On the other hand, predicated on SET, we also argue that employees who are less committed to their organization are more likely to engage in cyberloafing when they are abused and experience stress as a result of that in order to rebalance the unfair treatment in the employment relationship.

The contribution of this study is threefold. First, as Agarwal and Avey (2020) only examined the influence of abusive supervision on cyberloafing through psychological capital from a psychological capital perspective, this study offers an alternative theoretical explanation to link abusive supervision and cyberloafing through the mediating effect of emotional exhaustion. Second, the study examines the moderating effect of organizational commitment on the relationship between abusive supervision and cyberloafing through emotional exhaustion. Third, we offer some useful suggestions to help managers to handle employees' cyberloafing behavior in the workplace.

2. Literature review
2.1 Social exchange theory
Within contemporary management research, SET has been one of the widely used conceptual paradigms for understanding workplace relationships and workplace behaviors. Its origin can be traced back to as far as 1920. However, it was formally introduced by George Homans, a sociologist, in his paper called "Social Behavior as Exchange" (Homans, 1958). Social exchange had been described to signify the substitute of an action, concrete or abstract and comparatively gratifying or cost-inflated, among not less than two individuals (Homans, 1961). Essentially, the fundamental principle of the theory posits that that humans in social

situations tend to select the behaviors that bring the most benefits that are aligned with their self-interests.

There are several assumptions using SET to explain human social interactions. First, this theory posits that humans act rationally and calculate the costs and benefits of social exchanges. There will be both rational actors and reactors. It provides a clear picture of how people make a decision. Second, humans who are in an exchange process are expected to seek to attain maximum benefits rationally. Third, humans will get used to and learn the patterns of the exchange processes that produce favorable outcomes or rewards. The formation of these patterns of social interactions serves for two purposes, which are to fulfill individuals' needs and serve as a barrier for individuals to satisfy those needs. Individuals may be motivated to be in relationships and interactions with others if all of them can satisfy their own needs. In the employment relationship, employers are expected to provide material and immaterial work conditions and opportunities to employees, whereby employees are expected to work hard for the employers. In this study, we expect that abusive supervision will result in employees contribute less by holding back their efforts at work through cyberloafing.

2.2 Conservation of resource theory
Developed by Hobfoll (1998), COR theory posits people's motivation in obtaining, retaining, protecting and fostering resources that are deemed essential to them. Resources can be differentiated into four different categories, which are objects (e.g. a car, a computer), conditions (e.g. love, money), individual traits (e.g. abilities, character attributes) and vitalities (e.g. self-esteem, mental energy). The depletion of these resources will result in stress. According to COR theory, stress occurs when a person experiences (1) the risk of a net forfeiture of resources; (2) the net forfeiture of resources and (3) an absence of resource growth subsequent to the investment of resources (Hobfoll, 1989, p. 516). Resource loss impacts a person more substantially than resource gain. This is because resources are not easy to be gained and maintained (Hobfoll, 2011). In this study, abusive supervision is regarded as a source that drains employees' resources which can cause stress for employees. This is because abused employees experience losing control over valuable resources and personal autonomy. In addition, they are also more likely to have low levels of self-efficacy, optimism, hope and resilience in the workplace (Agarwal and Avey, 2020). Subsequently, employees are motivated to engage in cyberloafing as a means to prevent further loss of resources and to regain resources.

2.3 Cyberloafing
Cyberloafing is defined as "a set of behaviors at work in which an employee engages in electronically-mediated activities, particularly through the use of the internet, that his or her immediate supervisor would not consider job-related" (Askew *et al.*, 2014, p. 510). Cyberloafing includes examples such as accessing private e-mails, checking You-Tube videos, browsing Facebook, engaging in private financial transactions and posting private blogs/websites (Koay and Soh, 2019). Lim (2002) termed it as a type of production deviant behavior when workers purposely withhold their efforts to do work-related tasks, based on Robinson and Bennett's (1995) classification of workplace deviant behavior. Many employees prefer cyberloafing as a means to slack off instead of other types of lazing acts, for instance, prematurely leaving the workplace, seizing the chance for extended recess or chit-chatting with colleagues, because it is not easily detected by others (Koay and Soh, 2018). Cyberloafing allows employees to fake themselves as a hardworking person by merely acting busy clicking their computers. However, most of the online activities are personal and not work-related.

2.4 Abusive supervision

Abusive supervision has become increasingly critical delinquency that afflicts modern-day organizations, distressing approximately 10%–16% of all workers (Tepper *et al.*, 2004). This study offers a synopsis of occupational maltreatment investigation, which focuses on unmannerly surveillance or abusive supervision. Abusive supervision presents a growing challenge that upsets current organizations and employers because of the detrimental influence on workers and their managers, as well as on the occupational setting. It had also cost the organization to incur unnecessary expenses of \$23.8B per year (Tepper, *et al.*, 2006). Abusive supervision is also described to represent the extended abuse toward workers' emotions, psyche and/or mental health (Harvey *et al.*, 2007). Such abuses may involve shaming in public, invading privacy, withholding due credit and blaming subordinates wrongfully for errors committed by third parties. Other detrimental manners may include rude behavior, broken assurances, thoughtless acts, shunning or ignoring, public mockery and concealing relevant vital info, as well as the custom of derogatory speech, undue warnings and bullying strategies (Tepper, 2000). However, abusive supervision excludes corporeal violations, as they would constitute the behavioral context of physical violence (Harris *et al.*, 2007). Abusive supervision is required to have occurred a few times, which would negate the grounds of one-off occasions of such acts mentioned above. A constant form of abuse should be occurring regularly over the period for the definition to apply (Harvey *et al.*, 2007). Vigoda-Gadot (2007) suggested that the description of abusive supervision be extended to comprise manipulative behaviors, unwarranted demands and superior exploitative behaviors or directives without the option to decline.

2.5 Emotional exhaustion

Emotional exhaustion signifies "a chronic state of physical and emotional depletion that results from an excessive job, personal demands, and continuous stress" (Wright and Cropanzano, 1998, p. 486). It can be caused by one's excessive work, which leads to a sense of psychological and emotional weariness and physical exhaustion experienced by emotionally tired employees (Zohar, 1997). Emotional exhaustion can be understood by the feeling of being psychologically tired and weary due to amassed pressure from one's private life or occupational demands, or a mixture of both. Emotional exhaustion signals the onset of physical or mental collapse.

The majority of previous studies on emotional exhaustion were steered by Maslach and Jackson's three-factor notion of burnout (Maslach and Jackson, 1981, 1986). The concept proposes that burnout comprises three interconnected portions: emotional exhaustion, depersonalization and diminished personal accomplishment; the latter denotes adverse assessments of one's own character (Wilk and Moynihan, 2005; Ekman, 1997). Those who experience emotional exhaustion regularly feel that they are powerless in controlling events that transpire in life. It involves the feeling of being "stuck" or "trapped" in a circumstance. Other physical weaknesses due to emotional exhaustion could lead to lethargy, sleep deprivation and diminished enthusiasm. Chronically, this overstressed mental condition may lead to a permanent impairment on the health of the individual who had gone through this phase of life. Different people endure emotional exhaustion in a variety of manners, but usually, the indicators consist of the absence of motivated drive, sleeping problem, moodiness, bodily weakness, senses of futility, inattentiveness, indifference, migraine, appetite fluctuation, uneasiness, losing focus, absurd temper, amplified skepticism or gloom, dreadfulness and major depressive disorder. Likewise, longitudinal studies discovered that fatigued workers not only perform negatively in job-related tasks but also display extra nonattendances, as well as a higher possibility of looking for a different job at a different place (actual voluntary turnover) (Grandey *et al.*, 2004; Wright and Cropanzano, 1998).

2.6 Organizational commitment

Organizational commitment generally refers to a person's mental bond to one's workplace entity (Yousef, 2017). It is often used as an essential factor that foresees job flexibilities like turnover, organizational spirit/conduct and work performance. Other aspects, like role-pressure, empowerment, occupational uncertainty and employability and dispersal of control, are often connected to an employee's perception of organizational obligation. Commitment is defined by Merriam Webster dictionary as a pledge, an engagement, attachment, devotion or an agreement to do something for the future. The concept of workplace commitment remained a keen research topic for the social scientist and academician with an interest in organizational behavior. Generation *X, Y, Z,* and the millennial have dismissed the credo of being loyal to the company, and the company will be loyal to you. Such an equation has changed because employers today often prioritize profitability above humanities.

The concept of organizational commitment first made its round by Becker (1960) over to Meyer and Allen (1991), and numerous scholars on organizational commitment soon ensued. Despite tremendous research conducted by scholars, among the fields of management, organizational behavior and human resource management, it remains as one of the utmost fascinating concepts and approaches (Cohen, 2003; Cooper-Hakim and Viswesvaran, 2005; Morrow, 1993). Organizational commitment has become a fundamental indicator of workers' viewpoint toward the organization, as well as a reliable gauge of turnover behavior, withdrawal inclination and organizational spirit/conduct (Mathieu and Zajac, 1990; Morrow, 1993).

2.7 Hypothesis development

2.7.1 Abusive supervision and cyberloafing. According to SET, a relationship is maintained by both parties contributing something valuable to it. When supervisors abuse employees, employees will lose resources such as moral support, self-esteem and mental resources in their employee–employer relationships (Burton and Hoobler, 2006). Furthermore, employees are more likely to experience job dissatisfaction when facing abusive supervision in the workplace. As a result, employees tend to retaliate against their abusive supervisors by contributing lesser efforts at work. For instance, it was found that abusive employees tend to have a low level of proactive behaviors due to low levels of organizational identification (Lyu *et al.*, 2016). Moreover, Mackey *et al.* (2016) found that workers upon being mistreated by respective superiors have the tendency to transfer their anger by bullying their co-workers. However, workplace bullying may cause many negative consequences, such as the victims might retaliate. Hence, we argue that abused employees are more likely to engage in cyberloafing in order to reduce their work efforts in the workplace as a way of revenge on their supervisors' mistreatment (Agarwal and Avey, 2020). Therefore, a hypothesis is formulated below.

H1. Abusive supervision has a significant positive influence on cyberloafing

2.7.2 Emotional exhaustion as a mediator. According to Lyu *et al.* (2016), abusive supervision can cause the forfeiture of various valuable workplace resources. Abused employees are less likely to get supervisor support, which is crucial for better work performance or pro-social behaviors. For instance, abusive supervision promotes employees to hide knowledge in the workplace (Feng and Wang, 2019). Furthermore, abused employees have to exhaust more resources not only to endure the negative treatments from their supervisors but also to please their abusive supervisors in hopes that they would not get further abused. As per COR theory, people are inclined to preserve and gain resources. Hence, workers tend to participate in cyberloafing behavior to regain lost resources. Cyberloafing has constantly been used by

employees to cope with job stress and workplace aggression (Oravec, 2018). Also, the constant abuse by the supervisor will deplete employees' psychological resources, which are meant for dealing with other issues in the workplace, including low self-efficacy, low self-esteem, emotional exhaustion and others. In the absence of supervisor support from which social and moral support is obtained, workers tend to undergo emotional exhaustion. Past studies discovered that abusive supervision shows a substantial negative impact on employees' emotional exhaustion and job tension (e.g. Anasori *et al.*, 2020; Mackey *et al.*, 2013; McAllister *et al.*, 2018). Hence, the following hypothesis is formulated.

H2. Abusive supervision has a significant positive influence on emotional exhaustion

According to COR theory, an individual strives to regain their resources in order to reduce stress. In applying the theory in this context, emotionally exhausted employees are motivated to actions that can regain their depleted resources. Consistent with Koay (2018), the study showed that ostracized employees expand their mental resources to cope with the cold treatment from their co-workers, resulting in emotional exhaustion, which in turn engages in cyberloafing to prevent further loss of resources and regain resources. For instance, Tourigny *et al.* (2013) found that emotionally exhausted employees have a higher tendency for higher levels of turnover intention and a lower level of organizational spirit/conduct directed toward the organization. Similarly, this study surmises that abused employees tend to experience emotional exhaustion owing to the forfeiture of valuable resources. Subsequently, to cope with those losses, employees are motivated to engage in cyberloafing to avoid contacting with their abusive supervisors to prevent further loss of resources and to regain resources (e.g. a sense of self-control and self-esteem) by having social interactions with others in the virtual world. Thus, we posit that:

H3. Emotional exhaustion has a significant positive influence on cyberloafing

As mentioned earlier, we argue that abusive supervision causes depletion of resources such as a sense of social control and self-esteem, which subsequently leads to emotional exhaustion. This is because abused employees have to squander unnecessary resources to cope with abusive employers. According to Oravec (2018), cyberloafing is an activity that can help employees to escape from stress and negative feelings. Therefore, we postulate that emotionally fatigued workers, as a result of abuse supervision are more likely to engage in cyberloafing to cope with the stress. Hence, we hypothesize that:

H4. Emotional exhaustion mediates the relationship between abusive supervision and cyberloafing

2.7.3 Organizational commitment as a moderator. This present study proposed that organizational commitment as a moderator of the relationship between emotional exhaustion and cyberloafing. Specifically, the influence of emotional exhaustion on cyberloafing is expected to be weaker for those with high levels of organizational commitment because of their attachment to their job with monetary benefits and their desire to perform well in the organization. Therefore, commitment is an important resource to help employees to handle the detrimental impacts of stress and stay focused on their roles better (Antonovsky and Antonovsky, 1974; Kobasa, 1982). For instance, King and Sethi (1997) found that the impact of role stressors on burnout tends to be strong for employees who have low affective commitment. Franke and Felfe (2011) also found that detrimental impacts of the changes in authority on employees' perceived stress are smaller for highly committed employees. Similarly, it is argued that emotionally exhausted employees are less likely to engage in cyberloafing as a means for energy replenishment if they are committed to their organization. Hence, we postulate that:

H5. Organizational commitment moderates the positive relationship between emotional exhaustion and cyberloafing, such that the relationship is stronger when organizational commitment is low

Furthermore, it is further proposed that the impact of abusive supervision on cyberloafing through emotional exhaustion varies depending on organizational commitment. It is argued that less committed employees who experience abusive supervision by superiors possess the tendency to suffer emotional exhaustion; thus, resulting in cyberloafing. For instance, past studies found that employees who have low affective organizational commitment are more likely to experience work stress and weariness (Meyer *et al.*, 2002; Siu and Cooper, 1998). When employees are not committed to their organization, they no longer feel like staying in the organization. On top of that, a negative impact of abusive supervision on employees' organizational obligations was similarly found by Ogunfowora (2013). Without organizational commitment acting as a resource to buffer the potential negative impact of emotional exhaustion and abusive supervision, the incidental consequence of emotional exhaustion on the connection between abusive supervision and cyberloafing is postulated to become more robust when organizational commitment is low. Thus, we posit that:

H6. Organizational commitment moderates the indirect effect of emotional exhaustion on the relationship between abusive supervision and cyberloafing, such that the relationship is stronger when organizational commitment is low

The research model is presented in Figure 1.

3. Methodology
3.1 Sample and procedure
The survey method was employed to collect quantitative data in order to achieve the research objectives. The target population of this study was employees working in public listed companies in Malaysia. However, they have to meet certain criteria in order to be eligible to be our respondents. First, they must have at least one direct supervisor to whom they need to report. This is because this study required our respondents to measure the extent to which they experience abusive supervision in the workplace. Without having to report to a supervisor (e.g. CEO or self-employed), it is impossible. Second, they must be provided a personal computer with Internet access in the workplace. This requirement is to ensure that all respondents have the same resource to engage in cyberloafing.

Prior to handing out the survey questionnaires to the actual target population, the questionnaire was pre-tested on three academic experts to ensure the face validity of all the scales under study. Furthermore, we also conducted a pre-test by distributing 34 survey questionnaires to working adults. Preliminary results generated from the pre-test sample
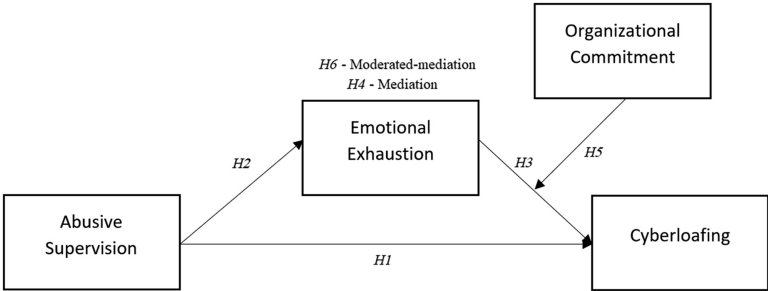
Figure 1.
Research model

showed that all scales were reliable as the Cronbach's alpha values for all constructs are greater than 0.7 (Nunnally and Bernstein, 1994). After some modifications to the questionnaire were made for better clarity, we sent the online survey link to the representative of each public listed company in Malaysia through personal contacts and asked the person in charge to distribute it to the employees. However, we explicitly mentioned to the representative that employees must have met the two criteria mentioned above in order to be our target respondents.

A total of 255 completed data were collected. The respondents include 125 (49%) females and 130 (51%) males. The majority of them were Chinese (81.6%). In terms of age group, 3 (1.2%) were below 21, 72 (28.2%) were 21–30, 85 (33.3%) were 31–40, 57 (22.4%) were 41–50, and 38 (14.9%) were 51 and above. Education statistics showed that 22 (8.6%) had completed secondary or pre-university education, 39 (15.3%) had a diploma, 146 (57.3%) had a bachelor's degree, 47 (18.4%) had a master's degree and 1 (0.4%) had a doctorate. Lastly, only eight (3.1%) reported that their Internet skill was very unskilled. The full demographic profile of the respondents is presented in Table 1.

3.2 Measures
Cyberloafing. This study used a 3-item scale by Moody and Siponen (2013) to measure cyberloafing. We asked respondents to provide their answers on a 7-point Likert scale ranging from 1 – strongly disagree to 7 – strongly agree.

	Frequency	Percentage
Gender		
Female	125	49.0
Male	130	51.0
Ethnicity		
Malay	29	11.4
Chinese	208	81.6
Indian	6	2.4
Others	12	4.7
Age group		
below 21	3	1.2
21 to 30	72	28.2
31 to 40	85	33.3
41 to 50	57	22.4
51 to 60	35	13.7
61 or older	3	1.2
Highest education		
Secondary / Pre-university	22	8.6
Diploma	39	15.3
Degree	146	57.3
Masters	47	18.4
Doctorate	1	0.4
Internet skills		
Very unskilled	8	3.1
Moderately skilled	107	42.0
Skilled	103	40.4
Very skilled	37	14.5

Table 1.
Demographic profile

Abusive supervision. A 15-item scale was adapted from Tepper (2000) to measure abusive supervision. Respondents were required to indicate their agreement toward the questions related to this construct in a response format of a 7-point Likert scale ranging from 1 – strongly disagree to 7 – strongly agree.

Emotional exhaustion. A shorted version emotional exhaustion scale by Maslach and Jackson (1981) was used to measure emotional exhaustion. The scale consisted of three items, as used by Hülsheger *et al.* (2013). Respondents indicated the degree to which they agreed with each of the items on a 7-point Likert scale ranging from 1 – strongly disagree to 7 – strongly agree.

Organizational commitment. Organizational commitment was measured using a 3-item scale by Giauque and Varone (2019). Respondents were required to indicate their agreement toward the questions related to this construct in a response format of a 7-point Likert scale ranging from 1 – strongly disagree to 7 – strongly agree.

Control variable. Gender (female = 0, male = 1) was included as a control variable as past studies indicated that it has a significant influence on cyberloafing (e.g. Betts *et al.*, 2014).

All items are presented in Appendix 1.

4. Data analysis
The reasons for using partial least squares structural equation modeling (PLS-SEM) instead of covariance-based SEM are (1) the flexibility on the data assumption of normal distribution, (2) the suitability for theory development and (3) the ability to handle small sample data. We used Smart PLS software to perform PLS-SEM. This study followed the assessment procedure recommended by Hair *et al.* (2017), which we first evaluate the measurement model, followed by the structural model.

4.1 Common method variance
Common method variance (CMV) should be examined in survey-based studies, especially when data for the independent and dependent variables were collected using the same method at the same point in time. To overcome CMV, we employed the procedural remedies suggested by MacKenzie and Podsakoff (2012), such as including a well-written cover letter, ensuring the confidentiality of respondents, avoiding confusing and complex questions and providing clear instructions. Apart from that, we also conducted several statistical tests to determine the seriousness of CMV in this study. First, by looking at the correlation matrix in Table 2, none of the correlation was greater than 0.9 (Bagozzi *et al.*, 1991), indicating CMV is not a concern. Second, we performed a more rigorous test, which is a full collinearity test proposed by Kock (2015). In Table 3, all variance inflation factor values were less than 3.3, providing evidence that the threat of CMV in this study is negligible.

4.2 Measurement model
Following the evaluation guidelines by Hair *et al.* (2017), the examination of the measurement model involves internal consistency reliability, convergent validity and discriminant validity. In Table 4, the Cronbach's alpha and composite reliability values for all constructs were greater than 0.7, indicating high internal consistency of measures. Furthermore, convergent validity was also ascertained as the factor loadings were greater than 0.7, and average variance extracted (AVE) values of all reflective constructs were above 0.5. Discriminant validity was assessed by the Fornell–Larcker criterion and Heterotrait–Monotrait ratio (HTMT) criterion. As shown in Table 2, the square root of AVE was greater than correlation values in rows and columns, passing the Fornell–Larcker criterion. As for the HTMT criterion, the HTMT value should not be higher than 0.85 (Henseler *et al.*, 2015). Table 5 shows

that all the HTMT values were lower than the recommended value of 0.85, indicating that discriminant validity is not a serious issue in this study.

Construct	Mean	Std	1	2	3	4	5
1) Abusive supervision	2.56	1.36	*0.894*				
2) Cyberloafing	4.30	1.90	−0.073	*0.862*			
3) Emotional exhaustion	3.91	1.40	0.316	0.105	*0.943*		
4) Organizational commitment	5.15	1.22	−0.260	0.079	−0.057	*0.924*	
5) Gender	n.a	n.a	0.089	0.058	0.001	0.015	n.a

Note(s): Values on the diagonal (italicized) represent the square root of the average variance extracted while the off-diagonals are correlations

Table 2. Fornell–Larcker criterion

	Abusive supervision	Cyberloafing	Emotional exhaustion	Organizational commitment
Variance inflation factor (VIF)	1.170	1.015	1.111	1.062

Table 3. A full collinearity test

Construct	Item	Factor loadings	Cronbach's alpha	Composite reliability	Average variance extracted (AVE)
Abusive supervision (AS)	AS1	0.875	0.982	0.984	0.799
	AS2	0.908			
	AS3	0.874			
	AS4	0.919			
	AS5	0.911			
	AS6	0.858			
	AS7	0.885			
	AS8	0.912			
	AS9	0.809			
	AS10	0.891			
	AS11	0.931			
	AS12	0.950			
	AS13	0.901			
	AS14	0.929			
	AS15	0.847			
Cyberloafing (CL)	CL1	0.965	0.891	0.894	0.743
	CL2	0.933			
	CL3	0.652			
Emotional exhaustion (EE)	EE1	0.928	0.938	0.960	0.890
	EE2	0.940			
	EE3	0.961			
Organizational commitment (OC)	OC1	0.930	0.917	0.946	0.854
	OC2	0.947			
	OC3	0.894			

Table 4. Measurement model

4.3 Structural model

This study evaluated the structural model by examining the significance of path coefficients, effect size (f^2), coefficient of determination (R^2) and predictive relevance (Q^2). The full structural model results were shown in Table 6. The model fit was also assessed using the Standardized Root Mean Square Residual (SRMR) and Normed Fit Index (NFI). SRMR assessed the discrepancies between observed and expected correlations whereby NFI represented an incremental fit measure. Table 6 shows that all models had SRMR values lower than 0.08 and NFI values greater than 0.8 (Henseler *et al.*, 2016), indicating the data fitted the model well. A bootstrapping procedure of 5,000 resamples was performed to obtain the standard error to compute the *t*-value. It was found H1 was not supported indicating that abusive supervision has no significant influence on cyberloafing ($b = -0.121$, $t = 1.147$, $p > 0.05$, $f^2 = 0.013$). However, abusive supervision has a significant positive influence on emotional exhaustion ($b = 0.316$, $t = 5.131$, $p < 0.001$, $f^2 = 0.111$), thus H2 was supported. Next, no support was found for H3 as emotional exhaustion was found to have no significant influence on cyberloafing ($b = 0.142$, $t = 1.515$, $p > 0.05$, $f^2 = 0.019$).

Furthermore, we found that H4 was not supported as the confidence intervals of the indirect effect (AS-> EE-> CL) contained a value of zero in between (see Table 7). The moderating effect of organizational commitment on the relationship between emotional exhaustion and cyberloafing was assessed using the product indicator approach to create the interaction term. It was found that H5 was supported as the interaction term was significant ($b = -0.135$, $t = 2.173$, $p < 0.05$, $f^2 = 0.025$).

To confirm H6, we also assessed the moderating effect of organizational commitment on the indirect relationship of abusive supervision on cyberloafing through emotional exhaustion. First, we ran the PLS algorithm to extract the latent variable scores for each construct. Next, all the latent variable scores were then used to run the PROCESS Macro. Similarly, gender was included as a control variable. Table 8 shows that the bias-corrected 95% bootstrap of the moderated-mediation index did not include the value of zero, indicating the conditional indirect effect is significant, supporting H6. Table 9 demonstrates that the indirect relationship of abusive supervision on cyberloafing through emotional exhaustion is significant when organizational commitment is low but is not significant when organizational commitment is high. To ensure that our results are consistent, we made a comparison of structural model results using both PROCESS macro (using mean scores) and PLS-SEM as shown in Appendix 2. Results showed that both generated consistent outcomes.

5. Discussion

Surprisingly, this study found that abusive supervision has no significant influence on cyberloafing. According to SET, a relationship is maintained if both parties contribute equally, satisfying each's needs throughout the exchange process. Hence, the result is rather unexpected because we expect that employees who got abused by their supervisor would engage in non-work-related online activities to withhold their efforts at work as a means of retaliation. For instance, Zhou (2016) reported that abusive supervision negatively affects

	1	2	3	4	5
1) Abusive supervision					
2) Cyberloafing	0.072				
3) Emotional exhaustion	0.323	0.086			
4) Organizational commitment	0.276	0.064	0.073		
5) Gender	0.091	0.040	0.023	0.028	

Table 5.
HTMT criterion

Relationships	Model 1	f^2	Model 2	f^2	Model 3	f^2	Support?
	$R^2_{EE} = 0.100 / Q^2_{EE} = 0.080$ $R^2_{CL} = 0.027 / Q^2_{CL} = 0.007$ SRMR: 0.045, NFI: 0.866		$R^2_{EE} = 0.100 / Q^2_{EE} = 0.080$ $R^2_{CL} = 0.031 / Q^2_{CL} = 0.004$ SRMR: 0.045, NFI: 0.854		$R^2_{EE} = 0.100 / Q^2_{EE} = 0.080$ $R^2_{CL} = 0.042 / Q^2_{CL} = 0.019$ SRMR: 0.043, NFI: 0.860		
H1: AS-> CL	−0.121 (1.147)	0.013	−0.108 (1.164)	0.010	−0.087 (1.187)	0.007	No
H2: AS -> EE	0.316*** (5.131)	0.111	0.316*** (5.168)	0.111	0.317*** (5.106)	0.112	Yes
H3: EE -> CL	0.142 (1.515)	0.019	0.143 (1.589)	0.019	0.128 (1.640)	0.015	No
OC -> CL			0.058 (0.589)	0.003	−0.003 (0.035)	0.000	
H5: OC*EE -> CL					−0.135* (2.173)	0.025	Yes
Control variable							
Gender -> CL	0.068 (0.934)		0.066 (0.937)		0.063 (0.975)		

Note(s): CL: Cyberloafing; AS: Abusive supervision; EE: Emotional exhaustion; OC: Organizational commitment, SRMR: Standardized Root Mean Square Residual; NFI: Normed Fit Index; R^2: coefficient of determination; Q^2: predictive relevance, t-values in parentheses (based on n = 5,000 subsamples), ***p < 0.001 (t-value: 3.092); **p < 0.01 (t-value: 2.327); *p < 0.05 (t-value: 1.645); ns = not significant (one-tailed test)

Table 6.
Structural model
results

employees' job performance due to spending more time on coping with negative emotions due to abusive supervision rather than on job-related tasks.

Furthermore, abusive supervision was found to have a significant positive influence on emotional exhaustion, suggesting that employees who are constantly abused by their supervisors are more likely to experience emotional exhaustion, consistent with COR theory that abusive supervision depletes employees' mental resources which then cause strain (Martinko *et al.*, 2013). Abusive supervision is a form of workplace stressor that drains employees' valued personal resources (Whitman *et al.*, 2014).

Besides, emotional exhaustion was found to have no significant influence on cyberloafing, contradicting previous works (e.g., Aghaz and Sheikh, 2016; Koay, 2018) in which cyberloafing is heralded as an activity engaged by employees to alleviate job stress and job tension in order to replenish resources. Nonetheless, the insignificant result between emotional exhaustion and cyberloafing can be explained by the moderating effect of organizational commitment as our empirical data showed abused employees who are

	Std. Beta	BCCI	Std. Error	*t*-value	*p*-value	Support?
H4: AS -> EE -> CL	0.045	[−0.040, 0.097]	0.033	1.368	0.171	No

Note(s): CL: Cyberloafing; AS: Abusive supervision; EE: Emotional exhaustion, BCCI: Bias corrected confidence interval. Bootstrapping based on $n = 5,000$ subsamples (two-tailed test)

Table 7.
Mediating results

Moderator = OC	Index	SE (Boot)	Bias corrected bootstrap 95% confidence interval	
			Lower	Upper
AS->EE->CL	−0.040	0.019	−0.082	−0.006

Note(s): CL: Cyberloafing; AS: Abusive supervision; EE: Emotional exhaustion; OC: Organizational commitment

Table 8.
Index of moderated mediation

Mediator	Control	Indirect effect	Boot SE	Bias corrected bootstrap 95% confidence interval	
				Lower	Upper
EE	−1.002	0.091	0.032	0.038	0.168
EE	0.000	0.051	0.026	0.009	0.113
EE	1.002	0.010	0.032	−0.048	0.077

Note(s): Values for OC (moderator) are the mean and plus/minus one standard deviation (SD) from mean

Mediator	Control	Indirect effect	Boot SE	Bias corrected bootstrap 95% confidence interval	
				Lower	Upper
EE	−1.138	0.096	0.035	0.038	0.175
EE	−0.660	0.077	0.029	0.0249	0.146
EE	−0.028	0.052	0.026	0.010	0.113
EE	0.703	0.022	0.029	−0.029	0.086
EE	1.181	0.003	0.034	−0.060	0.076

Note(s): Values for OC (moderator) are 10th, 25th, 50th, 75th and 90th percentiles

Table 9.
Conditional indirect effect analyses

committed to their organizations are less likely to engage in cyberloafing despite experiencing emotional exhaustion. This is because committed employees have significant professional loyalty and deep identification with the organization (Giauque and Varone, 2019; Steinhaus and Perry, 1996). Hence, they would not want to do something harmful to the organization. In the same vein, those who have low levels of organizational commitment are more inclined to engage in cyberloafing when experience high levels of emotional exhaustion because they do not care about the organization and would be willing to leave at any time (Ramalho Luz *et al.*, 2018).

This study also found that the mediating effect of emotional exhaustion on the relationship between abusive supervision and cyberloafing is moderated by organizational commitment. That is, the influence of abusive supervision on cyberloafing via emotional exhaustion is only significant for employees who have low levels of organizational commitment. As for employees who have high levels of organizational commitment, they would not engage in cyberloafing despite experiencing emotional exhaustion due to abusive supervision because organizational commitment buffers the negative impact of abusive supervision and emotional exhaustion on cyberloafing (Ogunfowora, 2013). However, such buffer effects would not last long if organizations do not counteract the issue of abusive supervision because abused employees will slowly lose confidence with the organization and subsequently resort to engaging in cyberloafing as well. Through cyberloafing, abused employees could take the opportunity to have a mental break to temporarily detach themselves from a stressful work environment.

5.1 Theoretical and managerial implications
This study has several theoretical and managerial contributions to the current cyberloafing literature. First, this study found that abusive supervision indeed causes emotional exhaustion in a Malaysian context, successfully replicating the results of past studies (e.g. Anasori *et al.*, 2020; Mackey *et al.*, 2013; McAllister *et al.*, 2018). Organizations must provide a proper channel for employees to report their abusive supervisors. Often employees are afraid of reporting their abusive supervisors because employees do not have a safe channel of doing it. Unsuccessful complaints might lead to retaliation by their supervisors, which could jeopardize their job.

The second contribution of this study is the discovery of the moderating effect of organizational commitment on the relationship between emotional exhaustion and cyberloafing. Despite past studies showing a significant positive relationship between emotional exhaustion and cyberloafing (e.g. Aghaz and Sheikh, 2016; Koay, 2018), this study found out that the relationship is more complicated in a way that organizational commitment affects the strength of the relationship, which has not been investigated by past studies. Although organizational commitment can act as a cushion absorbing the impact of emotional exhaustion on cyberloafing, organizations need to ensure their employees are not experiencing long-term stress because it can negatively affect their health and, subsequently, their performance. Moreover, fostering organizational commitment in employees is important but it takes time and effort for organizations to build bonds with them.

In addition, this study found that the influence of abusive supervision on cyberloafing via emotional exhaustion varied depending on employees' organizational commitment, which is another contribution of this study. According to SET and COR theory, abusive supervision should lead to emotional exhaustion, which in turn results in cyberloafing. This is because abusive supervision drains employees' valued personal resources (e.g. energy and time), which then causes strain. Subsequently, to overcome the strain employees resort to cyberloafing to reduce strain by regaining their resources in the virtual world.

Conventionally, cyberloafing has always been regarded as counterproductive workplace behavior by many organizations because they believe that employees spend too much time on non-work-related online activities, which can harm their productivity. However, the results of this study supported Andel *et al*.'s (2019) assertion that cyberloafing can act as an emotion-focused coping mechanism. Those who constantly get abused by their supervisors tend to experience high levels of emotional exhaustion and therefore are more likely to engage in cyberloafing because they need to take a short break to replenish their resources. As stated by COR theory, people are naturally motivated to engage in behavior that can refill their depleted resources. Organizations should not overly focus on the negative implications of cyberloafing but also consider the positive ramifications. Because eliminating cyberloafing in the workplace is impossible, employers may want to allow employees to engage in cyberloafing for a short amount of period as a micro-break to overcome emotional exhaustion which would be a better strategy (Koay and Soh, 2019).

6. Conclusion
In conclusion, this study successfully provided evidence that the relationship between abusive supervision and cyberloafing via emotional exhaustion is moderated by organizational commitment, that is, those who have low levels of organizational commitment are more likely to engage in cyberloafing if they experience emotional exhaustion as a result of abusive supervision, advancing the applicability of SET and COR theory in the abusive supervision and cyberloafing contexts. However, this study has several limitations. First, this study collected data from employees from public listed companies in Malaysia, which might limit the generalizability of the results to the entire working population. The research model could be further replicated on samples from the private sector. Second, the use of cross-sectional data may inherently cause the issue of common method variance, although our study found that the issue is minimal using the full-collinearity test. Hence, we suggest future scholars collect longitudinal data and perform cross-lagged panel analysis if possible, in order to get more reliable and valid results. Third, future research may want to explore other potential moderators to explain the insignificant direct relationship between abusive supervision and cyberloafing. Lastly, Agarwal and Avey (2020) found that psychological capital is a significant mediator of the relationship between abusive supervision and cyberloafing, but this study did not include it as a control variable in the regression analysis. Therefore, future studies should include psychological capital as a control variable to reduce the potential for getting spurious findings.

References

Agarwal, U. and Avey, J. (2020), "Abusive supervisors and employees who cyberloaf: examining the roles of psychological capital and contract breach", *Internet Research*, Vol. 30 No. 3, pp. 789-809.

Aghaz, A. and Sheikh, A. (2016), "Cyberloafing and job burnout: an investigation in the knowledge intensive sector", *Computers in Human Behavior*, Vol. 62, pp. 51-60.

Akram, Z., Li, Y. and Akram, U. (2019), "When employees are emotionally exhausted due to abusive supervision. a conservation-of-resources perspective", *International Journal of Environmental Research and Public Health*, Vol. 16 No. 18, p. 3300.

Anandarajan, M., Simmers, C. and Igbaria, M. (2000), "An exploratory investigation of the antecedents and impact of internet usage: an individual perspective", *Behavioural Information Technology*, Vol. 19 No. 3, pp. 69-85.

Anasori, E., Bayighomog, S.W. and Tanova, C. (2020), "Workplace bullying, psychological distress, resilience, mindfulness, and emotional exhaustion", *The Service Industries Journal*, Vol. 40 Nos 1/2, pp. 65-89.

Andel, S.A., Kessler, S.R., Pindek, S., Kleinman, G. and 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*, Vol. 101, pp. 124-130.

Antonovsky, H.F. and Antonovsky, A. (1974), "Commitment in an Israeli Kibbutz", *Human Relations*, Vol. 27 No. 3, pp. 303-319.

Askew, K., Buckner, J.E., Taing, M.U., Ilie, A., Bauer, J.A. and Coovert, M.D. (2014), "Explaining cyberloafing: the role of the theory of planned behaviour", *Computers in Human Behavior*, Vol. 36, pp. 510-519.

Bagozzi, R.P., Yi, Y. and Phillips, L.W. (1991), "Assessing construct validity in organizational research", *Administrative Science Quarterly*, Vol. 3 No. 3, pp. 421-458.

Baturay, M.H. and Toker, S. (2015), "An investigation of the impact of demographics on cyberloafing from an educational setting angle", *Computers in Human Behavior*, Vol. 50, pp. 358-366.

Becker, H.S. (1960), "Notes on the concept of commitment", *American Journal of Sociology*, Vol. 66 No. 1, pp. 32-40.

Betts, T.K., Setterstrom, A.J., Pearson, J.M. and Totty, S. (2014), "Explaining cyberloafing through a theoretical integration of theory of interpersonal behaviour and theory of organizational justice", *Journal of Organizational and End User Computing*, Vol. 26 No. 4, pp. 23-42.

Burton, J. and Hoobler, J. (2006), "Subordinate self-esteem and abusive supervision", *Journal of Managerial Issues*, Vol. 18 No. 3, pp. 340-355.

Chen, J.V., Ross, W.H. and Yang, H. (2011), "Personality and motivational factors predicting internet abuse at work", *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, Vol. 5 No. 1, Article 5.

Cheng, L., Li, W., Zhai, Q. and Smyth, R. (2014), "Understanding personal use of the Internet at work: an integrated model of neutralization techniques and general deterrence theory", *Computers in Human Behavior*, Vol. 38, pp. 220-228.

Cohen, A. (2003), *Multiple Commitments in the Workplace: An Integrative Approach*, Lawrence Erlbaum Associates, Mahwah, NJ.

Cooper-Hakim, H.,A. and Viswesvaran, C. (2005), "The construct of work commitment: testing an integrative framework", *Psychological Bulletin*, Vol. 131 No. 2, pp. 241-259.

Ekman, P. (1997), "Expression or communication about emotion", in Segal, N.L., Weisfeld, G.E. and Weisfeld, C.C. (Eds), *Uniting Psychology and Biology: Integrative Perspectives on Human Development*, American Psychological Association, Washington, DC, pp. 315-338.

Feng, J. and Wang, C. (2019), "Does abusive supervision always promote employees to hide knowledge? from both reactance and COR perspectives", *Journal of Knowledge Management*, Vol. 23 No. 7, pp. 1455-1474.

Franke, F. and Felfe, J. (2011), "How does transformational leadership impact employees' psychological strain?: examining differentiated effects and the moderating role of affective organizational commitment", *Leadership*, Vol. 7 No. 3, pp. 295-316.

Giauque, D. and Varone, F. (2019), "Work opportunities and organizational commitment in international organizations", *Public Administration Review*, Vol. 79 No. 3, pp. 343-354.

Grandey, A., Dickter, D. and Sin, H.P. (2004), "The customer is not always right: customer aggression and emotion regulation of service employees", *Journal of Organizational Behavior*, Vol. 25 No. 3, pp. 397-418.

Graves, J.A. (2013), "The top cyberloafing activities of a distracted office worker", US News, available at: http://money.usnews.com/money/careers/articles/2013/03/21/the-top-cyberloafingactivities-of-a-distracted-office-worker (accessed 20 August 2018).

Hair, J.F.J., Hult, G.T.M., Ringle, C.M. and Sarstedt, M. (2017), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed., Sage Publications, Thousand Oaks, CA.

Harris, K.J., Kacmar, K.M. and Zivnuska, S. (2007), "An investigation of abusive supervision as a predictor of performance and the meaning of work as a moderator of the relationship", *The Leadership Quarterly*, Vol. 18 No. 3, pp. 252-263.

Harvey, P., Stoner, J., Hochwarter, W. and Kacmar, C. (2007), "Coping with abusive supervision: the neutralizing effects of ingratiation and positive affect on negative employee outcomes", *The Leadership Quarterly*, Vol. 18 No. 3, pp. 264-280.

Henle, C.A. and Blanchard, A.L. (2008), "The interaction of work stressors and organizational sanctions on cyberloafing", *Journal of Managerial Issues*, Vol. 20 No. 3, pp. 383-400.

Henseler, J., Ringle, C.M. and Sarstedt, M. (2015), "A new criterion for assessing discriminant validity in variance-based structural equation modeling", *Journal of the Academy of Marketing Science*, Vol. 43 No. 1, pp. 115-135.

Henseler, J., Hubona, G.S. and Pauline, A.R. (2016), "Using PLS path modeling in new technology research: updated guidelines", *Industrial Management and Data Systems*, Vol. 116 No. 1, pp. 2-20.

Hobfoll, S.E. (1989), "Conservation of resources: a new attempt at conceptualizing stress", *American Psychologist*, Vol. 44 No. 3, pp. 513-524.

Hobfoll, S.E. (1998), *Stress, Culture, and Community*, Plenum, New York, NY.

Hobfoll, S.E. (2011), "Conservation of resources theory: its implication for stress, health, and resilience", in Folkman, S. (Ed.), *Oxford Library of Psychology. The Oxford Handbook of Stress, Health, and Coping*, Oxford University Press, New York, NY, pp. 127-147.

Homans, G.C. (1958), "Social behavior as exchange", *American Journal of Sociology*, Vol. 63 No. 3, pp. 597-606.

Homans, G.C. (1961), *Social Behavior: Its Elementary Forms*, Harcourt Brace, New York, NY.

Hülsheger, U., Alberts, H., Feinholdt, A. and Lang, J. (2013), "Benefits of mindfulness at work: the role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction", *Journal of Applied Psychology*, Vol. 98 No. 2, pp. 310-325.

Jandaghi, G., Alvani, S.M., Matin, H.Z. and Kozekanan, S.F. (2015), "Cyberloafing management in organizations", *Iranian Journal of Management Studies*, Vol. 8 No. 3, pp. 335-349.

King, R.C. and Sethi, V. (1997), "The moderating effect of organizational commitment on burnout in information systems professionals", *European Journal of Information Systems*, Vol. 6 No. 2, pp. 86-96.

Koay, K.Y. (2018), "Workplace ostracism and cyberloafing: a moderated-mediation model", *Internet Research*, Vol. 28 No. 4, pp. 1122-1141.

Koay, K.Y. and Soh, P.C.H. (2018), "Should cyberloafing be allowed in the workplace?", *Human Resource Management International Digest*, Vol. 26 No. 7, pp. 4-6.

Koay, K.Y. and Soh, P.C.H. (2019), "Does cyberloafing really harm employees' work performance?: an overview", *Lecture Notes on Multidisciplinary Industrial Engineering*, Cham, pp. 901-912.

Koay, K.Y., Soh, P.C.H. and Chew, K.W. (2017), "Do employees' private demands lead to cyberloafing?: the mediating role of job stress", *Management Research Review*, Vol. 40 No. 9, pp. 1025-1038.

Kobasa, S.C., Maddi, S.R. and Kahn, S. (1982), "Hardiness and health: a prospective study", *Journal of Personality and Social Psychology*, Vol. 42 No. 1, pp. 168-177.

Kock, N. (2015), "Common method bias in PLS-SEM: a full collinearity assessment approach", *International Journal of e-Collaboration*, Vol. 11 No. 4, pp. 1-10.

Lim, V.K.G. (2002), "The IT way of loafing on the job: cyberloafing, neutralizing and organizational justice", *Journal of Organizational Behavior*, Vol. 23 No. 5, pp. 675-694.

Lim, V.K.G. and Chen, D.J.Q. (2012), "Cyberloafing at the workplace: gain or drain on work?", *Behaviour and Information Technology*, Vol. 31 No. 4, pp. 343-353.

Lim, V.K.G. and Teo, T.S.H. (2005), "Prevalence, perceived seriousness, justification and regulation of cyberloafing in Singapore: an exploratory study", *Information and Management*, Vol. 42 No. 8, pp. 1081-1093.

Lyu, Y., Zhou, X., Li, W., Wan, J., Zhang, J. and Qiu, C. (2016), "The impact of abusive supervision on service employees' proactive customer service performance in the hotel industry", *International Journal of Contemporary Hospitality Management*, Vol. 28 No. 9, pp. 1992-2012.

MacKenzie, S.B. and Podsakoff, P.M. (2012), "Common method bias in marketing: causes, mechanisms, and procedural remedies", *Journal of Retail*, Vol. 88 No. 4, pp. 542-555.

Mackey, J.D., Ellen, B.P. III, Hochwarter, W.A. and Ferris, G.R. (2013), "Subordinate social adaptability and the consequences of abusive supervision perceptions in two samples", *Leadership Quarterly*, Vol. 24 No. 5, pp. 732-746.

Mackey, J.D., Brees, J.R., McAllister, C.P., Zorn, M.L., Martinko, M.J. and Harvey, P. (2016), "Victim and culprit? The effects of entitlement and felt accountability on perceptions of abusive supervision and perpetration of workplace bullying", *Journal of Business Ethics*, Vol. 153 No. 3, pp. 659-673.

Martinko, M.J., Harvey, P., Brees, J.R. and Mackey, J. (2013), "A review of abusive supervision research", *Journal of Organizational Behavior*, Vol. 34 No. S1, pp. S120-S137.

Maslach, C. and Jackson, S.E. (1981), "The measurement of experienced burnout", *Journal of Organizational Behavior*, Vol. 2 No. 2, pp. 99-113.

Maslach, C. and Jackson, S.E. (1986), *Maslach Burnout Inventory Manual*, 2nd ed., Consulting Psychologists Press, Palo Alto, CA.

Mathieu, J.E. and Zajac, D.M. (1990), "A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment", *Psychological Bulletin*, Vol. 108 No. 2, pp. 171-194.

McAllister, C.P., Mackey, J.D. and Perrewé, P.L. (2018), "The role of self-regulation in the relationship between abusive supervision and job tension", *Journal of Organizational Behavior*, Vol. 39 No. 4, pp. 416-428.

Meyer, J.P. and Allen, J.N. (1991), "A three-component conceptualization of organizational commitment", *Human Resource Management Review*, Vol. 1 No. 1, pp. 61-89.

Meyer, J.P., Stanley, D.J., Herscovitch, L. and Topolnytsky, L. (2002), "Affective, continuance and normative commitment to the organization: a meta-analysis of antecedents, correlates, and consequences", *Journal of Vocational Behavior*, Vol. 61 No. 1, pp. 20-52.

Moody, G.D. and Siponen, M. (2013), "Using the theory of interpersonal behaviour to explain non-work-related personal use of the Internet at work", *Information and Management*, Vol. 50 No. 6, pp. 322-335.

Morrow, P.C. (1993), *The theory and Measurement of Work Commitment*, Jai Press Inc, Greenwich, CT.

Nunnally, J.C. and Bernstein, I.H. (1994), *Psychometric Theory*, 3rd ed., McGraw-Hill, New York, NY.

Ogunfowora, B. (2013), "When the abuse is unevenly distributed: the effects of abusive supervision variability on work attitudes and behaviors", *Journal of Organizational Behavior*, Vol. 34 No. 8, pp. 1105-1123.

Oravec, J.A. (2018), "Cyberloafing and constructive recreation", in Mehdi Khosrow-Pour, D.B.A. (Ed.), *Encyclopedia of Information Science and Technology*, 4th ed., IGI Global, Hershey, PA, pp. 4316-4325.

Ramalho Luz, C., Luiz de Paula, S. and de Oliveira, L. (2018), "Organizational commitment, job satisfaction and their possible influences on intent to turnover", *Revista de Gestão*, Vol. 25 No. 1, pp. 84-101.

Restubog, S.L.D., Garcia, P.R.J.M., Toledano, L.S., Amarnani, R.K., Tolentino, L.R. and Tang, R.L. (2011), "Yielding to (cyber)-temptation: exploring the buffering role of self-control in the relationship between organizational justice and cyberloafing behavior in the workplace", *Journal of Research in Personality*, Vol. 45 No. 2, pp. 247-251.

Robinson, S.L. and Bennett, R.J. (1995), "A typology of deviant workplace behaviours: a multidimensional scaling study", *Academy of Management Journal*, Vol. 38 No. 2, pp. 555-572.

Sheikh, A., Aghaz, A. and Mohammadi, M. (2019), "Cyberloafing and personality traits: an investigation among knowledge-workers across the Iranian knowledge-intensive sectors", *Behaviour and Information Technology*, Vol. 38 No. 12, pp. 1-12.

Siu, O.L. and Cooper, C.L. (1998), "A study of occupational stress, job satisfaction and quitting intention in Hong Kong firms: the role of locus of control and organizational commitment", *Stress Medicine*, Vol. 14 No. 1, pp. 55-66.

Soral, P., Arayankalam, J. and Pandey, J. (2020), "The impact of ambivalent perception of bureaucratic structure on cyberloafing", *Australasian Journal of Information Systems*, Vol. 24, pp. 1-44.

StaffMonitoring.com (2015), "Office slacker stats", available at: http://www.staffmonitoring.com/P32/stats.htm (accessed 8 May 2018).

Steinhaus, C. and Perry, J. (1996), "Organizational commitment: does sector matter?", *Public Productivity and Management Review*, Vol. 19 No. 3, pp. 278-288.

Tepper, B.J. (2000), "Consequences of abusive supervision", *Academy of Management Journal*, Vol. 43 No. 2, pp. 178-190.

Tepper, B.J., Duffy, M.K., Hoobler, J. and Ensley, M.D. (2004), "Moderators of the relationships between coworkers' organizational citizenship behavior and fellow employees' attitudes", *Journal of Applied Psychology*, Vol. 89 No. 3, pp. 455-465.

Tepper, B.J., Duffy, M.K., Henle, C.A. and Lambert, L.S. (2006), "Procedural injustice, victim precipitation, and abusive supervision", *Personnel Psychology*, Vol. 59 No. 1, pp. 101-123.

Tourigny, L., Baba, V.V., Han, J. and Wang, X. (2013), "Emotional exhaustion and job performance: the mediating role of organizational commitment", *The International Journal of Human Resource Management*, Vol. 24 No. 3, pp. 514-532.

Vigoda-Gadot, E. (2007), "Redrawing the boundaries of OCB? An empirical examination of compulsory extra-role behavior in the workplace", *Journal of Business and Psychology*, Vol. 21 No. 3, pp. 377-405.

Whitman, M.V., Halbesleben, J.R.B. and Holmes, O. (2014), "Abusive supervision and feedback avoidance: the mediating role of emotional exhaustion", *Journal of Organizational Behavior*, Vol. 35 No. 1, pp. 38-53.

Wilk, S.L. and Moynihan, L.M. (2005), "Display rule "Regulators": the relationship between supervisors and worker emotional exhaustion", *Journal of Applied Psychology*, Vol. 90 No. 5, pp. 917-927.

Wright, T.A. and Cropanzano, R. (1998), "Emotional exhaustion as a predictor of job performance and voluntary turnover", *Journal of Applied Psychology*, Vol. 83 No. 3, pp. 486-493.

Yousef, D.A. (2017), "Organizational commitment, job satisfaction and attitudes toward organizational change: a study in the local government", *International Journal of Public Administration*, Vol. 40 No. 1, pp. 77-88.

Zhang, J., Akhtar, M.N., Zhang, Y. and Sun, S. (2019), "Are overqualified employees bad apples? a dual-pathway model of cyberloafing", *Internet Research*, Vol. 30 No. 1, pp. 289-313.

Zhou, L. (2016), "Abusive supervision and work performance: the moderating role of abusive supervision variability", *Social Behavior and Personality: International Journal*, Vol. 44 No. 6, pp. 1089-1098.

Zohar, D. (1997), "Predicting burnout with a hassle-based measure of role demands", *Journal of Organizational Behavior*, Vol. 18 No. 2, pp. 101-115.

Appendix 1: Measurement items
Cyberloafing

(1) In general, I use the Internet at work for non-work-related purposes

(2) I access the Internet at work for non-work-related purposes several times each day

(3) I spend a significant amount of time on the Internet at work for non-work-related purposes

Abusive supervision

(1) (1) My boss (manager/superior) ridicules me

(2) (2) My boss (manager/superior) tells me my thoughts or feelings are stupid

(3) My boss (manager/superior) gives me the silent treatment

(4) My boss (manager/superior) puts me down in front of others

(5) My boss (manager/superior) invades my privacy

(6) My boss (manager/superior) reminds me of my past mistakes and failures

(7) My boss (manager/superior) does not give me credit for jobs requiring a lot of effort

(8) My boss (manager/superior) blames me to save himself/herself from embarrassment

(9) My boss (manager/superior) breaks the promises he/she makes

(10) My boss (manager/superior) expresses anger at me when he/she is mad for/with another reason

(11) My boss (manager/superior) makes negative comments about me to others

(12) My boss (manager/superior) is rude to me

(13) My boss (manager/superior) does not allow me to interact with my co-worker

(14) My boss (manager/superior) tells me I am incompetent

(15) My boss (manager/superior) lied to me

Emotional exhaustion

(1) I feel emotionally drained from my work

(2) I feel used up (depleted) at the end of the workday

(3) I feel burned out from my work

Organizational commitment

(1) I am willing to put in a great deal of effort beyond what is normally accepted to help this organization become successful

(2) I am proud to tell others that I belonged to this organization

(3) I find that my values and the organization's values are similar

Appendix 2: A comparison of structural model results between PROCESS macro and PLS-SEM

	Using standardized mean scores (PROCESS macro)			PLS-SEM (Smart PLS)		
	Path coefficient	t-Value	Supported?	Path coefficient	t-Value	Support?
H1: AS-> CL	−0.061	−0.885	No	−0.087	1.187	No
H2: AS -> EE	0.310	5.186	Yes	0.317	5.106	Yes
H3: EE -> CL	0.108	1.644	No	0.128	1.640	No
OC -> CL	−0.011	−0.165		−0.003	0.035	
H5: OC*EE -> CL	−0.122	−2.355	Yes	−0.135	2.173	Yes
Control variable						
Gender	0.099	0.793		0.063	0.975	

Table A1.
Structural model results

Note(s): CL: Cyberloafing; AS: Abusive supervision; EE: Emotional exhaustion; OC: Organizational commitment

		Std. beta	Bias-corrected confidence intervals	Std. error	Support?
Using standardized mean scores (PROCESS macro)	H4: AS -> EE -> CL	0.030	[−0.014, 0.084]	0.024	No
PLS-SEM (Smart PLS)	H4: AS -> EE -> CL	0.045	[−0.040, 0.097]	0.033	No

Table A2.
Mediation results

Note(s): CL: Cyberloafing; AS: Abusive supervision; EE: Emotional exhaustion; OC: Organizational commitment

				Bias corrected bootstrap 95% confidence intervals	
	Moderator = OC	Index	SE (Boot)	Lower	Upper
Using standardized mean scores (PROCESS macro)	AS->EE->CL	−0.038	0.018	−0.079	−0.005
Using standardized PLS latent scores (PROCESS macro)	AS->EE->CL	−0.040	0.019	−0.082	−0.006

Table A3.
Index of moderated mediation

Note(s): CL: Cyberloafing; AS: Abusive supervision; EE: Emotional exhaustion; OC: Organizational commitment

Corresponding author
Kian Yeik Koay can be contacted at: koaydarren@hotmail.com; kianyeikk@sunway.edu.my