



Functions of control mechanisms in mitigating workplace loafing; evidence from an Islamic society



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ABSTRACT

The purpose of this study is to examine the functionality of control mechanisms in regards to workplace loafing. It is hypothesized that the organizational controls are negatively associated with non-cyber loafing but not with cyber-loafing, and also, self-control is negatively associated with both. Furthermore, non-cyber loafing was considered as the predictor of cyber-loafing, and self-control as the moderator of organizational controls/loafing relationship. As predicted, organizational controls were only associated with non-cyber loafing. In addition, self-control was associated with both the cyber- and non-cyber loafing, and non-cyber loafing associated with cyber-loafing. Contrary to the prediction, self-control did not ameliorate the effect of proximity on non-cyber loafing. Altogether, this study is the first to investigate the simultaneous and interactive effects of self-control and organizational controls in predicting the variance of both the cyber- and non-cyber loafing. The results provide insights to understand why and when the organizational controls should be implemented and/or self-control should be emphasized.

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1. Introduction

In our modern world, the Internet has brought many benefits to various businesses and it is going to become an attractive media in marketing and efficient investment. E-mail as a technology embedded in the Internet has widely improved internal communication and computation in most firms; and consequently, the information flow has become more flexible, and the customization of products and services has been accelerated with fewer costs (Lang, 2001). The Internet enables employees to be more productive than ever before, but it also offers them a new way to escape from work (Askew et al., 2014). Although the Internet may potentially boost productivity, it may also undermine efficiency if it gets to become a prevalent and pressing issue (Alder, Noel, & Ambrose, 2006). It is initially thought that the computers and the Internet are important tools to make laborious works easy and they assure to provide more freed and saved time at work, but they may sometimes work the opposite as extra burdens for organizations (Whitty & Carr, 2006). Curley (1989) stipulated that computerization has transformed the nature of jobs done by knowledge workers. Furthermore, instead of reducing anxiety, computers have been a source of anxiety for many people at work, especially older ones who do not have sufficient knowledge to use computers (Marquié, Thon, & Baracat, 1994; Whitty & Carr, 2006). While the

Internet and e-mail can be great assets to an organization (particularly to create new knowledge), workplace Internet has caused various problems (Whitty & Carr, 2006). For instance, employees may use workplace Internet for work- and non-work related activities (Jia, 2008). Considering these facts, recent studies have pointed out that the Internet is a double-edged sword that the organizations must be cautious about when using (Jia, 2008; Lim & Teo, 2005).

Employees' deviance at place of work appears to fall into four categories: production deviance, property deviance, political deviance, and personal aggression (Robinson & Bennett, 1995). Loafing or slacking is a type of deviant behavior (Lim, 2002) including many examples such as socializing with coworkers, conducting personal businesses, making personal phone calls, and surfing the Internet. As some researchers do, our attention was exclusively focused on loafers' behavior under the two categories of cyber-loafing and non-cyber loafing.

The term "cyber-loafing" (also referred to as cyber-slacking, non-work-related computing, cyber deviance, personal use at work, Internet abuse, workplace Internet leisure browsing, and junk computing; Vitak, Crouse, & LaRose, 2011) was first introduced by Kamins (1995) in New York Daily News in an article entitled "Cyber-loafing: Does employee time online add up to net losses?" Since then, this concept has become more popular in scientific circles due to the research done by Lim (2002) from the National University of Singapore. This type of deviance refers to a practice, firstly based on computer and the Internet, and secondly,

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it wastes the employees' useful time at work. In other words, instead of doing work-related activities the person performs his/her personal affairs using the space provided by the Internet. In this sense, the Internet has provided an opportunity for slacking and turned into an arena for cyber loafers' showing-off.

Cyber-loafing which is a type of production deviance can be considered as an innocuous deviance such as sending and receiving a personal email, or more of a problem such as online gambling (Blanchard & Henle, 2008; Malachowski, 2005). As such, cyber-loafing is discussed in the literature as having mostly negative connotations (König & de la Guardia, 2014) and sometimes carry both the positive and negative connotations (Kim & Byrne, 2011). Cyber-loafing is important to study because it is a potential intervention point for increasing productivity (Naughton, Raymond, & Shulman, 1999), but the idea of human resource management is not to eliminate cyber-loafing, rather, is to strike a balance between productivity and cyber-loafing (De Lara, Tacoronte, & Ding, 2006). De Lara et al. (2006) have suggested that employee surveillance measures such as web browsing monitors and access blockers can extenuate job satisfaction and productivity. This is the reason that makes us to bring about the organizational and individual control theories, and to incorporate them in regards to cyber-loafing behaviors.

Many studies have concentrated on reducing cyber-loafing at workplace through organizational control mechanisms, but unfortunately the literature has only sufficed to offer the anecdotal advice in order to create these systems while these pieces of advice are not based on theory and their effectiveness has not been empirically evaluated (Henle, Kohut, & Booth, 2009). This may explain why only 40% of human resource managers perceive that existing policies are effective in deterring (not tracking down) cyber-loafing (Young & Case, 2004). Meanwhile, some researchers such as Ugrin and Pearson (2013) have tried to show that the deterrence model affects various types of cyber-loafing differently, but there exists no study on investigating the mechanisms through which organizational and individual control affect different types of loafing. To address this gap, the current study is aimed at finding the answers to the following questions: "What kind of control affects loafing and what is the nature of this impact on different types of loafing?" and "How can we combat cyber-loafing?"

To serve our purpose, in this study, organizational controls and self-control will be studied in association with cyber-loafing and non-cyber loafing, and the mechanism attenuating these types of deviant behaviors at workplace is investigated. The buffering role of self-control will also be highlighted by considering its possible moderating effects.

2. Literature

2.1. Control mechanisms

Managerial control, control systems, and coercive control are some of the phrases used to describe non-individual control – a concept called organizational control. Flamholtz (1996) defined managerial control as the organizational mechanisms designed to increase the probability of employees' behaving in a manner congruent with the organization's goals. This type of control depends on horrifying the employees – fear (French & Raven, 1959, as cited in De Lara et al., 2006), which refers to the act of compelling employees to perform in a desired manner by employing various forms of punishment (e.g., formal punishment) as an intimidator strategy (Bass, 1990). Self-control, on the other hand, is a stable and distinctive human attribute (a personality/dispositional variable) in order to arbitrarily regulate a certain number of urges in work-related activities. A paragraph from De Lara and Olivares-Mesa (2010)

adequately reflects the coercive nature of organizational control, and yet, implies the different functionality of self-control since it is spontaneous.

Control systems and punishment acting separately are unable to increase the "expected cost" of engaging in cyber-loafing, because, on the one hand, punishment only leads employees to evaluate the "cost of detection" if they are caught. On the other hand, control systems can only increase the "probability of detection." Thus, to deter cyber loafers from decisions to "go or continue on the wrong track," proximity, monitoring, and punishment should act together in an interactive way. [...]

According to the general theory of crime (Gottfredson & Hirschi, 1990), individuals with low levels of self-control are more likely to respond to situational triggers with counterproductive behaviors (such as workplace loafing) when they are given the opportunity to do so. Another theory entitled the strength model of self-control (Muraven & Baumeister, 2000) discusses the extent to which different individuals exert self-control over impulses, which indicates that the various control mechanisms (organizational and individual) should be complementary. In the current study, Organizational control encompasses the supervisor's physical proximity (hereafter, proximity) and general perceptions of organizational control (monitoring). Proximity which is more concerned with organizational design characteristics refers to the extent to which employees perceive their supervisor moves around too closely (Murphy, Wayne, Liden, & Erdogan, 2003). For example, one of the control mechanisms can be open office design layout that makes the employees feel exposed to their supervisors (Lieberman, Seidman, McKenna, & Buffardi, 2011). Engaging in cyber-loafing might be particularly relevant when working at home under the telework arrangements because it would be easier to avoid being caught by supervisors and co-workers (O'Neill, Hambley, & Bercovich, 2014). Furthermore, monitoring is comprised of controlling both the individuals (e.g., closed circuit televisions and physical security of facilities) and devices called electronic use policy (e.g., tracking software, security software, security cable, and Internet traffic restriction); the former is more concerned with non-cyber violations, while the latter pertains to cyber violations. Both of these controls can be only for-cause or periodic, which respectively implies the monitoring those who have violated the policy in the past and who are suspected of violating the policy, or monitoring all the employees on a random or periodic basis (Donati & Hardgrove, 2002). Despite the fact that over 80% of employers implement the electronic use policies (American Management Association, 2005); its success in deterring cyber loafers depends on the nature of work and social-organizational work environment (i.e., organizational context). However, self-control which is largely context-free is at the opposite extreme of prevention strategy spectrum.

In general, drawing on the existing body of research on organizational control mechanisms, neutralization theory (Sykes & Matza, 1957), general deterrence theory (Becker, 1968), Gottfredson and Hirschi's (1990) general theory of crime, and Muraven and Baumeister's (2000) strength model of self-control, we tried to establish a theoretical foundation to develop the hypotheses relating to control mechanisms/loafing.

2.2. Loafing: a brief review

There are various forms of deviant behavior at the workplace. Loafing is a phenomenon from which the organizations are suffering since their inception (Lim, 2002). Some common forms of loafing at the workplace along with their frequency percentage are provided in Malachowski's (2005) study as following: surfing the Internet (44.7%), socializing with coworkers (23.4%), conducting

personal businesses (6.8%), spacing out (3.9%), running errands off-premises (3.1%), making personal phone calls (2.3%), applying for other jobs (1.3%), planning personal events (1.0%), and arriving late/leaving early (1.0%). Given the considerable proportion of surfing the Internet compared with other forms of loafing, we studied this issue as a separate category called cyber-loafing versus other forms of loafing called non-cyber loafing.

Non-cyber loafing refers to the act of employees socially loaf at the workplace and engage in non-productive work behaviors apart from using the workplace internet. In other words, non-cyber loafers are engaged in activities such as chit-chatting with fellow coworkers, running non-work related errands, making non-work related phone calls, and taking breaks in between work tasks out of the time allotted by one's supervisor. Cyber-loafing, on the other hand, is considered as one of the counterproductive forms of work behaviors with a specific focus on the organizations' Internet access (Lukseyte, 2011). According to one of the first and most complete definitions, cyber-loafing means "any voluntary act of employees using their company's internet access during office hours to surf non-job related websites for personal purposes and to check personal e-mails" (Lim, 2002). Recently, some new expressions were used to describe the same notion of cyber-loafing. For example, Quiñones and Korak (2014) used the term "compulsive Internet use" to refer to "a maladaptive relationship with the tool, including a loss of control over the use, the use for mood change and withdrawal symptoms."

Generally, cyber loafers have been considered as a more costly threat than the regular loafers (Grodzinsky, Gumbus, & Lilley, 2010). Obviously, cyber-loafing can be a serious problem for organizations by losing their productivity and wasting their resources (Whitty & Carr, 2006). A survey in 2000 revealed that about 40% of employees' productivity can be lost due to cyber-loafing (Verton, 2000, as cited in Jia, 2008). In 2000, 56% of employees were using the Internet for personal purposes (Greengard, 2000). By 2003, 59% of Internet use at place of work was non-work related (Griffiths, 2003), and by 2005, cyber-loafing had become the most common way for employers to waste time at work (Malachowski, 2005).

2.3. Iranian organizations; the Internet, culture, and loafing

In 1993, Iran was the second country in the Middle East that connected to the Internet (Sohrabi-Haghighat, 2011). The Internet usage in Iran is continuing to increase with a sharp rate. The number of Internet users in Iran has grown at an average annual rate of approximately 48%, increasing from under one million Internet users in 2000 to around 23 million in 2008 (ITU, 2008). These Internet users are suffering from both the filtering imposed by the governmental agencies and inverse filtering applied by companies associated with the countries sanctioning Iran. For Internet users in organizations; however, the situation is slightly different in terms of both the penetration rate and Internet use policies.

According to Hamshahri Online (a Persian news agency) on Jun 16, 2008, about 99.1% of Iranian organizations are connected to the Internet and an average of 77.4% of employees use the Internet while at work. While national filtering is applied for organizational as well as home users, organizational sanctioning does not make sense. This means that employees may either have or do not have access to the Internet while at work; if accessibility is permitted, they will not have restrictions on surfing the net. It implies that there is no Internet use policy and no electronic monitoring. Due to trust climate or absence of needed infrastructures, this way of treating users at the workplace is a common procedure in Iranian organizations. There is no study focusing on the prevalence of cyber-loafing and patterns of Internet usage in Iranian organizations, and only few studies have investigated the association of

organizational culture with netiquette (e.g., Abzari, Yarmohammadian, & Iravani, 2011). There are a lot of studies focusing on non-cyber loafing of which the most relevant to the current study pertains to work culture. This research has revealed that women are more engaged in teamwork in comparison with men, but their commitment to work is less than that of men (Ahmadi & Roosta, 2011). Generally, in spite of contradictory results, studies have indicated that the loafing is of great concern in Iranian organizations. Nevertheless, the most common procedure of Iranian organizations at present to combat both types of loafing seems to be force monitoring through closed circuit televisions.

3. Hypotheses development

3.1. Organizational control/loafing

The literature on organizational and psychological research proposes the two strategies to control employees' misbehavior (De Lara & Olivares-Mesa, 2010): the introverted self-regulatory strategy (such as fair workplace) and extroverted coercive strategy (such as sanctioning) which are respectively based on intrinsic and extrinsic models of employee behavior. According to self-regulatory strategy, employees do not behave in a violated manner because of their desires, preferences, and intrinsic values (Kelman, 1958), and in terms of coercive strategy, employees reasonably treat a decision option based on its cost-benefit analysis (Blair & Stout, 2001). In this regard, monitoring systems are common tools to implement coercive strategy in order to mitigate the cyber-loafing at place of work (De Lara, 2006; De Lara & Olivares-Mesa, 2010; De Lara et al., 2006; Mirchandani, 2004).

As previously mentioned, a common method for managing the loafing behaviors is to develop the electronic use policies and control systems (Mirchandani, 2004). After documenting appropriate and acceptable activities by Internet use policies, control systems can be designed to detect the misuse of organization's Internet and e-mail. On the one hand, it seems to be widely accepted the role of proximity in behavioral controlling at the workplace (Bass, 1990; De Lara & Olivares-Mesa, 2010; De Lara et al., 2006). Since proximity enhances the capacity of supervisors to communicate with their subordinates (Bass, 1990), employees' perception of physical proximity may increase the loafers' psychological feeling of supervisor presence and help him/her to diagnose whether employees are loafing while at work (De Lara et al., 2006).

On the other hand, recent studies suggest that task invisibility at cyber workplace hinders the determination of loafing occurrence because it is very difficult for a supervisor to distinguish between the slacking of employees and their efforts to accomplish the tasks (De Lara et al., 2006). Accordingly, we reason that it is not easy to hide the non-cyber loafing at workplace, but cyber-loafing enables the employees to do their personal affairs through the Internet while they are seemingly working hard (Jia, 2008). In the same vein, the theory of planned behavior presumes that one of the antecedents of behavior is perceived behavioral control (Ajzen, 2011). In regards to cyber-loafing, perceived behavioral control can be conceptualized by employees' self-efficacy to navigate to favorite websites at work and their self-efficacy to engage in cyber-loafing behavior without getting caught (Askew et al., 2014). According to Askew et al. (2014), Cyber loafers who are well capable of hiding their Internet abuse have some or all of the following conditions: (a) their computer screens are not easily visible to coworkers or supervisors, (b) they can hear or see people approaching their work station, (c) they work in isolation or (d) their computer activity is not monitored. We also argue that besides these four conditions the employees' subjective norms may cause them to ignore the monitoring control because they are more sensitive to forewarnings by supervisors than

post-warnings by the organization. In other words, when employees are caught after engaging in cyber-loafing they have plenty of time to justify their deviation and they receive its negative consequences after a period of time. The first three conditions of the above-mentioned are related to feedforward deterrence (or control) and the last one is related to feedback deterrence.

Accordingly, it seems that the proximity and monitoring policies can only affect non-cyber loafing behaviors and their effects on cyber-loafing behavior are not significant. Furthermore, some researchers have illustrated that these control mechanisms should interact with each other (i.e., the proximity is interpreted as a monitoring presence) and be coupled with formal punishments in order to deter cyber-loafing behaviors. As a result, in mitigating the cyber-loafing, monitoring and proximity are effective methods provided that the employees perceive a certainty of being sanctioned. In other words, the organizational deterrence of cyber-loafers depends on their simultaneous perception of proximity and monitoring in interaction with punishment (De Lara & Olivares-Mesa, 2010) or fear of formal punishment (De Lara et al., 2006). Serving as a basis, the first two hypotheses were postulated as the followings:

Hypothesis 1. Proximity will be negatively associated with non-cyber loafing, but not with cyber-loafing.

Hypothesis 2. Monitoring will be negatively associated with non-cyber loafing, but not with cyber-loafing.

3.2. Self-control/loafing

Self-control is a stable human attribute, which is comprised of affect, behavior, and cognition towards the fulfillment of goals (Gottfredson & Hirschi, 1990). Previous studies support the subtractive influence of peoples' perceptions and attitudes on their behavioral deviations (e.g., Liberman et al., 2011). According to strength model of self-control (Muraven & Baumeister, 2000), certain individuals exert greater self-control than the others do. On the other hand, individuals who are low in self-control have been found to be more engaged in workplace deviance (Bordia, Restubog, & Tang, 2008; Restubog, Garcia, Wang, & Cheng, 2010). Although the exertion of self-control may be affected by some antecedents (such as work environment, organizational justice, and psychological contract), it is still a stable human attribute that may potentially reduce loafing at the workplace. For example, Lim (2002) and Beugre (2006) indicated that the work environment could be an effective self-monitoring strategy in order to manage cyber-loafing if it is perceived equitable by employees. Self-control is also viewed as an internal observer which is always accompanied with the employee and it does not matter that the loafing is cyber or non-cyber. Nevertheless, some references could be found defining the cyber-loafing based on self-control; "any voluntary, aimless, and undirected way of using web access and engaging in non-work-related activities on a regular basis, partially due to a lack of self-control at work" (Kim & Byrne, 2011). Therefore, we supposed a negative association between self-control and non-cyber loafing and cyber-loafing behaviors.

Hypothesis 3. Self-control will be negatively associated with both the cyber- and non-cyber loafing.

3.3. Non-cyber loafing/cyber-loafing

Liberman et al. (2011), in their study, have endorsed that the non-cyber loafing will result in cyber-loafing. In this regard, we

argue that the non-cyber loafing may result in cyber-loafing because of two reasons: psychological effect and postural effect. In our opinion, when employees find the non-cyber loafing attractive, they like to experience the cyber-loafing too (psychological effect), and when they perceive conditions suitable for non-cyber loafing they are encouraged to engage in cyber-loafing (postural effect). There is plenty of empirical evidence in support of this statement. For example, previous studies have indicated that different types of loafing at place of work are highly correlated with each other (Berry, Ones, & Sackett, 2007; Dalal, 2005) meaning that employees who engage in non-cyber loafing are more likely to engage in cyber-loafing. Accordingly, we hypothesized this relationship as the following:

Hypothesis 4. Non-cyber loafing will be positively associated with cyber-loafing.

3.4. Moderating effects of self-control

On an empirical basis, keeping the track of employees' Internet and e-mail activities by monitoring is a partially effective way to detect incidents of cyber-loafing and to identify the perpetrators. Straub and Nance (1990), in their classic study on computer abuse, found that the normal system controls and purposeful investigations were able to discover up to 66% of such incidents. Furthermore, given this fact that leadership is a kind of interaction and this interaction depends on physical proximity, the presence of supervisor and his/her success relates to such a physical configuration (De Lara et al., 2006). However, another issue is whether the high or low levels of self-control have a buffering role.

The mechanism through which self-control ameliorates the effect of organizational controls could be explained by neutralization theory –as a theory of delinquency (Sykes & Matza, 1957) and general deterrence theory (Becker, 1968). On the one hand, employees use the neutralization techniques to reconcile the discrepancies between their deviant behavior and the positive self-image that they wish to project (Cheng, Li, Zhai, & Smyth, 2014). In our opinion, self-control acts as opposed to neutralization techniques. If employees are high in self-control they will be less likely to engage in loafing behaviors even though they know the neutralization techniques. On the other hand, general deterrence theory posits that the sanctions are considered as a threat by loafers if the potential punishment is more weighted against the potential benefits of deviant behavior (Ugrin & Pearson, 2013). According to this theory, individuals who perceive that the possibility of detection and severity of sanction is higher will less likely engage in loafing behaviors (Cheng et al., 2014). Likewise, employees of high self-control disregard the potential benefits of loafing behavior without trading-off with its potential punishment.

However, according to Muraven and Baumeister's (2000) strength model, resources of self-control are finite and become depleted when an individual exerts self-control over a certain number of urges. Thus, it takes a longer time to hit the ego depletion point when the self-control operates in conjunction with an external resource of control. In addition, based on general theory of crime (Gottfredson & Hirschi, 1990), employees with low levels of self-control are more likely to non-cyber loaf in response to certain situational triggers such as the lack of proximity and monitoring. That is to say, these employees may engage more in non-cyber loafing behaviors because of the provided opportunity. For these reasons, we suggest that the effect of proximity and monitoring on non-cyber loafing may be ameliorated when interacting with self-control (virtue of previous hypotheses, there would be no relationship between proximity and monitoring and cyber-loafing). Thus, the last hypothesis is as follows:

Hypothesis 5. There would be a stronger negative association between proximity and monitoring and non-cyber loafing for employees with high as opposed to low levels of self-control.

Before proceeding, the logic based on which the hypotheses were codified should be highlighted. The constructs under study are duple: (a) control is a two-part construct comprised of organizational (proximity and monitoring) and individual (self-control); (b) and loafing is also comprised of cyber and non-cyber. In addition to exploring the role of organizational control and self-control in mitigating the workplace loafing, one of the main purposes of this study is to compare the effect of control elements on cyber- and non-cyber loafing. On this basis, the majority of hypotheses are codified in a comparative way. Fig. 1 depicts the hypothesized paths in which solid arrows represent the existing relationships and dotted arrow represents the non-existing ones. Increasing and decreasing effects are also specified with the symbols of (+) and (–).

4. Method

4.1. Procedure and participants

Structural equation modeling (SEM) was conducted in Amos v.20 to test the direct hypotheses, and to test the moderating ones, multiple regression analysis was conducted in SPSS v.20. This was accomplished using a survey of 320 administrative employees of Refah Chain Stores Corporation in Tehran and Khorasan

Provinces of I.R. Iran. The employees who had direct access to the workplace Internet, except sales forces, were the subjects of this survey. The participants did voluntarily respond to anonymous questionnaires distributed by surveyors. We did not use the integrated computer system of the corporation to distribute the questionnaires in order to reassure the participants that the confidentiality of their responses is maintained. The whole process of survey including the purpose, prior official approval, qualified participants, and the reply manner was advertised by surveyors in the absence of immediate supervisors. Having eliminated 14 questionnaires due to incorrect and incoherent completion, 306 well-qualified ones remained. The survey contained such questions on the participant’s demographics, loafing at the workplace, organizational control, and self-control. Among the respondents, 65.7% were male and subject’s ages ranged from 20 to 58, with an average age of 34.11 years (SD = 7.18). The participants’ average years of organizational tenure was 9.43 years (SD = 5.43). Seventeen percent of the respondents reported that the highest level of education they had completed was diploma or lower, 21% associate degree, 57% bachelor degree, and 5% reported obtaining a master degree or higher.

4.2. Measures

The variable items used in this study were scored on 5, 6, and 7-point Likert-type scales which can be seen in the Appendix A. The validity and reliability of the questionnaire were checked out through conventional methods. Table 1 shows the results of construct validity, and values in parentheses on the main diagonal of Table 2 shows the alpha reliability.

The supervisor physical proximity and monitoring were measured respectively by De Lara and Olivares-Mesa’s (2010) 3-item proximity scale and the 4-item scale of organizational perceived control. The respondents were asked to specify their level of agreement on a 7-point scale ranging from “1 = strongly disagree” to “7 = strongly agree.” The Brief Self-Control Scale (BSCS) of Tangney, Baumeister, and Boone (2004) was used in order to measure dispositional self-control behaviors at the workplace. This instrument consists of 13 items rated on a 5-point scale ranging from “1 = not at all like me” to “5 = very much like me.” They proposed that the BSCS measures a single self-control construct, but it is expected to be four-dimensional here, whose detailed information is provided in the next section. Using four items adopted from Liberman et al. (2011), the respondents were asked to designate the extent to which they engage in non-productive behaviors while at work on a 5-point scale ranging from “1 = never” to “5 = frequently.” And finally, a 13-item scale adopted from Lim and Teo

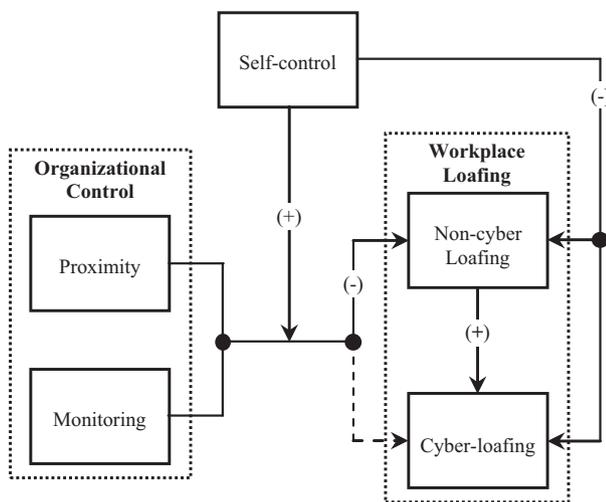


Fig. 1. Conceptual framework of control/loafing.

Table 1
Results of CFA for multidimensional measures.

Measure	Factor	Item no.	Factor loading	Measure	Factor	Item no.	Factor loading
Self-control	SC1	X08	.444	Cyber-loafing	Web Browsing	Y25	.688
		X09	.506			Y26	.701
		X10	.668			Y27	.842
		X11	.638			Y28	.617
		X12	.684		Y34	.266	
	SC2	X13	.389		Interactive	Y29	.919
		X14	.634			Y30	.705
		X15	.725			Y31	.630
		X18	.383			Y32	.556
	SC3	X16	.914		E-mailing	Y33	.805
		X17	.656			Y35	.885
	SC4	X19	.735		Y36	.985	
		X20	.900		Y37	.915	
				.993			

$\chi^2 = 64.16$; $\chi^2/df = 1.39$; CFI = .98; TLI = .97; RMR = .045; RMSEA = .036

$\chi^2 = 139.01$; $\chi^2/df = 3.65$; CFI = .96; TLI = .92; RMR = .094; RMSEA = .093

Note: All items are significant at $p < .001$.

Table 2
Descriptive statistics, correlations, and internal consistencies for the study variables.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender ^a	.34	.47	–								
2. Age	34.11	7.18	–.02	–							
3. Organizational tenure	9.43	5.43	–.01	.78**	–						
4. Educational level ^b	2.5	.82	.01	.29**	–.35**	–					
5. Supervisor proximity	3.51	1.32	.07	–.05	–.11*	.18**	(.71)				
6. Monitoring	3.87	1.24	–.11	–.16**	–.11*	.29**	.38**	(.76)			
7. Self-control	2.27	0.54	.07	–.04	–.11*	–.03	–.23**	–.14**	(.78)		
8. Non-cyber loafing	3.34	0.63	.06	–.09	–.07	–.01	–.33**	–.11*	–.43**	(.73)	
9. Cyber-loafing	4.73	0.76	.12*	–.04	.05	–.11	–.20**	–.09*	–.57**	.54**	(.88)

Note: $N = 306$.

^a Gender: 0 = male, 1 = female.

^b Educational Level: 1 = diploma or lower, 2 = associate degree, 3 = bachelor degree, 4 = master or higher.

* $p < .05$.

** $p < .01$.

(2005) was used to measure the prevalence of cyber-loafing behaviors, which expected to be three-dimensional (see Table 1). In doing so, the respondents were asked to indicate the frequency with which they surf the non-job related websites using organization's Internet facilities on a 6-point scale ranging from "0 = never" to "5 = constantly."

5. Results

5.1. Preliminary analyses

Tangney et al.'s (2004) BSCS covers several spheres of self-control including control over thoughts (5 items), emotional control (3 items), impulse control (2 items), performance regulation (2 items), and habit breaking (1 item); however, there exists a concern regarding its unidimensionality. To address this concern and by referring to Schumacker and Lomax (1996) suggesting the items categorization would lead to the improvement of fit indices, we ran exploratory factor analysis (EFA) in SPSS. In doing so, these 13 items were subjected to a principal components analysis with varimax rotation which eventually extracted 4 factors. Although Maloney, Grawitch, and Barber (2012) have also tried to do the same beforehand; we did not use their 2-factor BSCS (restraint and impulsivity) because it includes only 8 items out of 13. The study of Baumeister, Heatherton, and Tice (1994) that identified four major domains of self-control (controlling thoughts, emotions, impulses, and performance) might be in support of ours; however, we were not to match these two and name the extracted factors. Likewise, dimensionality of cyber-loafing measure varies in different studies. De Lara and Olivares-Mesa (2010) considered it 1-dimensional, the original measure is 2-dimensional (Lim, 2002; Lim & Teo, 2005), and several improved ones have three dimensions as well (Blau, Yang, & Ward-Cook, 2006; Mahatanankoon, Anandarajan, & Igbaria, 2004). In this study, the 3-dimensional version was used based on Blau et al.'s (2006) taxonomy: web browsing, e-mailing, and interactive.

Before conducting SEM, the measures were evaluated to see if each item is statistically significantly loaded on its relevant construct. To this end, a confirmatory factor analysis (CFA) was run in AMOS using covariance matrices and the Maximum-Likelihood method of estimation. Measurement models were assessed by utilizing fit indices and significance of regression weights. Hereupon, the CFA models were satisfactorily fitted to data and all the items were significantly loaded on their relevant constructs. Detailed information of CFA for multidimensional measures is provided in the following.

Common method bias was also investigated. Since this study is a single-method with cross-sectional research design and self-reporting measures, data were likely to be susceptible to common method variance (CMV) that is attributed to the measurement

method rather than the constructs, and it is of the most important concerns in social researches. Therefore, to decrease the possibility of CMV, we used various response formats (5, 6, and 7-point scales) and conducted a Harman's single-factor test by performing an EFA (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The results of the un-rotated principal components factor analysis for all the items revealed 10 distinct factors with eigenvalues greater than one. The first factor with the greatest eigenvalue did not account for the majority of variance (about 24.4% that is significantly less than half) and the ten together accounted for 70.65% of the total variance. Therefore, CMV was not of great concern and the study results could not be attributed to common method bias (Podsakoff et al., 2003).

5.2. Testing of direct hypotheses

Table 2 presents the means, standard deviations, internal consistency reliabilities, and inter-correlations among study variables. Internal consistency estimates were all above .70 and correlations were all in the predicted direction. Hypotheses were tested using structural equation modeling (SEM) and multiple regression analysis. First, the variables of proximity, monitoring, self-control, non-cyber loafing and cyber-loafing were modeled in SEM, and then, the moderating effects of self-control were investigated through regression analysis.

The output model was modified, so that the final structural model was satisfactorily fitted to data [$\chi^2 = 210.622$; $\chi^2/df = 2.265$; CFI = .94; TLI = .91; RMR = .047; RMSEA = .064], based on which the first 4 hypotheses were tested. Hypotheses 1 and 2 proposed that proximity and monitoring would be negatively associated with non-cyber loafing and not be associated with cyber-loafing. As shown in Fig. 4, SEM revealed significant effects for proximity ($\gamma = -.35$, $p < .001$) and monitoring ($\gamma = -.21$, $p < .05$) on non-cyber loafing, and non-significant effects for proximity ($\gamma = -.06$, sig = .352) and monitoring ($\gamma = -.02$, sig = .711) on cyber-loafing. Hypothesis 3 postulated that self-control is negatively associated with both the non-cyber loafing and cyber-loafing, and Hypothesis 4 proposed that non-cyber loafing would be positively associated with cyber-loafing. The results revealed significant effects for self-control on non-cyber loafing ($\gamma = -.63$, $p < .001$) and cyber-loafing ($\gamma = -.54$, $p < .001$) as well as significant effect for non-cyber loafing on cyber-loafing ($\beta = .37$, $p < .001$). In terms of squared multiple correlation (SMC), it can be said that the variables of monitoring, proximity, self-control, and non-cyber loafing explained a considerable amount of the variance in cyber-loafing ($R^2 = .72$).

5.2.1. Testing of moderating hypotheses

According to the procedure recommended by Cohen, Cohen, West, and Aiken (2003), first we standardized the variables and

Table 3
Regression models testing interaction effects on non-cyber loafing; moderation of self-control.

Model	Predictor	Step 1	Step 2
1	Proximity	-.253**	-.243**
	Self-control	-.372**	-.360**
	Proximity × self-control	-	.078
	R ²	.246**	.252**
	R ² change	-	.006
	F change	-	2.302
2	Monitoring	-.151*	-.139*
	Self-control	-.424**	-.449**
	Monitoring × self-control	-	.236**
	R ²	.188**	.243**
	R ² change	-	.055**
	F change	-	2.721**

* $p < .05$.

** $p < .01$.

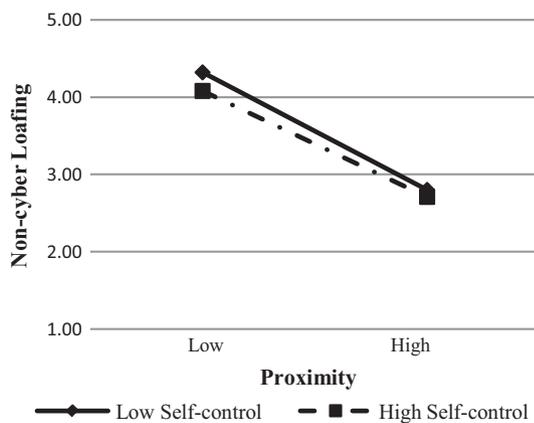


Fig. 2. Two-way interaction effect of proximity and self-control on non-cyber loafing.

created interaction terms by multiplying each predictor variable on the moderator variable, and then, conducted multiple regression analysis. As it can be seen in Table 3, only the interactive effect of monitoring and self-control was statistically significant ($\Delta R^2 = .055, p < .01$). To interpret the interactions, their simple slope at one standard deviation above (i.e., high self-control) and below (i.e., low self-control) the mean of moderator variable was plotted as shown in Figs. 2 and 3. This shows that the high levels of monitoring will be more strongly associated with low levels of non-cyber loafing when interacting with self-control, since the simple slope for the interaction term was positive and statistically significant (simple slope = .26, $t = 4.686$, sig = .000), but such a thing did not apply to proximity (simple slope = .08, $t = 1.517$, sig = .130).

In summary, the first 4 hypotheses were all fully accepted and hypothesis 5 was partially accepted because of the non-significant effect of self-control on the relationship between proximity and non-cyber loafing. Detailed information including path coefficients, p -values, t -values, and results summary for the proposed research model is provided in Table 4.

5.3. Control variables

Results of the hierarchical multiple regressions indicated that some control variables had a significant influence on non-cyber loafing and cyber-loafing. Gender (0 = male, 1 = female) was positively associated with cyber-loafing ($\beta = .13, t = 3.04, p < .01$) indicating higher levels of cyber-loafing for females than males, but non-cyber loafing behaviors do not vary significantly between

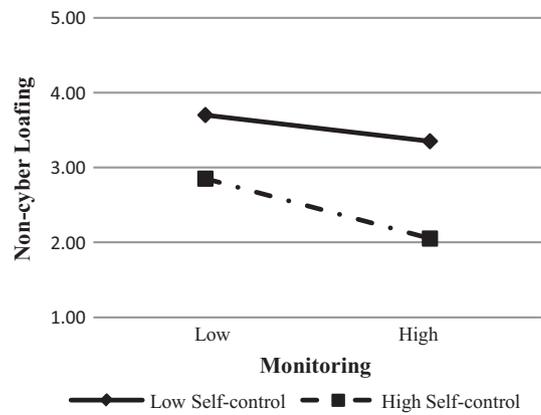


Fig. 3. Two-way interaction effect of monitoring and self-control on non-cyber loafing.

the two groups of males and females ($\beta = .04, t = .81, sig = .41$). Educational level was negatively associated with cyber-loafing ($\beta = -.12, t = -2.60, p < .01$) with employees with higher education showing lower levels of cyber-loafing. There were no significant influence for age ($\beta = -.10, t = -1.47, sig = .14$) and organizational tenure ($\beta = .10, t = 1.44, sig = .14$) on cyber-loafing. Results also indicated that only the educational level was associated with non-cyber loafing ($\beta = -.11, t = -2.10, p < .05$) indicating more educated employees were less likely to engage in non-cyber loafing behaviors.

6. Discussion

The results of this study illustrated the simultaneous effect of organizational control mechanisms and self-control in predicting employees' loafing behaviors at workplace. All the relationships between control elements and non-cyber loafing and cyber-loafing were negative (though, some of them were non-significant), which was a reasonable result and consistent with similar previous studies (e.g., De Lara, 2006; De Lara & Olivares-Mesa, 2010; De Lara et al., 2006; Mirchandani, 2004). The results of more detailed were as follows: (a) All the control elements affected the non-cyber loafing; (b) none of the organizational control elements –neither the proximity nor monitoring– affected the cyber-loafing; (c) amongst control elements, only self-control had a direct effect on cyber-loafing.; and (d) non-cyber loafing was positively associated with cyber-loafing.

The results also provided empirical support for the moderating effect of self-control on the relationship between monitoring and non-cyber loafing. Although the interaction term for monitoring indicated a pattern consistent with our presupposition (no empirical evidence was found for this relationship), we expected a more prominent buffering role for self-control on the relationship between proximity and non-cyber loafing. It shows that proximity has a relatively stable effect on non-cyber loafing regardless of the level of employees' self-control. That is to say, proximity is a dominant variable and in case of its presence the level of recessive variable of self-control does not matter significantly. In addition, the subsidiary results indicated that some control variables had a significant effect on non-cyber loafing and cyber-loafing; more educated employees were less likely to engage in non-cyber loafing and cyber-loafing behaviors, and contrary to the findings of Jia (2008), Lim and Chen (2009), and Yilmaz, Yilmaz, Öztürk, Sezer, and Karademir (2015), females were more engaged in cyber-loafing than males. It is worth noting that the difference between males and females in terms of engaging in cyber-loafing was not found significant in the study of Akman and Mishra (2010).

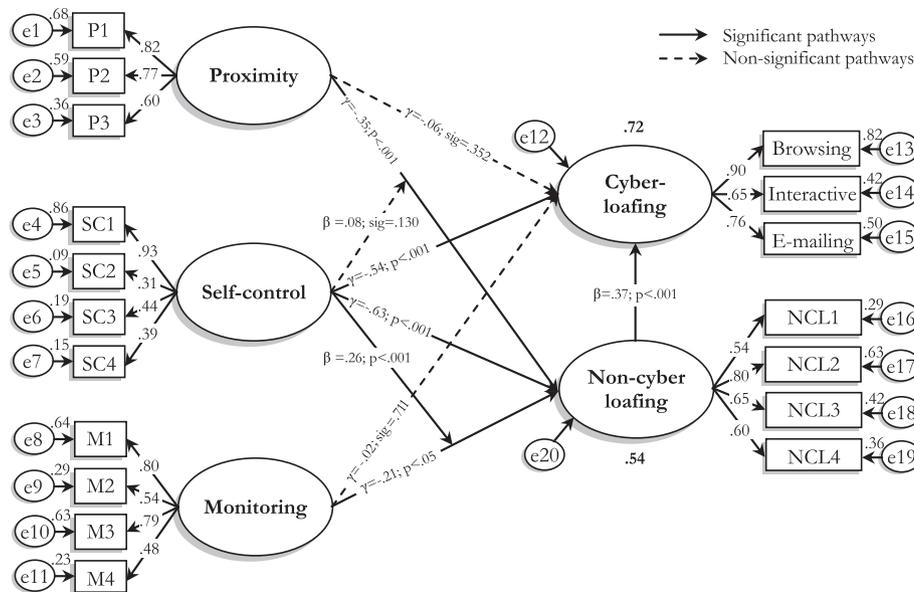


Fig. 4. Accepted model of control/loafing.

Table 4
Summary statistics.

Effect	Intensity	p-Value	t-Value	Result	Hypothesis
Supervisor proximity → non-cyber loafing	-.347*	.000	-4.157	Existed	Accepted
Supervisor proximity → cyber-loafing	-.057	.352	-.931	Not existed	
Monitoring → non-cyber loafing	-.206*	.011	-2.544	Existed	Accepted
Monitoring → cyber-loafing	-.021	.711	-.370	Not existed	
Self-control → non-cyber loafing	-.631*	.000	-5.218	Existed	Accepted
Self-control → cyber-loafing	-.542*	.000	-5.043	Existed	
Non-cyber loafing → cyber-loafing	.366*	.000	3.797	Existed	Accepted
Self-control → (proximity/non-cyber loafing)	.087	.130	1.517	Not existed	Partially accepted
Self-control → (monitoring/non-cyber loafing)	.260*	.000	4.686	Existed	

* Significant values at the confidence level of .95.

This inconsistency may be due to the sample composition of Jia's (2008) study consisting of respondents who were recruited through study Response (a non-profit online research facilitator) from different organizations, or Lim and Chen's (2009) approach to study the perception of cyber-loafing in general instead of cyber-loafing itself in an organizational environment, since the respondents were selected from the alumni list of a university. However, Yilmaz et al. (2015) have investigated the cyber-loafing in teaching and learning environments and concluded that cyber-loafing levels of male students are higher than those of female students. In this regard, many other studies found that men are more confident in Internet usage and more likely to use the Internet for entertainment and leisure purposes (e.g., Hargittai & Shafer, 2006; Jackson, Ervin, Gardner, & Schmitt, 2001; Weiser 2000). Nevertheless, the findings of this study revealed that the gender differences of and attitude to cyber-loafing in Islamic societies appears to be different from both the western and eastern societies. It is worth mentioning that the study of Jia (2008) was carried out in the United States, and Lim and Chen's (2009) in Singapore, which are respectively representative of the west and the east. Turkey, exceptionally, is in the middle where in which Yilmaz et al. (2015) conducted their study. In Iran, as an Islamic society of having Islamic regime, women should be self-restrained in social scenes according to the doctrines of Islam, and thereby, cyber-loafing may be an opportunity to unlock this knot. In addition, Iranian women are characterized by their clever. In line with Jackson et al.'s (2001) study that considers a

communicating online role for women, Iranian female loafers probably treat the cyberspace as an opportunity to satisfy this internalized characteristic to which they are accustomed.

6.1. Implications for practice and research

The results of this study suggest several worthwhile points of view to consider for practice. The organizational control mechanisms only affect the non-cyber loafing. Therefore, in proximity and monitoring plans, there should be more focus on non-cyber loafing behaviors because they are more detectable. Moreover, proximity reduces the cyber-loafing (which mainly consists of intangible activities) indirectly through non-cyber loafing, but the indirect attenuating effect of monitoring on cyber-loafing depends largely on the level of employees' self-control. In fact, monitoring may reduce cyber-loafing through decreases in non-cyber loafing but not among employees with low self-control. Overall, proximity lowers loafing behaviors regardless of employees' level of self-control, but the attenuating effect of monitoring only applies to employees of high self-control.

Considering the simultaneous and interactive effects of organizational control elements on employees' loafing behaviors, there may be five possible strategies as the followings: (1) not to implement the organizational control mechanisms – neither the proximity nor monitoring – and to rely solely on employees' self-control; (2) to implement the organizational control mechanisms

– either the proximity and monitoring – regardless of employees' level of self-control; (3) to implement both the organizational control mechanisms for employees with low self-control; (4) to put the employees of low self-control encounter with their immediate supervisors, and not to implement the monitoring process; and (5) to implement the monitoring process for employees with high levels of self-control, and proximity for employees with low ones.

We believe that the last strategy is the best one in this special context. This can be explained by the strength model of self-control (Muraven & Baumeister, 2000) suggesting that self-control may be likened to a limited resource. Therefore, employees can only regulate a certain number of urges at any given time, and certain individuals exert greater self-control than the others do. This means that the different control mechanisms should complement each other, because the level of self-control varies in different employees and perhaps preventive effect of self-control against loafing behaviors reduces if other workplace urges precede the temptation of loafing behaviors. The fourth strategy could be an alternative too; though, it is not perfect and it ignores the complementary role of monitoring process for employees with high self-control. In all, the last three strategies necessitate the plans to separate the employees (newcomers and insiders) of high from low self-control, and hence, they are long-lasting and require the supervisors to be trained for those plans to be settled in the organizational context. In our opinion, it is costlier for organizations to ignore employees' different levels of self-control in terms of productivity. However, for those organizations that want to take the second strategy, it is suggested to implement more proximal monitoring strategies alongside a lurking supervisor in order to decrease the costs and increase the effectiveness of controlling process. Reminders or warnings on workstations that the company will monitor Internet activity could be an effective proximal monitoring and a strong enough motivator for employees with any level of self-control. And finally, the results of demographics analysis suggest that the organizational control and briefing sessions should be more targeted at females and less educated employees.

In terms of research, our findings suggest several areas in order to be considered in future studies. As previously mentioned, some antecedents affected the intensity of self-control exertion. For example, as cited in Restubog et al. (2010), the effect of self-control on cyber-loafing may be attenuated or ameliorated when it occurs in conjunction with certain situational factors (such as organizational injustice; Bordia et al., 2008). By the same token, we propose to investigate these factors as independent or moderator variables. Furthermore, it was recommended not to implement the proximity plans on employees with high self-control (strategy No. 5), because imposing proximity on employees of high self-control may result in intervening variables like disillusionment. These variables may operate like the previous one (organizational injustice), so we suggest a longitudinal study be conducted in order to address this issue. Another form of addressing this issue could be investigating the probable moderating role of proximity on self-control/loafing relationships. Future studies may also rely on the other human resource management techniques such as training (Zhao, Qi, & De Pablos, 2014) instead of on controlling in association with loafing behaviors, to enhance organizational and employee productivity.

6.2. Study limitations

A number of limitations should be kept in mind when interpreting and generalizing the results of this study. Because of the cross-sectional methodology, we were unable to draw causal conclusions on the relationships and some of them might be inflated or deflated due to the common method variance (Siemsen, Roth, & Oliveira, 2010). However, we utilized the structural equation modeling to compensate this deficiency of research design. In addition, method

variance is less likely to be a serious issue because we used the various response formats (Podsakoff et al., 2003) and the hierarchical multiple regression to analyze the moderating effects (Evans, 1985). Another limitation of this study is related to the population under study, which probably restricts the generalizability of the results to service organizations. However, with caution, the results can be generalized to other types of organizations due to the same nature of workplace loafing in different (manufacturing, business, and service) organizations.

In conclusion, this study is the first to investigate the different forms of control mechanisms (organizational and individual) and their simultaneous and interactive effects in order to predict the variance of both the cyber- and non-cyber loafing. The results illustrated the organizational control mechanisms are directly associated with only non-cyber loafing and self-control is associated with both types of loafing. Additionally, the self-control was considered as a moderator variable in order to more and more distinguishing the role of organizational control from that of self-control. Taken together, these results provide worthwhile insights to understand why and when the organizational controls should be implemented and/or self-control should be emphasized.

Appendix A. Variable items used in this study

Measures	
<i>Supervisor physical proximity; De Lara and Olivares-Mesa (2010), 7-point scale</i>	
X01. I feel my supervisor moves around too closely to my personal workstation	.822
X02. I cannot say I feel that my supervisor appropriate my job privacy through his/her physical proximity (R)	.799
X03. My supervisor move around so far from my workstation that I sometimes feel isolated from him/her (R)	.607
<i>Perceived organizational control (monitoring); De Lara and Olivares-Mesa (2010), 7-point scale</i>	
X04. I perceive that my co-worker and/or client relationships are controlled by the organization	.796
X05. I perceive pressure to achieve goals in my job	.521
X06. I perceive that the proper use of my work tools may be checked by my organization	.808
X07. I may be accused at any moment of not strictly fulfilling my job obligations	.486
<i>Self-control; Tangney et al. (2004), 5-point scale</i>	
X08. I am good at resisting temptation	.444
X09. I have a hard time breaking bad habits (R)	.506
X10. I am lazy (R)	.668
X11. I say inappropriate things (R)	.638
X12. I do certain things that are bad for me, if they are fun (R)	.684
X13. I refuse things that are bad for me	.389
X14. I wish I had more self-discipline (R)	.634
X15. People would say that I have iron self-discipline	.725
X16. Pleasure and fun sometimes keep me from getting work done (R)	.914
X17. I have trouble concentrating (R)	.656
X18. I am able to work effectively toward long-term goals	.383
X19. Sometimes I can't stop myself from doing something, even if I know it is wrong (R)	.735

(continued on next page)

Appendix A (continued)

Measures	
X20. I often act without thinking through all the alternatives (R)	.900
<i>Non-cyber loafing behaviors; Liberman et al. (2011), 5-point scale</i>	
Participants were asked to indicate how often they performed each of the following activities while at work. . .	
Y21. Chit-chatting with fellow coworkers	.435
Y22. Running non-work related errands (e.g., going to the bank, picking up a prescription at the pharmacy, etc.)	.518
Y23. Using either a cell phone or telephone to make non-work related telephone calls	.733
Y24. Taking breaks in between work tasks (e.g., bathroom breaks, snack breaks, stretch breaks)	.802
<i>Cyber-loafing behaviors; Lim and Teo (2005), 6-point scale</i>	
Participants were asked to indicate how often they surf the following websites using the Internet at work. . .	
Y25. Visit non-job related websites	.688
Y26. Visit general news websites	.701
Y27. Visit entertainment-related websites	.842
Y28. Visit sports related websites	.617
Y29. Instant messaging/chat online (IRC)	.919
Y30. Download non-work related information	.705
Y31. Look for employment	.630
Y32. Shop online	.556
Y33. Play online games	.805
Y34. Visit adult-oriented (sexually explicit) websites	.266
Y35. Check non-work related e-mail	.885
Y36. Send non-work related e-mail	.985
Y37. Receive non-work related e-mail	.915

Note: (R) represents the reverse scored items.

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