

Which Leaders Lead Employees to Cyberslack?

By

David Debly

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Approved: Dr. Kevin Kelloway

Supervisor

Approved: Dr. Mark Fleming

Examiner

Approved: Dr. Nicholas Roulin

Examiner

Approved: Dr. Mike Teed

Examiner

Date: August 21, 2022

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Abstract

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Abstract: A new measure of cyberslacking was created. The mediational effects of organizational commitment on the relationship between transformational, passive, and abusive leadership styles and cyberslacking were proposed and explained using the social exchange theory. In a two-wave longitudinal study, Data was collected from 399 participants. Time 1 data was divided into sample A (n=199, exploratory factor analysis) and sample B (n=200, confirmatory factor analysis). Using time 2 data (N=253) a second CFA was conducted and tested a structural equation model examining the mediational effects of organizational commitment on the relationship between leadership styles (transformational and passive) and cyberslacking over time.

The cyberslacking measure was found to be reliable and to have good fit. It appears to be a strong alternative for researchers who are interested in looking at cyberslacking in the workplace who are interested in collecting data on a wide array of cyberslacking behaviors. Convergent validity was found for the new online sexual behaviors and gaming factors of the measure. Self esteem and external locus of control were found to have different relationships with the factors of cyberslacking. The mediational effects of organizational commitment on the relationship between leadership styles and cyberslacking were found to be non-significant. Transformational leadership was found to have a significant positive relationship with affective organizational commitment, and abusive leadership was found to have a significant positive relationship with cyberslacking. This suggests further research should be conducted to gain a better understanding into the underlying mechanisms of cyberslacking.

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Cyberslacking is defined as use of the internet during work hours for non-work-related purposes (Bock & Ho, 2009; Johnson & Indvik, 2004; Lim, 2002; Mastangelo et al., 2006; Vitak et al., 2011). With many people working remotely during the Covid-19 pandemic, there has been increased research interest in cyberslacking behaviors (Miranda, 2021). Existing cyberslacking research usually examine a limited number of cyberslacking behaviors (Vitak et al., 2011). Therefore, a primary goal of my research is to develop a more comprehensive and psychometrically acceptable measure of cyberslacking.

Numerous researchers have suggested cyberslacking behaviors can be influenced by leadership styles (Alshuaibi et al., 2017; De Lara et al., 2006; Shamsudin et al., 2012). Although previous research (Alshuaibi et al., 2017; De Lara et al., 2006) has investigated the effects of transformational leadership on cyberslacking there is limited research which investigates the effects other styles of leadership have on cyberslacking. Accordingly, this research attempted to accomplish two objectives; first, a new, comprehensive measure of cyberslacking was developed, secondly the mediational effect of organizational commitment on the relationship between leadership styles and employee cyberslacking in the workplace were examined.

Cyberslacking

What is Cyberslacking?

As noted above, cyberslacking is the use of the internet during work hours for non-work-related purposes (cyberslacking is sometimes referred to as cyberloafing, goldbricking, cyber-deviance, non-work-related computing, personal Internet use at work, Internet abuse, workplace Internet leisure browsing and junk computing; Bock & Ho, 2009; Johnson & Indvik, 2004; Lim, 2002; Mastangelo, et al., 2006; Vitak, et al., 2011). There are many activities which can be considered cyberslacking: online shopping, blogging, gaming, and instant messaging are

considered among some of the most popular forms of cyberslacking (Mills et al., 2001). Social network sites and streaming online videos are not very well researched forms of cyberslacking while personal text messages and personal emails (Andreassen, et al., 2014a, b; Farivar & Richardson, 2020; Vitak, et al., 2011), personal investing and online auctions (Pee, et al., 2008) and pornography (Cooper, et al., 2006) are a few of the most well researched forms of cyberslacking.

Cyberslacking has negative implications for organizational productivity. The US productivity losses due to cyberslacking are estimated to be over \$178 billion per year (Websense, 2006). The number of workers engaging in cyberslacking behaviors appears to be increasing as outlined by recent survey results which reported that 52% of respondents admitted to responding to personal emails during work time (Statista, 2019). Some cyberslacking activities, specifically activities which are bandwidth intensive such as gaming, streaming videos and downloading files may inhibit the ability for other employees to access the internet thereby reducing not only the perpetrators productivity but also the productivity of all their colleagues as well (Oswalt, et al., 2003). Cyberslacking also includes activities which have the risk of leaving employers and all levels of upper management vulnerable to lawsuits related to sexual, criminal, or even terrorist activity (Hernández, et al., 2016; Mills et al., 2001; Oswalt, et al., 2003). These behaviors may include but are not limited to online sexual activities, illegal gambling, and promotion of terrorist acts. These behaviors are especially rare at work and are far less likely to occur than common forms of cyberslacking such as checking one's personal emails.

Classifications of Cyberslacking

Most characteristics of cyberslacking are not well established (Vitak, et al., 2011). The cyberslacking literature provides several definitions of what cyberslacking is, but rarely offers up

a way to compare cyberslacking behaviors to each other (Vitak, et al., 2011). Cyberslacking can be rated on its frequency, behavior type, employee motivations, severity, and duration but is usually only viewed by behavior type and frequency. Even when different behavior types of cyberslacking are being measured it is often that many important categories are lacking from the survey options. Social media and viewing videos are often not included in measures of cyberslacking (Andreassen, et al., 2014a, b; Farivar & Richardson, 2020; Vitak, et al., 2011). Significant differences between popular cyberslacking measures can be found below (Table 1) in a comparison chart.

Lim (2002) identified 2 categories of workplace cyberslacking; browsing which includes visiting sports, news, investment, entertainment, non-work or adult websites, online shopping and downloading non-work information and emailing which includes checking, sending, receiving non-work emails. The classification system focuses exclusively on small subset of cyberslacking behaviors and does not include a wide variety of cyberslacking activities engaged in by employees as many cyberslacking activities can not fit into either of Lim's (2002) proposed categories. While the items contained within the browsing factor of Lim's (2002) cyberslacking scale cover a decent range of cyberslacking behaviors, the emailing factor's items are so closely related the behaviors could most likely be covered with one item on messaging or emailing. It is highly likely that someone who is checking their non-work emails at work will engage in sending and receiving non-work-related emails, making the factor not very valuable in terms of what incremental information its three items provide. The browsing factor also contains items related to downloading, shopping, and online sexual activity, which do not load highly onto the factor ($< .70$). This indicates that these items, belong to other factors, as we will see in newer scales. Despite the countless critiques researchers have provided for Lim's (2002) measure of

cyberslacking it is still one of the most widely used and reliable measures of cyberslacking that exist. Lim's (2002) cyberslacking scale was useful when it was created, but its items no longer cover enough behaviors to properly represent how cyberslacking is conducted in the modern day.

Blanchard and Henle (2008) classified news, sports, finance, stocks, and emails as typical/minor cyberslacking activities, while gambling, downloading and adult sites were labelled as major cyberslacking activities. Both minor and major cyberslacking activities were considered to negatively effect productivity (Blanchard & Henle, 2008). In Blanchard and Henle's (2008) classification a cyberslacking activity was considered major if there was potentially for legal liability for the organization (Mills et al., 2001; Oswald et al.,2003) and if there was an activity that an employee was likely to spend a lot of time on.

This measure improved on the typology originally proposed by Lim (2002), by making the important point that activities on the internet vary drastically in their significance. Blanchard and Henle (2008) made another significant contribution to the cyberslacking literature by showing that certain internet activities such as visiting websites, did not drastically differ from engaging with non-work emails, showing that emailing did not need to be in a category of its own. Blanchard and Henle (2008) also introduced new forms of cyberslacking not previously found in cyberslacking measures such as reading blogs, maintaining a webpage, and participating in chatrooms. The main issues that this method of classification suffers from is that it fails to recognize that any cyberslacking behavior can be severely harmful if its duration is high enough, and that the classifications are limited in the number of cyberslacking activities it includes. Blanchard and Henle's (2008) measure had many items with poor loadings in both factors, suggesting room for even more factors, and improvements in typological analysis or there is potential for the poor loadings to be due to poor item design. Blanchard and Henle's (2008)

measure has a similar issue to Lim's (2002) cyberslacking scale which is that it was useful when it was created, but its items no longer cover enough behaviors to properly represent how cyberslacking is conducted in the modern day.

Akbulut et al.,(2016) created a new measure of cyberslacking based off an unpublished master's thesis by Kalayci (2010). Kalayci's (2010) measure was adapted from Blanchard and Henle's (2008) measure to be used in an academic setting instead of the workplace and had 13 items across 3 factors: personal works, socialization, and news reading. Kalayci's (2010) measure was found to have content validity issues due to the elimination of many items previously found in Lim's (2002) and Blanchard and Henle's (2008) measures, the measure was also found to have unacceptable model fit (Akbulut, et al., 2016). Kalayci's (2010) measure advanced the field by breaking out of the 2-factor structure system found in other cyberslacking measures, approaching the complex and diverse expression cyberslacking is now known to have. This impressive advancement of the field lead to researchers wanting to modify and adapt this unique yet problematic measure for their own purposes (Akbulut et al., 2016; Baturay, & Toker, 2015; Yilmaz et al., 2015).

Akbulut et al., (2016) made significant improvements to the measure by Kalayci (2010). The measure by Akbulut et al., (2016) was a five factor (sharing, shopping, real-time updating, accessing online content, and gaming/gambling) measure with 30 items. This measure explained more variance (70.44%), with high internal consistency while covering more forms of cyberslacking than previous measures. The primary issues with this measure are that the real-time updating factor contains exclusively items related to Twitter. With a modification on that factor this would be a powerful, comprehensive, and contemporary measure for cyberslacking in an academic setting.

Cook and Roulin (2022) modified the measure created by Akbulut et al., (2016) to adapt the measure for the workplace. Cook and Roulin (2022) included examples for some of the items to help clarify the meaning of the cyberslacking items for those who are less familiar with the language used in the measure. Cook and Roulin (2022) also removed the real-time updating factor, as it was believed to be a factor which just determined whether participants used Twitter or not. The sharing factor was retained as the language was modified and many of the terms used within the sharing factor are terms which appear across multiple forms of social media besides Facebook.

Table 1: Cyberslacking Measures Comparison Chart

	Factors	Pros	Cons
Lim (2002)	Email & Browsing	Strong, Reliable, Simple, Short	Noncomprehensive, Outdated, email factor is not very valuable
Blanchard & Henle (2008)	Major, Minor	Strong, Reliable, Simple, Short, Tackles Organizational Perspective	Noncomprehensive, Outdated, Email Factor Is Not Valuable, Weak Loadings
(Akbulut et al., 2016)	Sharing, Shopping, Real-Time Updating, Gaming/Gambling,	Strong, Reliable, Comprehensive in an	Long, Sharing & Real-Time Updating

Accessing Online	academic setting,	Factor Are Not
Content	Contemporary	Valuable

Aghaz and Sheikh (2016) discussed the conceptualization of cyberslacking proposed by Li, & Chung (2006) through four forms of activities: social, informational, leisure and pursuance of the wants of the virtual self. Although this way of thinking about cyberslacking has not been well tested in the literature, intuitively it appears to fit the modern expression of cyberslacking in organizations. Li, & Chung (2016) conceptualization of cyberslacking takes employee motivations into consideration, which is an area rarely explored in the cyberslacking literature cyberslacking (Andreassen, et al., 2014a, b; Farivar & Richardson, 2020; Vitak, et al., 2011).

Cyberslacking measures have gone through many revisions over the years, but I believe they can still be improved. I suggest that the gaming/gambling factor found in Akbulut et al., (2016) measure should be separated into two factors, one for gaming and one for gambling, as I believe these are theoretically distinct forms of cyberslacking. I also propose that online sexual activities should be reintroduced into the cyberslacking measure as online sexual activities have been found in workplace cyberslacking measures since Lim's (2002) and Blanchard and Henle's (2008) original measures. The inclusion of online sexual activities for workplace cyberslacking measures has also been suggested in the literature (Akbulut et al., 2016; Vitak, et al., 2011). Online sexual activities are not found in the measure used by Akbulut et al., (2016) because the online sexual activity item from Blanchard and Henle's measure (2008) was removed by Kaylaci (2010) to adapt the measure to an academic setting where it was deemed less likely to engage in online sexual activities via cyberslacking due to the difference in privacy between being in one's own office and being in a classroom with classmates. To address these measurement issues, the following hypotheses were proposed:

Hypothesis 1: The proposed measure would assess cyberslacking behaviors on 6 facets (sharing, shopping, accessing online content, gaming, gambling, and online sexual activities)

Hypothesis 2: The gaming factor of the cyberslacking measure would demonstrate convergent validity by being positively correlated with the problematic online gaming questionnaire

Hypothesis 3: The online sexual activities factor of the new cyberslacking measure would demonstrate convergent validity by being positively correlated with Cooper et al.'s online sexual activities measure (2006)

Correlates of Cyberslacking

Predictors

A great deal of cyberslacking literature presents mixed results, such as the literature on cyberslacking and demographic variables (Vitak et al., 2011). Danzinger (2008b) found that occupational status, perceived autonomy within the workplace, income, education, and gender were significant predictors of cyberslacking. Ugrin et al., (2007) found that young executives were more likely to engage in cyberslacking when compared to those from a group with a different combination of job titles and age groups. Conversely, Stanton (2002) found that differences in demographics, internet use, or occupational attitudes did not increase one's chances of cyberslacking.

Job related stress-level and job satisfaction have been found to not influence the amount an individual engages in cyberslacking behaviors (Garrett & Danzinger, 2008a). Although, this finding contradicts a large body of literature on stress and CWBs (Aghaz & Sheikh, 2016; Fox, et al., 2001; Goh, et al., 2003; Güğərçin, 2020; Spector & Fox 2002). Lim (2002) suggested that stress and dissatisfied employees would cyberslack to get back at unfair employers.

Contradictory, it has been found that stress and dissatisfaction have no significant influence on an employee's cyberslacking behaviors and that an individual's personal computer habits and perceptions are the strongest predictor of cyberslacking (Garrett & Danzinger, 2008a; Lim et al., 2002). More specifically, Garrett and Danzinger (2008a) found that positive perception of the utility of the internet, routinized use of computers, job commitment, and organizational restrictions on computer use were significant predictors of cyberslacking behavior. These two findings contradict each other, as it is unknown whether stress and dissatisfaction truly lead to increased engagement in cyberslacking activities.

People with an external locus of control and low self esteem are more likely to cyberslack at work (Blanchard & Henle, 2008). This may be because an individual's external locus of control at work makes them feel as if their work is unimportant to the organization. When an employee feels like this, they may adopt the belief that regardless of whether they are working their hardest, or cyberslacking, the organizational outcomes will remain the same. Although the reverse finding was observed by Vitak et al., (2011), no explanation was provided.

Low self esteem may be related to cyberslacking due to its relationship with internet addiction (Das et al., 2020). It has been suggested that employees may use the internet at work like how they do at home, therefore factors which predict higher internet use at home will predict cyberslacking in the workplace (Garrett, & Danziger, 2008a). Employees may find cyberslacking a more favorable activity than attempting to achieve work goals that they do not believe they can achieve. To verify the criterion validity of the new measure, the following hypotheses were proposed:

Hypothesis 4: external locus of control would be positively related to cyberslacking

Hypothesis 5: self esteem would be negatively related to cyberslacking

Leadership

Transformational Leadership

Transformational leadership is the most researched and valid leadership theory. Transformational leaders perfectly balance the challenge and support that they provide for their employees. A transformational leader considers their employees on an individual level, motivates, and develops each employee to help them improve their critical thinking, problem solving, and leadership skills. As all leaders are expected to be, a transformational leader is charismatic and commits themselves and their employees to a shared vision of the future for themselves and their organizations (Bass & Riggio, 2006).

There are four main components to transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Bass & Bass, 1985). Idealized influence is about the status of the leader, how the leader behaves and how the leader's behavior is perceived and regarded by their subordinates (Bass & Bass, 1985). A transformational leader will elicit respect and admiration from their subordinates through their actions, which will lead to idea that the leader is dependable, trustworthy, and determined. This idealized version of the leader will lead to emulation from employees, increasing their satisfaction and productivity (Hickman, 1998). The idea behind idealized influence is based off the social learning theory (Bandura & Walters, 1977). If the subject has an internal reinforcement such as wanting to be praised and recognized by a person, they respect such as their boss, they will observationally learn and mimic the behaviors of the important figure.

Intellectual stimulation is important for helping develop the transformational leaders' follower's respect (Bass & Bass, 1985). The transformational leader must act as a mentor and

encourage their followers to participate in perspective taking exercises, to think critically and creatively about problems (Hickman, 1998). The leader must be respectful and never criticize a subordinate's attempt. Inspirational motivation is all about the leader's ability to articulate a desirable future (Bass & Bass, 1985). The follower's commitment to the organization and the vision is what will get them motivated and the transformational leader is the one who must help them create this vision together.

Individualized consideration is the most important part of transformational leadership for growth consideration (Bass & Bass, 1985). The follower's needs must be met, and their desires must be accommodated. The challenge and support given to each individual follower must be tailored to their strengths and weaknesses so that each individual employee may become self-actualized (Hickman, 1998). Female leaders have been found to be more transformational than male leaders (Bass, 1999).

Passive Leadership

Passive leaders are leaders who do not attempt to help or harm followers. Passive leaders will not attempt to prevent an issue and will only act if an issue is brought to their attention or if it has become such a large problem that it is unavoidable. Passive leadership leads to subordinates feeling psychological fatigue, role stressors (role overload, conflict, and ambiguity; Barling & Frone, 2017), reduced mental health, increased workplace incivility (Harold, & Holtz, 2014), reduced work attitude, motivation (Judge, & Piccolo, 2004), job satisfaction, life satisfaction, performance, and wellbeing (Kelloway, Mullen & Francis, 2006).

Abusive Leadership

Abusive Supervision is the employee's perceptions of the extent to which supervisors engage in displays of hostile verbal and nonverbal behaviors, excluding physical contact

(Tepper, 2000). The collection of behaviors which are considered abusive include: unhelpful criticisms, tantrums, rudeness, inconsiderate actions, use of noncontingent punishment, willful hostility, belittling subordinates, and coercion (Tepper, 2000). Abusive leadership has been found to lead to subordinates leaving their jobs, reduced wellbeing, reduced life satisfaction, reduced job satisfaction, increased work-family conflict, and reduced normative and affective commitment (Tepper, 2000).

Social Exchange Theory

Social exchange theory (Homans, 1958) is one of the most widely accepted and researched conceptual frameworks in the social sciences (Cropanzano, & Mitchell, 2005). Moreover, social exchange theory has been thoroughly explored with regards to relationships between leaders and employees and how the relationship influences employees' affective organizational commitment (Bishop, Scott, & Burroughs, 2000).

Blau suggests that when people voluntarily engage in a task for which they are expecting compensation they are often rewarded, as material and social exchanges are a fundamental form of human interaction (1964). The social norm of reciprocity (Gouldner, 1960) is the expectation that people respond in kind, and a social pattern which social exchange theory is contingent on. In relation to the present study, the social norm of reciprocity would be expected to govern the social interactions between leaders and employees such that high quality leadership (transformational) will increase affective organizational commitment and therefore be met with high quality behavior from an employee, whereas low quality leadership (passive and abusive) will decrease affective organizational commitment and therefore be met with low quality employee behavior (cyberslacking). Past research has suggested that affective organizational commitment is attitudinal, and that this attitude is built upon consistent rewards such as pay, and

recognition (Van Knippenberg, 2006). The social exchange theory will be used to propose the following hypotheses.

Leadership and Cyberslacking

Social exchange theory is a framework which may be able to explain the mechanisms behind the relationship between leadership and cyberslacking. Leadership is known to influence employee behavior (Babcock-Roberson & Strickland, 2010; Lian & Tui, 2012). There is a limited amount of research on the effects of leadership on cyberslacking (Alshuaibi et al., 2017; De Lara et al., 2006; Shamsudin et al., 2012). In the literature it has been proposed that transformational leadership will reduce cyberslacking through the social exchange theory (Alshuaibi et al., 2017). This would explain the relationship between leadership and cyberslacking as good leadership getting rewarded by employees reducing the severity and frequency of their negative CWB cyberslacking. Following the framework proposed by the social exchange theory, if an employee were to experience negative leadership such as abusive or passive leadership, they may respond to this by increasing the frequency of their cyberslacking behaviors.

In a cross-sectional study (Agarwal, 2019) a significant positive association between passive leader communication style and cyberslacking was found. This relationship has previously been explained to function similarly to passive leadership style's relationship with other CWB's where a passive leader's inability to motivate employees (Newcombe, & Ashkanasy, 2002) combined with a passive leader's tendency to avoid conversing with their employees and to provide a lack of intellectual stimulation (Avolio, & Bass, 1995) can lead to

employees feeling disengaged and choosing to engage in behaviors which are unproductive. These findings are inline with the social exchange theory and the norm of reciprocity.

De Lara et al., found a negative relationship between in-person leadership and cyberslacking (2006). De Lara et al's., study of cyberslacking looked at coercive control strategies implemented by leaders to reduce cyberslacking behaviors. The coercive variables introduced into the model were perceived organizational control, fear of formal punishment and physical leadership proximity. De Lara et al., collected data from 147 participants in 2 waves approximately 1 month apart. De Lara et al., found that perceived organizational control and physical leadership proximity significantly reduced cyberslacking behaviors while fear of formal punishment significantly increased cyberslacking behaviors. Physical leadership proximity's relationship with cyberslacking was found to be fully mediated by fear of punishment and perceived organizational control. Fear of formal punishment increasing cyberslacking behaviors is in line with the idea proposed by Kelloway et al., (2010) and Lim (2002) in which CWBs may be used by employees to protest an individual or organization. These research findings combined suggest that abusive leaders who utilize formal punishment as a method of control on employees may receive increased rebellious actions such as cyberslacking in response.

In a cross-sectional study (Agarwal, & Avey, 2020) a significant positive association between abusive leadership and cyberslacking was found. Past studies found that employees are more likely to engage in cyberslacking when they work under a supervisor they do not view favourably (Pee, Woon, & Kankanhalli, 2008), or when an employee views their organization as unjust (Lim, 2002). These findings are inline with the social exchange theory. The employees have negative experiences with their leader and retaliate with a negative behavior against the leader and organization. It is important to note that although there is support in the literature for

the positive association between abusive leadership and cyberslacking, and that there is a solid theoretical background behind the relationship, but findings have not always been consistent (Lim et al., 2020). To test the relationships between various leadership styles and cyberslacking, the following hypotheses were proposed:

Hypothesis 6a: Transformational leadership style would be negatively related to cyberslacking

Hypothesis 6b: Passive leadership style would be positively related to cyberslacking

Hypothesis 6c: Abusive Leadership style would be positively related to cyberslacking

Leadership and Affective Organizational Commitment

Mowday et al., (1982, pp. 27) defined organizational commitment as, “the relative strength of an individual’s identification with and involvement in a particular organization”. Previous literature has categorized leadership style as an antecedent to organizational commitment (Sabir, & Khan, 2011). The present study will focus exclusively on the affective component of organizational commitment, as past literature demonstrated that affective organizational commitment has a strong relationship with leadership styles and that normative and affective leadership are highly correlated (Tepper, 2000).

There is a large body of research suggesting that transformational leadership is positively associated with organizational commitment (Avolio et al., 2004; Bono & Judge, 2003; Dumdum et al., 2002; Koh, Steers, & Terborg, 1995; Lowe et al., 1996; Sušanj, & Jakopec, 2012; Walumbwa & Lawler, 2003). Transformational leaders can influence their employee’s commitment to their organization by making their employees feel empowered (Ismail et al., 2011). This feeling is instilled in employees by transformational leaders as transformational leaders individually consider their employees and allow them to participate in decision making

processes (Jermier & Berkes, 1979; Rhodes & Steers, 1981) which leads to employees feeling heard and gaining a sense of control within their organization.

Previous research has suggested that passive leadership is negatively associated with organizational commitment (Chenevert et al., 2013; Jackson et al., 2013; Sušanj, & Jakopec, 2012). This negative association has been found to be mediated by role stressors which a passive leader can introduce to an employee-leader relationship due to their inactivity, such as role ambiguity, role conflict and role overload (Chenevert et al., 2013). The negative association between passive leadership and organizational commitment has also been found to be mediated by job satisfaction, and perceived organizational justice (Sušanj, & Jakopec, 2012). An employee who notices behaviors which go against organizational goals continue to go unpunished may become unsatisfied and disengaged with their work (Avolio, & Bass, 1995; Sušanj, & Jakopec, 2012).

Past research has provided evidence for a negative association between abusive leadership and organizational commitment (Aryee et al., 2007; Mehta, & Maheshwari, 2013; Tepper, 2000). Procedural and interactional justice were found to be mediators (Aryee et al., 2007) of the negative association between abusive leadership and organizational commitment. This relationship may be explained by emotional strain placed on an employee working under an abusive leader may lead them to having less job satisfaction and therefore becoming less committed to their organization (Tepper, 2000).

The social exchange theory posits that people follow the social norm of reciprocity (Gouldner, 1960), and that positive reciprocal social exchanges strengthen a bond. Following this logic, one would suspect that positive leadership behaviors would lead to an increase in employee commitment, while negative or a lack of leadership behaviors would lead to a decrease

in employee commitment. As an employee had negative experiences associated with the organization such as negative experiences with leaders and supervisors, they may begin to question their commitment to the organization. The social exchange theory explains that people tend to prefer to be in profitable relationships where rewards are greater than costs than relationships where the costs are greater than the rewards (Homans, 1958). If the negative relationship with an employee's leader is so poor that it outweighs the positive benefits of the organization to the employee, they may respond by reducing their commitment to the entire organization. Considering all the information provided on the relationship between leadership styles and organizational commitment the following hypotheses were proposed:

Hypothesis 7a: Transformational leadership style would be positively related to affective commitment

Hypothesis 7b: Passive leadership style would be negatively related to affective commitment

Hypothesis 7c: Abusive Leadership style would be negatively related to affective commitment

Organizational Commitment and Cyberslacking

I posit that affective organizational commitment will mediate the relationship between leadership styles and cyberslacking, and that this relationship can be effectively understood through social exchange theory (Blau, 1964). Prior research has shown a negative association between organizational commitment and cyberslacking (Hensel, & Kacprzak, 2020; Niaei, Peidaei, & Nasiripour, 2014; Sage, 2015). Antonovsky, and Antonovsky, (1974) posits that organizational commitment should be viewed as an employee's resource, and that when it is high, it allows an employee to focus on their work tasks, but when it is low, they are more easily distracted and have an increased likelihood in engaging in CWBs. Shamsudinet al., proposed

organizational commitment as a mediator between leadership style and cyberslacking, (2012) although in the literature, organizational commitment is more commonly seen as a moderator in cyberslacking studies (Limet al.,2020).

Through the social exchange theory, the proposed relationship could be explained as follows: positive experiences with a leader occur for low cost, the employee sees this relationship as positive and beneficial, and since the relationship is associated with their work and organization, they in turn, become more committed to their organization. This higher level of organizational commitment will be demonstrated not just by their feelings but also in their behavior, by engaging in less CWBs such as cyberslacking. In addition, the social exchange theory could be used to explain the relationship for other forms of leadership such as abusive and passive leadership. Negative experiences with a leader occur and the cost for positive experiences seems too high, the employee sees this relationship as negative and harmful, since the relationship is associated with their work and organization, they in turn, become less committed to their organization. This lower level of organizational commitment will be demonstrated not just by their feelings but also in their behavior, by engaging in more CWBs such as cyberslacking. Taking into consideration the existing literature, and the hypotheses previously proposed, the following hypotheses were proposed:

Hypothesis 8: Organizational commitment would be negatively related to cyberslacking

Hypothesis 9a: Organizational commitment mediates the relationship between transformational leadership and cyberslacking

Hypothesis 9b: Organizational commitment mediates the relationship between passive leadership and cyberslacking

Hypothesis 9c: Organizational commitment mediates the relationship between abusive leadership and cyberslacking

Method

Participants

Data from 399 employed participants who work on computers were recruited via Prolific. Participants age ranged from 18 – 60 years old ($M = 30.53$, $SD = 7.51$). When asked, “Which gender do you identify with?” participants were presented with a list of options and primarily identified as male (49.6%), followed by female (49.4%), prefer not to say (.5%), and other (.3%). When asked, “How do you self identify?” participants were presented with a list of options and primarily identified as Caucasian (49.9%), followed by Black (28.8%), Hispanic/Latino (8%), Mixed Race (3.8%), Other (3.5%), Middle Eastern (2.8%), Prefer not to say (1.8%), Asian (1.5%). When asked, “What is the highest level of education you completed?”, Participants were presented with a list of options and the majority reported having acquired a bachelor’s degree (43.4%), followed by a master’s degree (27.8%), college (13.8%), grade 12 (12.8%), doctoral degree (2.3%).

A balance criterion was implemented to get an approximately even distribution of male and female participants. A Prolific pre-screening criterion was utilized to only allow participants who are full time workers to be allowed to participate in the survey. Participants from all countries that have access to Prolific were allowed, this includes most OECD countries, but does not include Turkey, Lithuania, Colombia, and Costa Rica. All Participants profile’s claim to be 18 year or older, as that is a requirement for all Prolific profiles.

ReCAPTCHA fraud detection software was utilized as a screening question to help avoid synthetic accounts (Google, 2020). Participants were asked, “approximately how many hours do

you work per week?”, participants who reported less than 30 hours a week were removed from further analysis. This screening question was included to verify that the participants were full-time workers. Participants were asked, “Does your work require the use of information communication technologies (computers, phones, etc.)?”. Participants were prompted to answer either, “yes” or “no”, those who answered no were excluded from further analysis. This question was included to verify that participants had access to some form of information communication technology so that they could engage in cyberslacking behaviors. Participants were asked, “Are you self-employed?”. Participants were prompted to answer either “yes” or “no”. Participants who answered yes were removed from future analysis. This question was included as self-employed participants would not have a boss or leader to allow them to respond to the leadership style questions.

Procedure

The data were collected one month apart. Subjects were offered compensation for their participation with this research. The participants were encouraged to engage with the research again one month later and the participants were incentivized by the offer to receive the rest of the compensation. The survey remained open for participants for approximately one week, and during this time the participants were encouraged to fill out all the measures once again.

22 participants data were removed due to missing data via listwise deletion. Data from time one was roughly split in half with Sample A being used for exploratory factor analysis (n = 199; hypothesis 1) and Sample B being used for a confirmatory factor analysis (n = 200). Participants were resampled to acquire data one month later at data extraction point time two (n = 252). Time two data was used for a secondary confirmatory factor analysis (n = 252). Mean substitution was used for the exploratory factor analysis, and full information maximum

likelihood was used for missing data in both confirmatory factor analyses (these forms of analysis were also viewed using listwise deletion and the results were not found to drastically differ from the chosen method). All time one data (N = 374 listwise) were used to test hypotheses 2 – 5. Data from time one and two was used to test test-retest reliability and other hypotheses regarding correlates of cyberslacking (n = 225; hypotheses 6– 9). Only 213 participants data remained to be used in structural equation modelling after removing participants data for missing data via listwise deletion.

Scale Development Procedure

The 25 items from Cook and Roulin's (2022) paper were included in their appropriate factors. 17 additional questions were developed. All questions were rated on a five-point scale in terms of their relevance to cyberslacking and its facets. The questions were derived from the definitions of cyberslacking and its facets and were created from the literature review using the deductive approach (Hinkin, 1998). The literature review included reviewing past scales of cyberslacking to develop the new items, and reviewing scales related to the factors of cyberslacking. Suggestions from subject matter experts were also taken to help create new items and to modify newly proposed items. 7 Subject matter experts (SMEs) were given the name of each facet of cyberslacking followed by a list of questions, and after each question they were asked how related this question was to the provided definition. Scores of "3" (neutral) were coded as ".5", scores of "4" and "5" (4 - related, 5 - strongly related) were coded as "1", and scores of "1" or "2" (1 - strongly unrelated, 2 = unrelated) were coded as "0". SMEs were also allowed to include additional comments to make suggestions on how to improve items and met engaged in a discussion with the research team to suggest item modifications and new items. No items were removed through this process, the scores were reviewed but all items were accepted

into the exploratory factor analysis regardless. This is because the average score for each item was quite low, even though the majority of the items were pulled from a validated measure, and agreement between SMEs was also quite low. This potential problem may have been avoided if individual definitions were provided for each facet. This issue may have also been caused by the level of similarity between each facet, perhaps the SMEs did not believe the items were poor cyberslacking items, but that they may have applied to more than one facet. The respondents consisted of SMEs who are Master or Doctoral program students, recruited from Saint Mary's University. No demographic information on the SMEs were gathered.

An application for research ethics board (REB) review was submitted and approved. The application included test materials, the informed consent form, and the feedback form. Test materials were uploaded on Qualtrics to create the online survey which was used for data collection.

Demographics, Control Variables and Attentional Checks

Participants gender, race, and education were recorded and reviewed as highly educated individuals, non-white individuals and men have been found to be more likely to engage in cyberslacking (Vitak et al.,2011; Danzinger, 2008b). Age was included as young adults (20 – 30 years old) have been found to engage in more cyberslacking activities (Reed et al.,2005). See Appendix A for the demographic control variable questions. 3 Attentional checks were also included to ensure high quality data (see Appendix B). Participants would have been removed from further analysis if they got 2/3 or 3/3 attentional checks wrong, no participants were required to be removed due to missing attentional checks. One failed attentional check was tolerated as it is possible that a participant made a mistake, but it was deemed unacceptable if a

participant was to miss 2 or 3 attentional checks as it was expected to be less likely to be an acceptable error, or more likely to be an actual attentional issue.

Materials.

See appendices for all measures and items.

Self-esteem.

The Single Item Self Esteem Measure (SISE; Robins et al.,2001) is a 1 item measure of self esteem, “I have high self esteem.”. This single item is rated from 1 (“not very true of me”) – 5 (“very true of me”).

Work Locus of Control Scale.

The Work Locus of Control Scale (WLCS; Spector, 1988; Appendix D) is a 16-item measure of Locus Control at Work. Each item is rated from 1 (“I disagree very much”) – 6 (“I agree very much”). The scale was found to be very reliable ($\alpha = .85$).

Cyberslacking.

The Cyberslacking Scale is a six-factor 42-item measure (Appendix E). The questions begin with, “During work-time...”. Each item is rated from 1 – 5 (1 “Never”, 2 “Rarely”, 3 “Sometimes”, 4 “Most of the time” 5 “Always”). The scale was found to be very reliable (21 item reduced measure; $\alpha = .91$).

Transformational Leadership.

Leader’s level of transformational leadership (Carless et al.,2000) was measured with the Global Transformational Leadership Scale (see Appendix F). The Global Transformational Leadership Scale is a 7 item 5-point Likert scale which assess each item is rated from 1 (Rarely

or never) – 5 (Very frequently, if not always). The scale was found to be highly reliable ($\alpha = .86$).

Passive Leadership.

Leader's level of passive leadership was measured using a modified version of a passive leadership scale which was adapted from the MLQ (Kelloway et al.,2006; Appendix G). The 3 items are rated on a 5-point likert scale. The scale was found to have an acceptable level of reliability ($\alpha = .79$).

Abusive Leadership.

Leader's level of abusive leadership (Tepper, 2000) was measured using the scale of Abusive Leadership (see Appendix H). The Abusive Leadership scale is a 15 item Likert scale which assess each item is rated from 1 – 5 (1, "I cannot remember him/her ever using this behavior with me"; 2, "He/she very seldom uses this behavior with me"; 3, "He/she occasionally uses this behavior with me"; 4, "He/she uses this behavior moderately often with me"; and 5, "He/she uses this behavior very often with me") . The scale was found to be highly reliable ($\alpha = .89$).

Affective Organizational Commitment.

Employee's level of affective organizational commitment was measured using 6 items from an 18-item measure of organizational commitment (Meyer et al.,1993; Appendix I). Each item is rated on a 7-point scale (1 = strongly disagree and 7 = strongly agree).

The scale was found to be highly reliable ($\alpha = .87$).

Short Form Problematic Online Gaming Questionnaire.

Employee's frequency of engaging in problematic online gaming was measured using this 12-item scale (Pápay et al., 2013; Appendix J). Each item is rated on a 4-point scale ("rarely or never" – "most of the time"). The scale was found to be highly reliable ($\alpha = .91$).

Cooper et al.'s Online Sexual Activities Scale (2006).

Employee's willingness to engage in a variety of online sexual activities was measured using Cooper et al.'s Online Sexual Activities Scale (2006; Appendix K). Each item rated as either the person did or did not engage in that specific type of online sexual activity ($\alpha = .48$).

Results

EFA

Outliers were reviewed, but prior to analysis it was decided that outliers would not be removed, as one of the main focuses on this new scale of cyberslacking is to look at fringe behaviors which would appear as outliers. Outliers were deemed as valuable information and retained. An exploratory factor analysis of the 42 items of the Cyberslacking scale was performed on data from 199 participants (Sample A). 21 items were removed across multiple rounds of exploratory factor analysis due to inadequate factor loadings (factor loadings below .4) on the primary factor, having higher loadings on factors which were not the items' primary factor, or for having substantial cross-loadings (above .4). The Kaiser-Meyer-Olkin measure of sampling adequacy was .84, which is above the commonly recommended value of .6, and Bartlett's test of sphericity was significant ($\chi^2(210) = 2469.62, p < .05$). As shown in Table 2, a principal component factor analysis with a varimax rotation resulted in the identification of 6 factors with an eigenvalue above 1, review of the scree plot was also used to help inform the decision. The total variance accounted for was 73.91%. Factor 1 explained 15.20% of item variance and was defined by items related to sharing. Factor 2 explained 14.92% of item

variance and was defined by items related to online sexual activities. Factor 3 explained 13.49% of item variance and was defined by items related to shopping. Factor 4 explained 10.25% of item variance and was defined by items related to gaming. Factor 5 explained 10.23% of item variance and was defined by items related to gambling. Factor 6 explained 9.83% of item variance and was defined by items related to accessing online content. Overall, the items loaded on to the six-factor solution as they were expected to, as items 1 – 4 loaded onto sharing, 5 - 8 loaded onto shopping, 9 - 11 loaded onto accessing online content, 12 – 14 loaded on gambling, 15 – 17 loaded onto gaming, and 18 – 21 loaded onto online sexual activities.

Table 2

Factor Loadings, Percentages of Rotated Variance, and Communalities for a Principal Components Analysis with a Varimax Rotation for The Cyberslacking Scale

	Factor						Communalities
	1	2	3	4	5	6	(h ²)
1. I “like” social media posts that are interesting to me	.78	.07	.21	.01	.08	.12	.67
2. I post updates on social media	.82	.11	.14	.06	.08	.20	.75
3. I comment on social media posts	.86	-.04	.09	.03	.05	.14	.77
4. I share content on social media (photo, video, etc.)	.87	.03	.16	.10	.06	.15	.82
5. I browse shopping websites/apps	.16	-.00	.86	.21	.10	.16	.84
6. I make online purchases	.15	.11	.78	.22	.09	.08	.70
7. I browse online auction websites/apps (e.g., eBay)	.17	.17	.74	.13	.24	.09	.69
8. I browse websites/apps for buying used products (e.g., Gumtree, Preloved, etc.)	.21	.17	.73	.01	.17	.26	.70
9. I download music	.16	.06	.16	.18	.14	.81	.77

10. I stream videos on websites/apps	.33	.15	.16	.16	.21	.65	.64
11. I download videos	.20	.09	.19	.10	.01	.81	.76
12. I visit online betting websites/apps	.20	.22	.12	.05	.86	.13	.86
13. I place bets on online betting websites/apps	.20	.31	.17	.04	.81	.13	.85
14. I browse sports websites/apps	-.11	-.06	.24	.26	.70	.07	.63
15. I play browser games	.16	.06	.13	.81	.06	.15	.73
16. I play computer games	-.05	.39	.18	.77	.09	.07	.79
17. I play mobile games	.05	.07	.19	.77	.16	.16	.68
18. I view explicit/adult cam websites	.02	.84	.15	-.01	.08	.09	.74
19. I send sexual photos/videos	.13	.67	.11	.14	.05	.04	.50
20. I view adult videos on explicit websites/apps	.01	.87	.08	.19	.16	.05	.82
21. I view adult photos on explicit websites/apps	.00	.89	.02	.08	.11	.10	.82

Notes. N = 199, highest loadings are bolded. Sharing (1 – 4), Shopping (5 – 8), Accessing Online Content (9 – 11), Gambling (12 – 14), Gaming (15 – 17), and Online Sexual Activities (18 – 21).

CFA

Based on data from Sample B (n = 200), three confirmatory factor models were tested.

The first estimated model was a model hypothesizing one factor on which all items were expected to load. The second estimated model was created based on the theoretical model created by Akbulut et al.,(2016), the five-factor model is comprised of a factor representing, sharing, shopping, online sexual activities, gaming, and gambling, and accessing online content.

The third estimated model was like the five-factor model except for the separation of gaming and gambling as separate factors as originally predicted, which matches the results found in the EFA.

The one factor model is nested in the five-factor model which is nested in the six-factor model.

All model tests used maximum likelihood estimation based on the covariance matrix and were estimated with Jamovi (the jamovi project, 2021). Results of the model tests are presented in Table 3. As shown, the five-factor model fit better than the unidimensional model ($X^2_{diff}(10, N = 200) = 926, p < .001$). The six-factor model fit better than the five-factor model ($X^2_{diff}(5, N = 200) = 141, p < .001$) and provided an acceptable fit to the data ($X^2(174, N = 200) = 324, p < .01$; CFI = .94, RMSEA = .07, $p < .001$). Therefore, the six-factor model was retained for further analysis.

Table 3

Fit Indices for the Confirmatory Factor Analysis of the Cyberslacking Scale

Model	X^2	df	CFI	RMSEA
Single Factor	1391**	189	.53	.18
Five Factor	465**	179	.89	.09
Six Factor	324**	174	.94	.07

Notes. * $p < 0.05$, ** $p < 0.01$

Standardized parameters for the model are presented in Table 4. As shown, all items loaded substantially (all estimates $>.40$ and load significantly on their assigned factor).

Table 4

Standardized Parameters for Six-Factor Model

	Factor					
	1	2	3	4	5	6
1. I “like” social media posts that are interesting to me	.78					
2. I post updates on social media	.86					
3. I comment on social media posts	.85					
4. I share content on	.83					

social media (photo, video, etc.)		
5. I browse shopping websites/apps	.79	
6. I make online purchases	.76	
7. I browse online auction websites/apps (e.g., eBay)	.82	
8. I browse websites/apps for buying used products (e.g., Gumtree, Preloved, etc.)	.65	
9. I download music	.89	
10. I stream videos on websites/apps	.74	
11. I download videos	.82	
12. I visit online betting websites/apps	.62	
13. I place bets online betting websites/apps	.95	
14. I browse sports websites/apps	.93	
15. I play browser games	.81	
16. I play computer games	.67	
17. I play mobile games	.75	

18. I view content on explicit/adult cam websites	.78
19. I send sexual photos/videos	.43
20. I view adult videos on explicit websites/apps	.87
21. I view adult photos on explicit websites/apps	.96

Notes. All parameters are significant at $p < 0.01$. Factor 1 is Sharing, factor 2 is Shopping, factor 3 is Accessing Online Content, factor 4 is Gambling, factor 5 is Gaming, factor 6 is Online Sexual Activities.

CFA 2

The same three confirmatory factor models which were previously tested with a subsample from the wave one data were tested again with wave 2 data. Results of the model tests are presented in Table 5. As shown, the five-factor model fit better than the unidimensional model, ($X^2_{\text{diff}}(10, N = 252) = 1372, p < .001$) and the six-factor model fit better than the five-factor model ($X^2_{\text{diff}}(5, N = 252) = 282, p < .001$) and provided an acceptable fit to the data ($X^2(174, N = 252) = 417, p < .01$; CFI = .93, RMSEA = .07, $p < .001$). Therefore, the findings were consistent with the findings from the previous confirmatory factor analysis and hypothesis 1 was supported.

Table 5

Fit Indices for the Confirmatory Factor Analysis of the Cyberslacking Scale

Model	X^2	df	CFI	RMSEA
Single Factor	2071**	189	.46	.20
Five Factor	699**	179	.85	.11
Six Factor	417**	174	.93	.07

Notes. * $p < 0.05$, ** $p < 0.01$

Standardized parameters for the model are presented in Table 6. As shown, all items loaded substantially, (all estimates $>.40$ and load significantly on their assigned factor) which is consistent with the findings from the previous confirmatory factor analysis.

Table 6*Standardized Parameters for Six-Factor Model*

	Factor					
	1	2	3	4	5	6
1. I “like” social media posts that are interesting to me	.78					
2. I post updates on social media	.91					
3. I comment on social media posts	.84					
4. I share content on social media (photo, video, etc.)	.90					
5. I browse shopping websites/apps		.73				
6. I make online purchases		.62				
7. I browse online auction websites/apps (e.g., eBay)		.81				
8. I browse websites/apps for buying used products (e.g., Gumtree, Preloved, etc.)		.81				

9. I download music	.90	
10. I stream videos on websites/apps	.66	
11. I download videos	.78	
12. I visit online betting websites/apps		.63
13. I place bets online betting websites/apps		.96
14. I browse sports websites/apps		.95
15. I play browser games		.62
16. I play computer games		.82
17. I play mobile games		.78
18. I view content on explicit/adult cam websites		.88
19. I send sexual photos/videos		.57
20. I view adult videos on explicit websites/apps		.85
21. I view adult photos on explicit websites/apps		.93

Notes. All parameters are significant at $p < 0.01$. Factor 1 is Sharing, factor 2 is Shopping, factor 3 is Accessing Online Content, factor 4 is Gambling, factor 5 is Gaming, factor 6 is Online Sexual Activities.

Internal consistencies, test-retest reliabilities and a correlation matrix for relevant measures are presented in Table 7.

Table 7**Internal Consistency, Test-Retest Reliability, & Correlations**

	M(SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	T1-T2
1. Sharing	2.35(.93)	.89															.69**
2. Shopping	2.25(.85)	.42**	.85														.60**
3. AOC	1.76(.93)	.49**	.50**	.82													.75**
4. Gaming	1.53(.73)	.25**	.42**	.48**	.78												.59**
5. Gambling	1.52(.76)	.33**	.44**	.48**	.44**	.82											.68**
6. OSA	1.18(.48)	.19**	.33**	.38**	.41**	.39**	.85										.53**
7. OtherOSA	.16(.13)	.06	.10	.15**	.16**	.18**	.31**	-									
8. POGQ	1.43(.51)	.06	.11*	.18**	.34**	.20**	.17**	.14**	.91								
9. WLC	3.09(.64)	-.10*	-.01	.02	.03	-.02	.02	.01	.17**	.83							
10. SISE	2.93(1.17)	.25**	.09	.17**	.04	.15**	.04	-.00	-.02	-.30**	--						
11. Caucasian	--	-.38**	-.25**	-.39**	-.13*	-.17**	-.07	-.05	-.11*	.04	-.21**	--					
12. Black	--	.45**	.21**	.51**	.12*	.24**	.11*	.08	.10*	-.05	.28**	--	--				
13. Gender	--	-.15**	-.01	.00	.14**	.23**	.17**	.11**	.25**	.03	-.02	.07	-.17**	--			
14. Age	30.47(7.60)	.01	.07	.01	-.03	.01	.11*	-.08	-.20**	-.01	.09	.18**	-.13*	-.01	--		
15. Education	3.92(1.01)	-.08	-.09	-.12*	-.08	-.09	.02	-.00	-.19**	.01	.02	.16**	-.13*	-.19**	.14**	--	

Notes. * correlated at .05 ** correlated at .01. N = 374. Six factors are correlated from time 1 data. Internal consistency is shown in bolded along the diagonal. r = test-retest reliability, which was calculated using time 1 and time 2 data (N = 252). AOC = Accessing Online Content, OSA = Online Sexual Content, OtherOSA = Cooper et al's., (2006) OSA measure, POGQ = Problematic Online Gaming Questionnaire, WLC = Work Locus of Control Scale, SISE = Single Item Self Esteem Measure. Gender 1 = male, 0 = female.

The gaming factor was found to have a significant correlation with the problematic online gaming questionnaire, therefore hypothesis 2 was supported as convergent validity was found. The online sexual activities factor was found to have a significant correlation with Cooper et al's., online sexual activities measure (2006) therefore hypothesis 3 was supported as convergent validity for this factor was found. Hypothesis 4 was not supported as internal locus of control was found to be significantly related to the sharing factor of the cyberslacking scale. Hypothesis 5 was not supported as the one item self esteem measure was found to be positively correlated with the sharing, gambling, and accessing online content factors of the cyberslacking measure and were not significantly related to the other factors instead of being negatively correlated as predicted.

StructuralEquation Modelling

Descriptive statistics and intercorrelations for all study variables are presented in Table 8.

Table 8**Descriptive Statistics and Intercorrelations of Study Variables**

	M(SD)	1	2	3	4	5	6	7
1. Transformational Leadership	3.43(.98)	.94						
2. Passive Leadership	2.34(1.01)	-	.69					
		.52**						
3. Abusive Leadership	1.52(.63)	-	.42**	.93				
		.63**						
4. Cyberslacking T1	1.81(.56)	.02	.02	.10	.91			
5. Cyberslacking T2	1.75(1.56)	-.01	.09	.13	.74**	.91		
6. Affective Organizational Commitment T1	3.84(1.56)	.58**	-	-	.06	-	.91	
			.30**	.36**		.01		
7. Affective Organizational Commitment T2	3.75(1.57)	.54**	-	-	.04	-	.86**	.92
			.23**	.33**		.01		

Notes. n = 213. * correlated at .05 ** correlated at .01. N = 399. Internal consistency is shown in bolded along the diagonal.

Three models were tested using structural equation modelling. Models 1 and 2 were looked at first for exploratory analysis while the saturated model was used to test hypotheses. Model 1 looks at how leadership style influences changes in organizational commitment and

how commitment predicts changes in cyberslacking. Model 1 modelled 3 styles of leadership measured at time one and time one commitment predicting time two commitment, and time one cyberslacking and time two commitment to predict cyberslacking at time two. This model is shown in figure 1. Model 2 controls for cyberslacking at T1 by modelled the 3 styles of leadership measured at time one as predictors for commitment, and cyberslacking and commitment measured at time one as predictors for cyberslacking at time two. The saturated model (shown in figure 3) was used to test hypotheses 6-9. Transformational leadership was found to predict affective organizational commitment ($\beta = .92, p < .001$), while passive leadership and abusive leadership did not ($\beta = .01, p > .05$; $\beta = -.004, p > .05$). Transformational and passive leadership did not predict cyberslacking at time two ($\beta = .09, p > .05$; $\beta = .05, p > .05$), while abusive leadership was found to predict cyberslacking at time two ($\beta = .17, p = .03$). Time two cyberslacking was not predicted by time one affective organizational commitment ($\beta = -.001, p > .05$). The indirect effects for transformational leadership ($\beta = -.001, 95\% \text{ CI } [-.05, .06]$), passive leadership ($\beta = .00; 95\% \text{ CI } [-.01, .01]$) and abusive leadership ($\beta = .00; 95\% \text{ CI } [-.01, .01]$) were analyzed by reviewing bootstrapped 95% bias-corrected confidence intervals run for 2000 iterations and were found to be non-significant. These findings taken together reject hypothesis 6a, 6b, 7b, 7c, 8 and 9. Support was found for hypothesis 6c and 7a.

Figure 1

Model 1

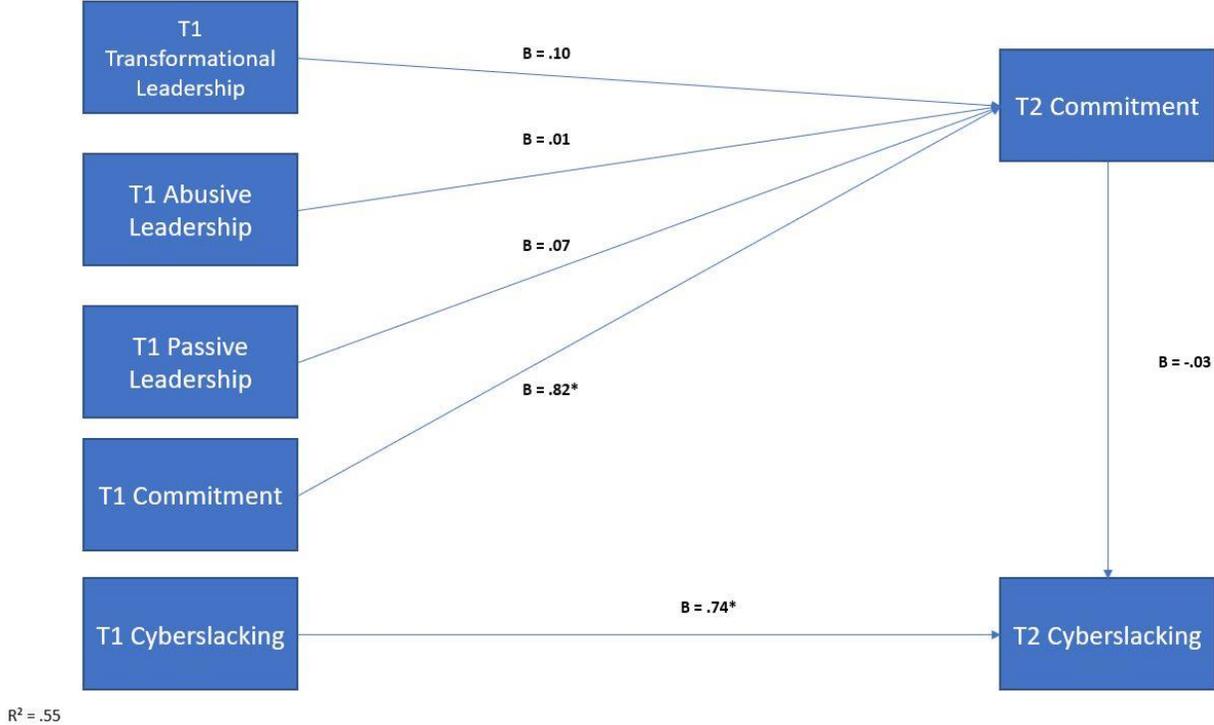


Figure 2

Model 2

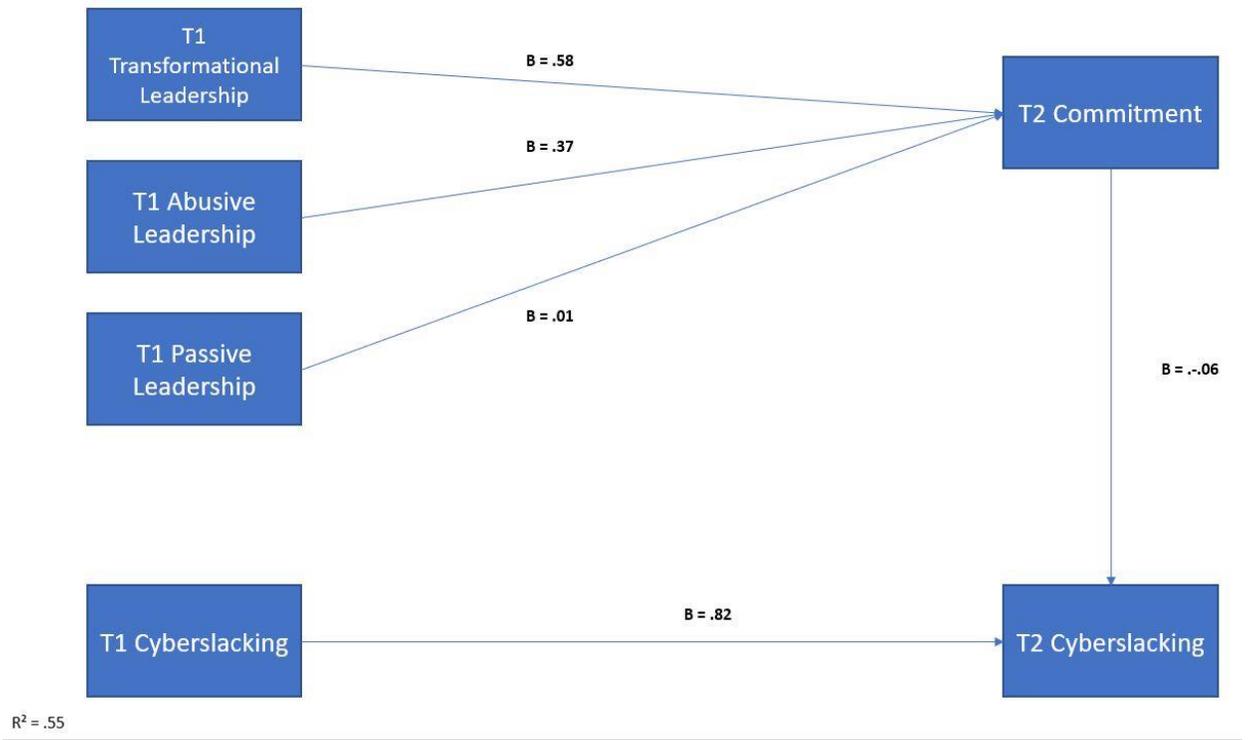
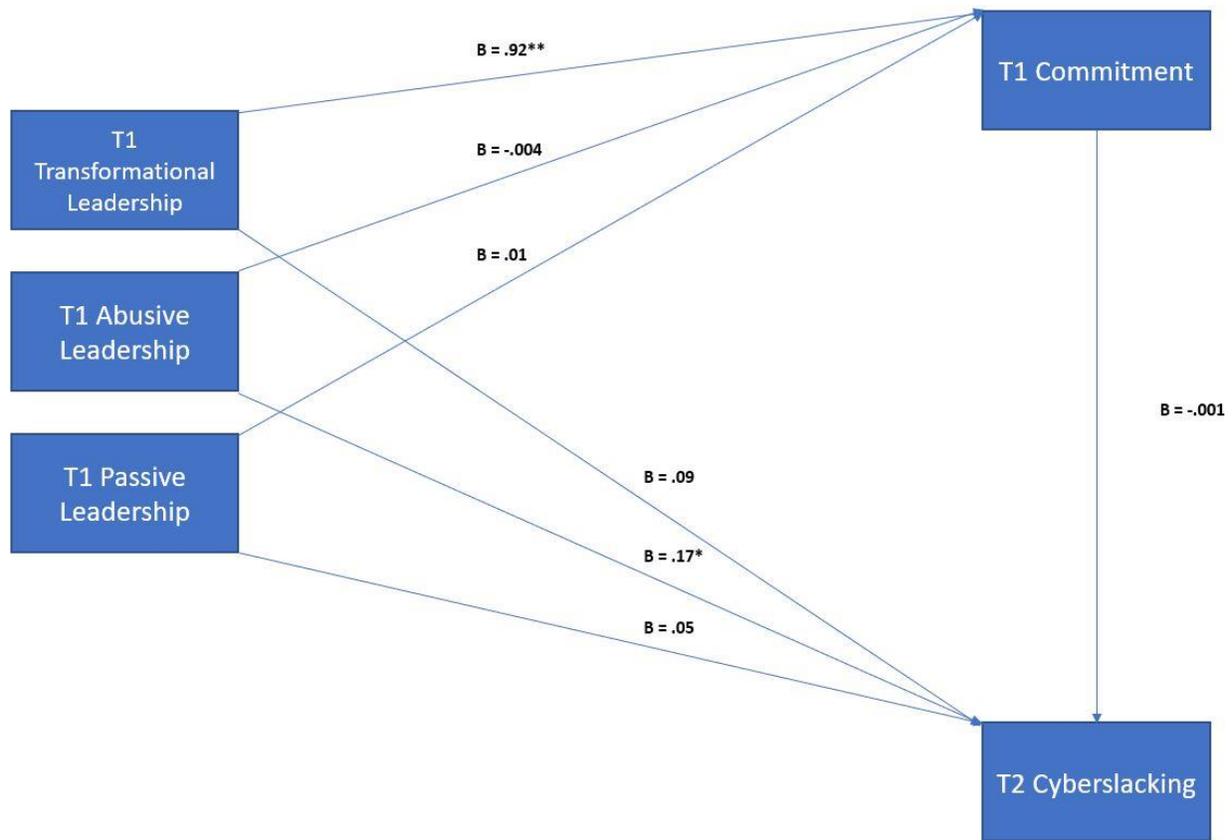


Figure 3

Saturated Model



Notes. * $p < .05$, ** $p < .01$.

Discussion

The first goal of my research was to develop a comprehensive measure of cyberslacking. The six-factor structure was identified, and the scales demonstrate substantial test-retest reliability. Moreover, confirmatory factor analyses on a separate sample, and then again on a longitudinal sample, confirmed the six-factor structure. The gaming and OSA factors

demonstrated convergent validity with relevant measures. These findings taken together support the idea that the new measure of cyberslacking is a reliable and valid measure. The measure is more comprehensive than existing measures – assessing a broader range of cyberslacking behaviors than previous measures,

Contrary to the hypotheses, cyberslacking was found to be unrelated to affective organizational commitment and two of the three leadership styles: transformational, and passive leadership. This suggests that cyberslacking appears to have different utility than what is typically proposed for counterproductive work behaviors. This may mean that cyberslacking is a different type of counterproductive work behavior, or perhaps not a counter productive work behavior at all. Since abusive leadership was found to be significantly related to cyberslacking but the relationship was not found to be mediated by organizational commitment cyberslacking appears to be acting as a more habitual sort of coping mechanism than a protest or act of revenge. This idea has been proposed in more recent literature explained through the neutralisation theory (Gugercin, 2020).

The gaming factor was found to have a small significant positive relationship to problematic online gaming behaviors. This was the expected finding as both scales used to share similarity as they are both focused on gaming, but the intensity of the fixation varies between scales. The gaming scale proposed in the new measure focuses primarily on modes in which employees engage in games, with questions rated on frequency. The problematic online gaming questionnaire focuses on gaming habits, but also mindset and more harmful behaviors associated with a gaming obsession.

The online sexual activities scale was found to have a small significant positive relationship with past online sexual activity scales. This was expected as the scales share a

similarity as they both focus on similar behaviors, but the behaviors measured and the way they are measured is different. The original online sexual activity scale (Cooper et al., 2006) had a wider variety of behaviors for which participants answered whether they engaged in these behaviors in a true or false type questionnaire. The newer scale shown in the measure developed through this paper's research focuses on behaviors of viewing and engaging in online sexual activities, and ignores behaviors focused on purchasing adult items and conducting sexual health research as these behaviors were previously found to be behaviors which were more rare than typical online sexual activities (Cooper et al., 2006).

Cyberslacking was found to have a positive significant relationship with abusive leadership, which agrees with past findings (Agarwal, & Avey, 2020; Agarwal, 2019). Cyberslacking was found to not have a strong significant relationship to passive leadership which is contradictory to past literature (Agarwal, & Avey, 2020; Agarwal, 2019). This suggests more research into the topic must be conducted. A possible explanation for why similar findings were not made is that the scales used to measure cyberslacking are vastly different in this study as compared to the previous literature. Technology has evolved at an incredible pace in the past few decades and cyberslacking has too. The variety of behaviors which have been defined as cyberslacking have greatly expanded in a short period of time and it may also be possible that the reasons why employees engage in cyberslacking behaviors made have changed too. It is possible with the new rise of remote work; the behavior of abusive leaders is still harmful enough to warrant a negative response while the behavior of a passive leader is easier for employees to ignore while working from home.

It is also important to note that the passive leadership scale which was used in this research was a safety specific measure of passive leadership. The original intention behind using

this scale was to hopefully capture employees who had leaders who had poorly dealt with psychological safety, and cyber-safety issues, but upon further consideration it is likely some passive leaders received lower scores than they would have on a more general passive leadership scale as the participants may have just interpreted safety as physical safety. It is also important to note that this research took place during a pandemic and was conducted with a sample of individuals who work on computers, so it is likely that many of these individuals work working from home and potentially experienced decreased physical safety risks.

Cyberslacking was found to have a mixed relationship with an internal locus of control. The sharing factor was found to be negatively correlated with external locus of control at work (those with an internal locus of control engage more frequently in sharing behaviors) which aligns with past literature that found that cyberslacking was previously found to be significantly related to internal locus of control (Vitak et al., 2011). It could be that most forms of cyberslacking are not a powerful enough form of escapism to be considered an avoidant behavior typically associated external locus of control. Most forms of cyberslacking also may not be considered problematic enough for those with high levels of internal locus of control to see it as a barrier to future success. Theory would suggest that those with high levels of internal locus on control would be more likely to engage in minor cyberslacking activities than major behaviors which do pose significant threats to their career sustainability.

Cyberslacking was found to be significantly positively related to self-esteem. More specifically gambling, accessing online content, and sharing behaviors were positively associated with self-esteem. Cyberslacking behaviors may be more common in those with high self esteem as social media may have become an important part of modern self esteem. It may be difficult with those who have high self esteem, to avoid posting and sharing content on social media.

Those with high self esteem may also be less worried about potential consequences associated with cyberslacking. Employees with high self esteem may believe that because they are perceiving themselves as capable at work that they can afford to engage in cyberslacking behaviors.

Past research shows that pathological gambling behaviors are typically associated with lower self esteem (Kaare, et al., 2009). My study found gambling behaviors to be related to higher self-esteem. This may reflect a difference between pathological and recreational gambling. It may also reflect a fundamental difference between online gambling and in-person gambling. Online gambling can take many forms, and it is possible that the behaviors participants were engaging in were less engaged forms of gambling such as sports betting, than behaviors more typically associated with pathological gambling (slots, and cards). It is also important to note the actual items used within the gambling scale are more associated with an interest in gambling rather than gambling itself. Only one of the three items included in the cyberslacking gambling scale involves gambling while the other two items are more focused on visiting sports and gambling websites. These differences may help explain the difference found within the relationship between gambling and self esteem.

Organizational commitment was not found to have a significant relationship with cyberslacking. Past findings had mixed results with regards to this relationship (Hensel, & Kacprzak, 2020; Niaei, Peidaei, & Nasiripour, 2014; Sage, 2015). These findings are aligned with the ideas proposed by Danzinger et al., (2008a, 2008b) which suggest that behaviors performed online at work mimic those conducted at home. Cyberslacking behaviors may be less involved with more emotional concepts such as commitment and more related to past behavior

and perception of cyberslacking behaviors. More research into the antecedents and outputs of cyberslacking should be conducted.

Associations between Cyberslacking and gender, age, race, and education were found. Findings for the relationship between cyberslacking and gender were like the findings of Akbulut et al., (2016) such that men outperformed females on gaming and gambling behaviors, and did not significantly differ on accessing online content, but differed in that men did not outperform females on shopping behaviors and females outperformed males on sharing behaviors.

Associations with age primarily contradict with past cyberslacking literature (Vitak et al, 2011; Ugrin et al, 2008; Garrett & Danziger, 2008b) as significant relationships with cyberslacking were not found for most factors, except for online sexual activities which was positively correlated with participant age. Black participants were found to outperform other races on cyberslacking behaviors which is like past literature (Garrett & Danziger, 2008b; Vitak et al, 2011). It is important to note that the strength of the relationship between black participants and cyberslacking was quite high, higher than past findings. Finally, the majority of cyberslacking dimensions did not have significant associations with education, except for accessing online content, which is more inline with the findings of Stanton (2002).

Limitations

The first and most important limitation of the study is studying three stages of a relationship with two waves of data collection. For future studies with a similar design, I recommend having at least three waves of data collection with longer intervals between collection points. This higher level of rigor may prove beneficial and lead to alternative findings than the ones presented in this paper.

The second limitation of this study is the method used to build the online sexual activities and gaming factors. Although the items presented in these factors were derived from the literature, and rated by SMEs, a stronger approach could be taken in future research to further improve research into these two expressions of cyberslacking. I recommend future researchers interested in online sexual activities and gaming during worktime to first conduct qualitative research with open-ended questions which ask workers how they engage in these behaviors during worktime. After conducting a thematic analysis, the resulting themes could be reviewed alongside the extant literature to help create new items which may better express these factors than the factors presented in this paper.

The third limitation is the sample used to conduct this research. Online labor markets have been found to be cheaper and faster than traditional data collection methods (Berinsky et al., 2012), and allow researchers to access rare populations they typically would not be capable of researching (Shapiro et al., 2013). Although past research has claimed that samples drawn from crowdfunded survey research websites are of equal or better quality than traditional data collection methods (Behrend et al., 2011), the literature has also outlined potential issues with the populations found on crowd funded survey research websites. Past research has found that Prolific workers often engage in many Prolific studies, are often distracted, and communicate with other Prolific users (Palan et al., 2018). The frequency with which Prolific users participate in studies is believed to be dangerous as it may lead to some sort of practice effect, or typical response pattern. It was found that over a third of Prolific users were attending to another activity while participating in Prolific studies, common distractions were talking to other people, watching TV, and listening to music. These common distractions may be problematic as they may lead to low quality responses. It was found that over a quarter of Prolific users communicate

to other Prolific users, whether it is someone they know in real life, or other Prolific users they communicate with over blogs. Online Prolific users share information for which studies are paying the best rates, and Prolific users will also share how they responded. This is problematic as it could lead to inaccurate data and reduce the randomness of participant selection.

Implications/Future Research

The first practical implications that should be made from this research should be based off the supported findings. Transformational leadership has a strong significant relationship with commitment which has a large impact on positive work-related outcomes. It is recommended that organizations do what they can to make sure their organizational leaders and supervisors shift their leadership goals towards acting in a transformational manner. An organizational which wishes to have more transformational leaders in their organization should take action at every level they can, from comparing top candidates' level of transformational leadership during selection, to offering training to current organizational leaders.

The second practical implication should be based off the finding that abusive leadership leads to cyberslacking. Regardless of whether cyberslacking is a counterproductive work behavior or not, cyberslacking is not the optimal response to an abusive leader, because it does not help deal with the abusive leader. It is important for organizations to make sure they have a culture of open communication, and to allow employees to feel comfortable to speak out about an abusive supervisor without fear of retaliation from the leader, or their organization.

The third practical implication is if the organization deems cyberslacking as a completely unacceptable activity then it is important for practitioners to take note that leadership style

does not appear to be an effective way to reduce cyberslacking. It is important for organizations to not put blame on individual leaders for their employees cyberslacking behaviors and instead to focus on solutions to limit cyberslacking. If cyberslacking behaviors must be reduced, organizations can focus on policies and procedures which are known to reduce cyberslacking such as preventing employees from having their phones on them during worktime, password protecting certain websites or phrases, limiting internet access, utilizing time-tracking software, and having harsh punishments for employees who are caught cyberslacking.

It is important to consider the potential downsides with each measure presented above. As limiting employee's internet access and constantly tracking employees through software may lead to employees feeling controlled and untrusted which may do more harm than good for the organization. This known downside to effective counters to cyberslacking, is what leads to the fourth and final practical implication, which is that organization should consider how important cyberslacking is to them. When deciding how to properly deal with cyberslacking there are many factors an organization should consider such as which cyberslacking behaviors are acceptable, how much cyberslacking is acceptable, when is cyberslacking acceptable, and what forms of cyberslacking acceptable. For example, some organizations may tolerate sharing activities but not online sexual activities. It is possible that some organizations may tolerate brief social media checks, but not watching entire online videos. Cyberslacking may be seen as more acceptable by some organizations during workplace downtime but see it as less acceptable during the busier parts of the workday. Organizations may also tolerate minor cyberslacking behaviors which take place on the company computer but may not tolerate cyberslacking on a

personal cellphone. It is important for organizations to be specific on their policy and consider their organizational needs when drafting new cyberslacking-related policy.

The first major academic implication is that there is a new, theoretically sound cyberslacking scale available for researchers to use, which is fully included in the appendices of this paper. This offers a new way for researchers to look at employees cyberslacking behaviors in a variety of factors which apply to the real world. This scale is not too long, so researchers should not have to worry about participant survey fatigue and should be used to replicate old research and to test new hypotheses.

The next implication is that leadership and commitment do not seem to be some of the primary leading reasons why employees engage in cyberslacking. I believe more research between leadership and cyberslacking should be done, replications as well as testing other aspects of leadership besides leadership styles. I also believe this research leaves the question, “what does lead to cyberslacking?”. I believe future research should focus on other antecedents to cyberslacking, to see what other factors, such as climate, culture, personality, mental states, and peers, lead to cyberslacking. Future research should focus on the factors which lead to other counterproductive work behaviors and work from there.

Future research should investigate employee perceptions of cyberslacking. “Do employees see cyberslacking as harmful to their organization? If so which behaviors? And to what degree do they view them as harmful?”. Future research should also analyze employee motivations for cyberslacking, “do employees cyberslack when bored? Angry? Curious?”. These kinds of questions asked in a qualitative research format, would help set up the framework for future cyberslacking research to ask better informed questions, as to why employees cyberslack, and how this is related to other organizational factors.

Summary and Conclusion

A new more comprehensive measure of cyberslacking was developed. The hypothesized six factor structure was identified in an exploratory factor analysis, confirmed in a separate sample, and confirmed again with data from the second wave of data collection. The factors comprising the scale demonstrated convergent validity and substantial test-retest reliability. Contrary to my predictions, cyberslacking was not related to either commitment or perceptions of transformational and passive leadership styles. Thus, further research into the causes or predictors of cyberslacking is warranted and I suggest that the instrument developed in this research could be useful in this endeavor.

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APPENDIX A

1. Which gender do you identify with?
 - Male
 - Female
 - Other: ____
2. What is your age? ____
3. What ethnicity best represents you?
 - Caucasian
 - Black
 - Hispanic/Latino
 - Asian
 - Middle Eastern
 - Native/Aboriginal/Indigenous
 - Mixed Race
 - Other: ____
 - Prefer not to say
4. What is the highest level of education you completed?
 - Less than Grade 12
 - Grade 12
 - College
 - Bachelor's Degree
 - Master's Degree
 - Doctoral Degree

APPENDIX B

Attentional Checks

1. Do you eat cement?
2. Have you been to Mars?
3. Have you ever used a computer before?

APPENDIX C

13 Item Short Form of the Marlowe-Crowne Social Desirability Scale

1. It is sometimes hard to go with my work if I am not encouraged.
2. I sometimes feel resentful when I don't get my way.
3. On a few occasions I have given up doing something because I thought too little of my ability.
4. There have been times when I felt like rebelling against people in authority even though I knew they were right.
5. No matter who I'm talking to, I'm always a good listener.
6. There have been occasions when I took advantage of someone.
7. I'm always willing to admit it when I make a mistake.
8. I sometimes try to get even rather than forgive and forget.
9. I am always courteous, even to people who are disagreeable.
10. I have never been irked when people expressed ideas very different from my own.
11. There have been times when I was quite jealous of the good fortune of others.
12. I am sometimes irritated by people who ask favors of me.
13. I have never deliberately said something that hurt someone's feelings.

APPENDIX D

Items from the Work Locus of Control Scale

1. A job is what you make of it. *
2. On most jobs, people can pretty much accomplish whatever they set out to accomplish. *
3. If you know what you want out of a job, you can find a job that gives it to you. *
4. If employees are unhappy with a decision made by their boss, they should say something about it. *
5. Getting the job you want is a matter of luck.
6. Making money is primarily a matter of good fortune.
7. Most people are capable of doing their jobs well if they make the effort. *
8. In order to get a really good job you need to have family members or friends in high places.
9. Promotions are usually a matter of good fortune.
10. When it comes to landing a really good job, who you know is more important than what you know.
11. Promotions are given to employees who perform well on the job. *
12. To make a lot of money you have to know the right people.
13. It takes a lot of luck to be an outstanding employee in most jobs.
14. People who perform their jobs will generally get rewarded for it. *
15. Most employees have more influence on their supervisors than they think they do. *
16. The main difference between people who make a lot of money and people who make a little money is luck.

Items followed by a * should be reversed scored.

Appendix E

Cyberslacking Scale

Sharing

1. I “like” social media posts that are interesting to me*+
2. I post updates on social media*+
3. I comment on social media posts*+
4. I share content on social media (photo, video, etc.) *+
5. I check my friends’ social media posts+
6. I look at my friends’ social media profiles+
7. I tag friends in photos and videos+
8. I message friends on social media+
9. I look at shared photos/videos+
10. I go on dating websites/apps (e.g., Tinder, Bumble, etc.)#

Shopping

1. I browse shopping websites/apps*+
2. I make online purchases*+
3. I browse online auction websites/apps (e.g., eBay)*+
4. I browse websites/apps for buying used products (e.g., Gumtree, Preloved, etc.)*+
5. I visit deal-of-the-day websites/apps (e.g., redflagdeals.com)+
6. I use online banking services+
7. I go online to check the stock market+
8. I check job advertisements website/apps+

Accessing Online Content

1. I download music*+
2. I stream videos on websites/apps*#
3. I download videos*+
4. I watch videos on video sharing websites/apps (e.g., Youtube, TikTok, etc.)+
5. I listen to music using websites/apps (e.g., Apple Music, Spotify, etc.)+
6. I listen to podcasts using websites/apps (e.g., Apple Music, Spotify, etc.)#
7. I listen to audiobooks using websites/apps (Audible.com, etc.)#
8. I download new apps+

Gambling

1. I visit online betting websites/apps*+
2. I place bets on online betting websites/apps*+
3. I browse sports websites/apps*+

Gaming

1. I play browser games*^
2. I play computer games*^

3. I play mobile games*^
4. I play console games#
5. I play handheld console games#
6. I watch video game content on video-streaming platforms (e.g., Twitch.tv)^

Online Sexual Activities

1. I view explicit/adult cam websites*^
2. I send sexual photos/videos*^
3. I view adult videos on explicit websites/apps*^
4. I view adult photos on explicit websites/apps*^
5. I participate in explicit/adult chat rooms^
6. I send sexual messages^
7. I engage in cybersex via webcam/phone camera^

Notes. Items denoted with * were retained, + were pulled from Cook & Roulin (2022), # were suggested by SMEs, and ^ were generated from literature review (of past cyberslacking measures, and other relevant survey data and measures)

APPENDIX F

Global Transformational Leadership Scale

1. Communicates a clear and positive vision of the future
2. Treats staff as individuals, supports and encourages their development
3. Gives encouragement and recognition to staff
4. Fosters trust, involvement, and co-operation among team members
5. Encourages thinking about problems in new ways and questions assumptions
6. Is clear about his/her values and practices what he/she preaches
7. Instills pride and respect in others and inspires me by being highly competent

APPENDIX G

Passive Leadership

1. Avoids making decisions that affect safety on the job
2. Fails to intervene until safety problems become serious
3. Waits for things to go wrong before taking action

APPENDIX H

Abusive Leadership Scale (Tepper, 2000)

1. Ridicules me
2. Tells me my thoughts or feelings are stupid
3. Gives me the silent treatment
4. Puts me down in front of others
5. Invades my privacy
6. Reminds me of my past mistakes and failures
7. Doesn't give me credit for jobs requiring a lot of effort
8. Blames me to save himself/herself embarrassment
9. Breaks promise he/she makes
10. Expresses anger at me when he/she is mad for another reason
11. Makes negative comments about me to others
12. Is rude to me
13. Does not allow me to interact with my coworkers
14. Tells me I'm incompetent
15. Lies to me

APPENDIX I

Affective Organizational Commitment Scale

1. I would be happy to spend the rest of my career with this organization.
2. I really feel as if this organization's problems are my own.
3. I do not feel a strong sense of "belonging" to my organization. *
4. I do not feel "emotionally attached" to this organization. *
5. I do not feel like "part of the family" at my organization. *
6. This organization has a great deal of personal meaning to me.

Notes. * Indicates reverse coded items

Appendix J

Short Form Problematic Online Gaming Questionnaire

1. When you are not gaming how often do you think about playing a game or think about how it would feel to play a that moment?
2. How often do you daydream about gaming?
3. How often do you lose track of time when gaming?
4. How often do you play longer than originally planned?
5. How often do you get restless or irritable if you are unable to play games for a few days?
6. How often do you feel depressed or irritable when not gaming only for those feelings to disappear when you start playing?
7. How often do you feel that you should reduce the amount of time you spend gaming?
8. How often do you unsuccessfully try to reduce the time you spend gaming?
9. How often do you argue with your parents and/or partner because of gaming?
10. How often do people around you complain that you game too much?
11. How often do you fail to meet up with a friend because you were gaming?
12. How often do you neglect other activities because you would rather game?