Emily Wilder
A,B,C,D,E,F
Shahnaz Aziz
A,B,E,F
Karl Wuensch
A,C,D,E

Working 9 to always: relationships among workplace telepressure, ICT boundary creation, and workaholism

BACKGROUND

Information and communication technology (ICT) in the work environment continues to change the landscape of the workplace. This technology allows employees to have greater flexibility when accessing information and communicating with those not physically present. The goal of the current study was to investigate the relationships between workplace telepressure, workaholism, and ICT boundary creation. The moderating role of ICT boundary creation in the relationship between workaholism and workplace telepressure was also examined.

PARTICIPANTS AND PROCEDURE

The sample consisted of 317 full-time faculty and staff at a large Southeastern university. Participants were recruited through an email distribution service, LISTSERV, that contains potential respondents' university email addresses. Prior to starting the Qualtrics survey, participants were shown an informed consent form indicating that their participation is voluntary, and responses will be confidential and anonymous. When they completed the form, respon-

dents were evaluated on measures of workplace telepressure, workaholism, and ICT boundary creation.

RESULTS

Workplace telepressure was positively related to workaholism (and its subscales) and negatively related to ICT boundary creation. Furthermore, workaholism was negatively related to ICT boundary creation. Additionally, both workaholism and ICT boundary creation had significant partial effects for predicting workplace telepressure.

CONCLUSIONS

As ICTs become more popular in the workforce, organizations must be aware of how the additional ease of access that ICTs provide affects employees. Setting ICT boundaries serves as a way to reduce the negative influence that workaholism and workplace telepressure have on workers.

KEY WORDS

information and communication technology; occupational health; workaholism; workplace telepressure

ORGANIZATION - Department of Psychology, East Carolina University, Greenville, NC, United States

AUTHORS' CONTRIBUTIONS – A: Study design \cdot B: Data collection \cdot C: Statistical analysis \cdot D: Data interpretation \cdot E: Manuscript preparation \cdot F: Literature search \cdot G: Funds collection

CORRESPONDING AUTHOR – Prof. Shahnaz Aziz, Department of Psychology, East Carolina University, E 5th Street, Greenville, NC 27858, United States, e-mail: azizs@ecu.edu

TO CITE THIS ARTICLE – Wilder, E., Aziz, S., & Wuensch, K. (2023). Working 9 to always: relationships among workplace telepressure, ICT boundary creation, and workaholism. *Health Psychology Report*. https://doi.org/10.5114/hpr/165873 RECEIVED 08.08.2022 · REVIEWED 23.04.2023 · ACCEPTED 03.05.2023 · PUBLISHED 26.06.2023

BACKGROUND

Information and communication technology (ICT) in the work environment continues to change the landscape of the workplace. This technology allows employees to have greater flexibility when accessing information and communicating with those not physically present (Christensson, 2010). ICTs have rapidly advanced and grown in popularity. In 2019, about 81% of Americans owned a smart phone, compared to 35% in 2011 (Pew Research Center, 2019). Additionally, almost 75% of Americans own a laptop or desktop computer (Pew Research Center, 2019). ICTs not only allow flexible response times, but they also make it possible to work without stepping inside a workplace. They have come into play more than ever now because of the impact of the COVID-19 pandemic on the nature of the workplace.

Since the inception of COVID-19 in the U.S., various measures have been taken to limit the spread of the virus. As a result, some organizations started requiring remote work for non-essential workers in order to keep employees safe and socially distanced. Previously, only 7% of U.S. workers had the option to telework full-time or occasionally. Due to the pandemic, however, the percentage of U.S. workers working remotely rose to 31% at the beginning of March 2020 and then to 62% by April 2nd (Brenan, 2020; DeSilver, 2020). As a result of COVID-19 safety procedures and changes to education, some predictions show that by the end of 2021 about 25-30% of workers will continue working from home multiple days a week (Global Workplace Analytics, 2020). With the average U.S. worker's work environment shifting, researchers should pay particular attention to organizational constructs that could be exacerbated due to using ICTs.

A key construct that could be amplified by ICT use and remote working is workaholism. Workaholism was originally described as the compulsive need to work incessantly (Oates, 1971). Most of the definitions that exist incorporate the idea that it is also associated with adverse effects at both the individual and organizational level (Clark et al., 2016; Oates, 1971). Workaholics tend to have sleep problems, physical complaints, work stress, burnout, and worse mental health (Andreassen et al., 2018; Clark et al., 2016). In addition, they experience work-life imbalance, role overload, and negative affect (Aziz et al., 2021; Torp et al., 2018). Overall, high levels of workaholism can adversely influence an employee's overall well-being.

Workplace telepressure is the preoccupation with and urge to respond to work-related messages (Barber & Santuzzi, 2015). Like workaholism, it has a negative influence on workers such as sleep problems, physical exhaustion, and poor work-life balance (Barber et al., 2019; Santuzzi & Barber, 2018). Workplace telepressure also has a positive relationship

with burnout and work-family conflict (Kao et al., 2020). Overall, ICTs could collectively impair levels of workplace telepressure and workaholic behaviors.

In the current study, we investigated the associations among workaholism, workplace telepressure, and ICT boundary creation. In addition, we investigated boundary creation as a potential moderator in the relationship between workaholism and workplace telepressure (Barber & Santuzzi, 2015). Boundary creation was selected due to the impact of COVID-19 on an employee's work environment. With COVID-19 affecting schools and forcing many employees to work remotely, physical boundaries between work and personal life have all but disappeared for most Americans. This construct helps identify tendencies of people to separate work from their personal life given the intersection of many roles and responsibilities.

WORKAHOLISM

The term 'workaholism' was first coined by Oates (1971) and described as a compulsion to work incessantly. Since then, it has been described in a myriad of ways such as a fatal disease, an addiction to work, working at the expense of other life areas, and non-required behavioral tendencies at work, to name a few (Clark et al., 2016). For the current study, based on the consensus reached by Clark and colleagues (2016) through a meta-analysis, we conceptualized workaholism as the compulsive need to work excessively hard.

Workaholics limit their social lives by constantly working and exhibiting little interest in non-work activities (Matuska, 2010). They also receive praise from coworkers, salary increases, and even promotions, which can make them discount the negative influence of working excessively (Griffiths, 2005; Porter, 2001). Workaholism is positively correlated with work-life conflict, which can lead to a ripple effect in one's family life such as low family communication (Clark et al., 2016; Robinson & Post, 1997). They experience more sleep problems, such as sleeping fewer hours, having poor quality sleep, and feeling tired in the morning (Salanova et al., 2016). Furthermore, based on a sample of managers, hospital workers, and other professionals, workaholism was negatively related to a range of well-being indicators, such as physical complaints and psychological distress (Schaufeli et al., 2009).

WORKPLACE TELEPRESSURE

As indicated earlier, workplace telepressure is defined as the preoccupation with and urge to respond to work-related messages through ICTs (Barber et al.,

Emily Wilder,

Shahnaz Aziz.

Karl Wuensch

2019; Grawitch et al., 2018). The main issue with workplace telepressure is that employees negate the advantage of flexibility and response time control. In turn, ICTs could lead to employees having inescapable work (Barber & Santuzzi, 2015). As a fairly new construct, its outcomes are still being researched; however, the association between workplace telepressure and other beneficial workplace constructs (e.g., work-life balance) is negative.

Workplace telepressure can affect employees both behaviorally and cognitively (Hu et al., 2019). Researchers conducted two studies using a sample of 663 employees through Amazon's Mechanical Turk (MTurk) – they found that workplace telepressure was negatively related to satisfaction with work-life balance and positively associated with work-family conflict (Barber et al., 2019). Another study of MBA students and staff at a university in Taiwan showed that the positive association between burnout, workfamily conflict, and ICT availability was mediated by workplace telepressure (Kao et al., 2020). Thus, workplace telepressure explained why those with high levels of ICT availability experience burnout and workfamily conflict.

Based on 252 participants recruited through MTurk, higher levels of workplace telepressure were related to lower levels of psychological detachment, which is the lack of thinking about work itself and work events (Santuzzi & Barber, 2018). A lack of detachment can be why workplace telepressure causes some of its detrimental outcomes (Barber et al., 2019). For instance, when measuring work-life balance using a global evaluation, workplace telepressure and work-life balance's negative relationship could be explained by one's control over leisure time and psychological detachment (Barber et al., 2019). Through a lack of psychological detachment, workplace telepressure has a positive indirect association with sleep problems and physical exhaustion (Santuzzi & Barber, 2018).

The origin of workplace telepressure is not clear given the contribution of both self-imposed and organizational pressures. An individual's perception of ICT-responsiveness demands and predisposition to workaholism explain the variance in workplace telepressure the most (Grawitch et al., 2018). Some researchers believe external pressures, such as work demands, are the main cause of workplace telepressure (Barber & Santuzzi, 2015). More recent findings have demonstrated that organizational and internal pressures are positively related to workplace telepressure comparably (Grawitch et al., 2018).

ICT BOUNDARY CREATION

According to boundary theory, individuals commonly manage their roles by creating psychological or

physical boundaries (Park & Jex, 2011). For instance, working at an organization helps employees with role management by associating their work role with their workspace and their personal life with their home (Sinclair et al., 2020). This boundary between work and personal life can become blurred as a result of overusing ICTs outside of working hours. A way to combat blurred boundaries is to create ICT boundaries.

ICT boundary creations are the work-related ICT restrictions we set for ourselves (Barber & Santuzzi, 2015). Those with high ICT boundary creation will be more adamant about limiting their use of ICTs to complete work outside of working hours. ICT boundary creation typically lowers the amount of one's working at home boundary crossing (Olson-Buchanan & Boswell, 2006; Park & Jex, 2011). In addition to ICTs, current events (i.e., the pandemic due to COVID-19) might influence one's ability to create a boundary between work and personal life.

With the increase of ICT use due to COVID-19, the ability to separate and disconnect from work has become even more of a challenge for workers. As more employees began to work from home as instructed by their employer and/or government, their personal and work life became intertwined, in addition to having more roles (Sinclair et al., 2020). As working from home becomes more prominent, some workers are taking on roles such as a fulltime caregiver. While the use of ICTs and the pandemic may cause cross-role interruptions, ICT boundary creation can help encourage psychological detachment from work (Barber & Jenkins, 2013).

If employees do not create some form of separation from work, they may face negative consequences. Based on a sample of 315 employees, researchers found workers who have low boundary creation have a harder time psychologically detaching from work and have lower sleep quality (Barber & Jenkins, 2013). However, in the same study, those with ICT boundaries were more likely to psychologically detach from work (Barber & Jenkins, 2013). Additionally, Boswell and Olson-Buchanan (2007) examined 938 nonacademic university employees and found that those with high levels of job involvement and ambition use ICTs during nonwork hours, and also had increased work-life conflict. Overall, ICT boundaries are beneficial and prevent employees from being negatively affected due to not disconnecting from work.

CURRENT STUDY

The main goal of this study was to examine the relationship between workplace telepressure and workaholism. Furthermore, ICT boundary creation was tested as a moderator. Examining these relationships is crucial since little research has been conducted on

Workplace telepressure, ICT boundary creation, and workaholism ICT boundary creation in general. Also, COVID-19 has made remote working more commonplace, which has led to an increase in the use of ICTs. While ICTs have helped organizations continue to conduct business, employees may find it challenging to separate from work since they are lacking a physical boundary such as an office building. Due to ICT use, boundaries between work and personal life are becoming distorted, which makes this a relevant variable to study.

Emily Wilder, Shahnaz Aziz, Karl Wuensch The current research will not only expand our understanding of ICT boundary creation, but it might also be a solution to handling workplace telepressure and workaholism. The presence of more ICT boundary creation could reduce the negative influence on workers due to increased workplace telepressure and workaholism. Hence, levels of sleep issues, burnout, and work-life conflict, to name a few, could be minimized in these employees.

Based on past (and limited) research, it is believed that workplace telepressure and workaholism will be positively related. If the current study results support this idea, then it can help organizations better understand how the constructs interact. Both share a sense of compulsiveness and similar outcomes, such as lower work-life balance and job satisfaction (Barber et al., 2019; Clark et al., 2016). Additionally, they are both related to greater work-family conflict (Kao et al., 2020; Torp et al., 2018). Workaholism and workplace telepressure may influence a worker's well-being because those with high levels of either do not have sufficient time to recover from work (Barber & Santuzzi, 2015; Taris et al., 2005).

Despite their commonalities, there is little research that links workaholism and workplace telepressure. One study suggests that a worker's predisposition to workaholism can explain workplace telepressure the most out of the variables examined (Grawitch et al., 2018). Also, workplace telepressure and workaholism have shared negative influences on workers - both are negatively related to employees' well-being through their sleep, exhaustion levels, work-life balance, and more (Andreassen et al., 2018; Barber et al., 2019; Clark et al., 2016; Salanova et al., 2016; Santuzzi & Barber, 2018). According to work/ family boundary theory, one's work and personal life are separate domains that individuals integrate and segregate (Clark, 2000). Therefore, people can integrate and have muddled boundaries, or segregate and have more established boundaries. Because ICTs provide workers with additional modes to continue working, workaholics can cross personal and work lives more than ever. This can correlate with workplace telepressure since workaholics may see ICTs as a way to continue working. Hence, the following hypothesis, including the direction of the hypothesized association, was proposed:

Hypothesis 1 (H1): Workaholism will be positively related to workplace telepressure.

While workplace telepressure and ICT boundary creation are associated with one another, ICT boundary creation is the limit we set for ourselves regarding ICT use for work-related reasons, while workplace telepressure is the urge to be responsive to work-related communications (Barber & Santuzzi, 2015). ICTs allow employees to give in to their workplace telepressure urges, making it harder to create a boundary between work and personal life. Considering the work/family boundary theory, the higher one's ICT boundary creation, the less boundary crossing takes place, thereby leading to lower workplace telepressure through email, instant messages, and so on (Clark, 2000). An increase of ICT boundary creation could decrease a worker's level of workplace telepressure because they will have personal restrictions set regarding ICT use. Thus, ICT boundary creation would encourage boundary setting (Van Laethem et al., 2018). Accordingly, the following hypothesis was posited:

Hypothesis 2a (H2a): ICT boundary creation will be negatively related to workplace telepressure.

Previous research has shown that ICT boundary creation helps employees better separate their work role from their personal role (Sinclair et al., 2020), which may help workaholics limit how often they give in to their compulsive need to work. A high level of boundary creation can prevent boundary crossing behaviors, such as working from home (Olson-Buchanan & Boswell, 2006; Park & Jex, 2011). Given that self-imposed boundaries limit the amount of time employees can virtually connect to work during nonwork hours, an increase of ICT boundary creation is predicted to decrease workaholism. Based on this notion, the following hypothesis was advanced:

Hypothesis 2b (H2b): ICT boundary creation will be negatively related to workaholism.

While workaholism and workplace telepressure tend to have a negative association with one's worklife balance (Barber et al., 2019; Clark et al., 2016), boundary creation could minimize the influence of these constructs. Moreover, boundary creation might be a potential solution by helping those workers psychologically detach from work and providing them time to recover (Barber et al., 2019; Taris et al., 2005). According to work/family boundary theory, individuals who have ICT boundaries are attempting to segregate these two domains, which prevents work life from crossing into personal life (Clark, 2000). Given that ICT boundary creation limits the amount of boundary-crossing, based on the work/family boundary theory, the following hypothesis was proposed:

Hypothesis 3 (H3): ICT boundary creation will moderate the relationship between workaholism and workplace telepressure, such that the greater the level of ICT boundary creation, the weaker the relationship between workaholism and workplace telepressure.

PARTICIPANTS AND PROCEDURE

PARTICIPANTS

Participants consisted of 317 full-time employees at a large Southeastern university. See Table 1 for demographic information. This sample size was sufficient to provide 100% power for a medium effect when testing the multiple regression model predicting workplace telepressure from workaholism and ICT boundary creation, and 61% for a small effect. Power for detecting the increase in R^2 when adding the moderation interaction term was 100% for a medium effect, and 71% for a small effect.

PROCEDURE

The procedure followed was in accordance with the Helsinki Declaration of 1975, as revised in 2000. After the study was approved by the Institutional Review Board (approval no. UMCIRB 20-002359), participants were recruited through an email distribution service, LISTSERV, that contains potential respondents' university email addresses. The email explained the topic, study requirements, estimated time to complete the survey, and a link to the survey in Qualtrics. Prior to starting the survey, participants were shown an informed consent form indicating that their participation is voluntary, and responses will be confidential and anonymous. When they completed the form, respondents were evaluated on measures of workplace telepressure, workaholism, and ICT boundary creation. Notably, data were collected approximately eight months after the pandemic started; hence, quarantine measures were in place, especially given the rise in variants.

MEASURES

Workaholism. The 16-item Multidimensional Workaholism Scale (MWS) was used to measure workaholism (Clark et al., 2020). The scale consists of four subscales – motivational, cognitive, emotional, and behavioral aspects of workaholism. The items are answered on a 5-point scale ranging from 1 (never true) to 5 (always true), with higher scores indicating greater levels of workaholism. Sample items include, "I have a strong inner desire to work all of the time," and "I feel upset if I cannot continue to work." A Cronbach's α of .94 was obtained.

Workplace telepressure. The 6-item Workplace Telepressure Measure was used to measure workplace telepressure (Barber & Santuzzi, 2015). The items are scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), whereby higher scores indicate greater levels of workplace tele-

pressure. Sample items include, "I can't stop thinking about a work-related message until I've responded," and "I feel a strong need to respond to coworkers about work immediately." Cronbach's α was .92.

ICT boundary creation. The ICT Boundary Creation Measure (BCM; Olson-Buchanan & Boswell, 2006) was used to measure ICT boundary creation. Of note, the items were slightly reworded due to

 Table 1

 Demographic characteristics of participants

Workplace telepressure, ICT boundary creation, and workaholism

Characteristic	Description
Age (years)	M = 47.90, SD = 12.50
Hours worked (total weekly; remote weekly)	M = 48.10, SD = 8.70; M = 30.30, SD = 19.90
Type of work hours	65% variable, 35% fixed
Gender	61% female, 39% male
Race	85% Caucasian/White, 8% African American or Black, 4% Asian or Pacific Islander, 2% Hispanic or Latino, 1% Native American or American Indian, 1% other
Marital status	76% married, 13% single/never married, 8% divorced, 1% widowed, 1% separated
Children	68% had at least one child
Education	49% doctoral, 27% masters, 12% bachelors, 5% professional, 4% high school, 3% associates
Organizational tenure (years)	M = 11.10, SD = 9.40
Role tenure (years)	M = 9.80, SD = 8.80
Role type	57% faculty, 42% staff
Roles outside of work	75% no, 25% yes
Career status	21% associate professors, 20% professional staff, 16% assistant professors, 16% support staff, 10% full professors, 7% teaching faculty/ instructors, 6% clinical staff, 3% non-teaching faculty, 3% clinical professors
Income (yearly) Note. N = 317.	\$60,000-\$79,999 (23%), \$40,000-\$59,999 (22%)

Note. N = 317.

increased remote work during the COVID-19 pandemic. The items were answered on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), in which higher total scores represent having more ICT boundary creation. Sample items include, "I do not use information/communication technologies to accommodate personal/family role(s) while I am working," and "I do not use information/communication technologies for work purposes while on vacation." A Cronbach's of .78 was obtained.

Emily Wilder, Shahnaz Aziz, Karl Wuensch

DATA ANALYSES

All analyses were conducted utilizing SPSS 27. Pearson correlations between each of the primary study variables, namely, workplace telepressure, workaholism, and ICT boundary, were examined. H1, H2a, and H2b were tested with correlation analysis. ICT boundary creation was predicted to moderate the relationship between workaholism and workplace telepressure (H3) - a multiple regression analysis was conducted to test H3, with a .05 criterion for statistical significance. Workaholism and ICT boundary creation served as the predictor variables, while workplace telepressure was the criterion variable. The main effects of workaholism and ICT boundary creation, followed by their interaction (workaholism × ICT boundary creation), were examined separately. Although we had hypothesized no gender differences, we conducted, as part of routine investigation of the demographic variables, t-tests comparing women with men on the primary outcome variables.

RESULTS

Plots, as well as measures of skewness and kurtosis, all indicated that workplace telepressure, workaholism, and ICT boundary creation were normally distributed. The bivariate correlations between workplace telepressure, workaholism, and ICT boundary creation were all in the hypothesized direction (see Table 2). First, H1 was supported in that workaholism was positively related to workplace telepressure, r = .57, p < .001. Furthermore, H2a was supported, as ICT boundary creation had a negative relationship with workplace telepressure, r = -.23, p < .001. The relationship between ICT boundary creation and workaholism, r = -.17, p = .003, was also negative, supporting H2b. Notably, each of workaholism's subscales (i.e., motivation, cognition, emotion, and behavior) was positively related to workplace telepressure (p < .001) – see Table 2.

In terms of demographics, women scored significantly higher (M = 21.40, SD = 5.41) on workplace telepressure (WTS) than did men (M = 19.49, SD = 5.44), t(311) = 3.04, p = .003, d = .35, as well as higher (M = 28.55, SD = 6.51) on ICT boundary creation (BCM) than did men (M = 26.40, SD = 6.53), t(311) = 2.85, p = .005, d = .33. On workaholism (MWS), women (M = 49.34, SD = 11.97) did not dif-

 Table 2

 Descriptive statistics and intercorrelations

Variable	1	2	3	4	5	6	7	8	9
1. WTS	(.92)								
2. MWS	.57**	(.94)							
3. BCM	23**	17**	(.78)						
4. MWS motivational	.44**	.83**	14*	(.85)					
5. MWS cognitive	.55**	.85**	28**	.62**	(.93)				
6. MWS emotional	.52**	.84**	04	.60**	.63**	(.90)			
7. MWS behavioral	.37**	.79**	10	.56**	.54**	.52**	(.89)		
8. Gender	17**	09	16**	09	05	10	05	_	
9. Hours worked	.21**	.50**	28**	.36**	.47**	.36**	.47**	.15**	-
Range	6-30	18-80	11-47	1-5	1-5	1-5	1-5	0-1	40-80
Mean	20.65	48.64	27.77	3.54	2.81	2.48	3.33	0.39	48.12
SD	5.49	11.89	6.62	0.81	0.94	0.95	0.90	0.49	8.67

Note. N = 317. Entries on the main diagonal are Cronbach's alphas. WTS – Workplace Telepressure Scale; MWS – Multidimensional Workaholism Scale; BCM – Boundary Creation Measure; MWS motivational – motivational subscale of the MWS; MWS cognitive – cognitive subscale of the MWS; MWS emotional – emotional subscale of the MWS; MWS behavioral – behavioral subscale of the MWS; gender was coded 0 for female and 1 for male; hours worked is per week. *p < .05, **p < .01.

 Table 3

 Predicting workplace telepressure from workaholism and ICT boundary creation

		Zero-order r			sr ²	b	
	MWS	ВСМ	WTS				
MWS	(.94)	17*	.57*	.55*	.54	.25	
BCM		(.78)	23*	14*	13	11	
WTS			(.92)		Intercept = 11.46		
М	48.64	27.77	20.65				
SD	11.89	6.62	5.49		$R^2 = .34^*$		

Note. N = 317. Entries on the main diagonal are Cronbach's alphas. MWS – Multidimensional Workaholism Scale; BCM – Boundary Creation Measure; WTS – Workplace Telepressure Scale. *p < .01.

Workplace telepressure, ICT boundary creation, and workaholism

fer significantly from men (M = 47.27, SD = 11.70), t(311) = 1.51, p = .132, d = .18.

A multiple regression analysis revealed that both workaholism (p < .01) and ICT boundary creation (p < .01) had significant partial effects for predicting workplace telepressure (see Table 3). The two-predictor model accounted for 34.4% of the variance in workplace telepressure, F(2, 314) = 82.45, p < .001. Multicollinearity was not a problem with our data, with the variance inflation factor being 1.03.

The interaction term (MWS × BCM) was then added to the model to investigate whether ICT boundary creation was a moderator. The interaction term fell short of statistical significance, F(1, 313) = 2.16, p = .143, $\Delta R^2 = .004$. The hypothesis that boundary creation would serve as a moderator in the relationship between workaholism and workplace telepressure (H3) was not supported.

As noted earlier, gender had a significant small to medium sized association with workplace telepressure and ICT boundary creation. When gender was added to the model as a covariate, the effects of workaholism (β = .54) and ICT boundary creation (β = -.15) remained significant, p < .01.

We also ran multiple regressions using each workaholism subscale. The results with each of the workaholism subscales were essentially the same as with the total scale – no significant moderation effect, but main effects of workaholism and ICT boundary creation. Statistical details are available upon request.

DISCUSSION

Workaholism is positively related to constructs that adversely influence employees, such as work-life imbalance, work stress, and burnout, to name a few (Andreassen et al., 2018; Aziz et al., 2021). The compulsive nature of workaholics and the detrimental outcomes for employees are similar to workplace telepressure. Like workaholism, workplace telepres-

sure is also positively related to work-life imbalance, work-family conflict, and burnout (Kao et al., 2020; Santuzzi & Barber, 2018). Both are influenced by ICT boundary creation. Hence, in the current study, we investigated the relationships between workaholism, workplace telepressure, and ICT boundary creation to better understand how to minimize the adverse consequences from the first two constructs.

Despite the similarities between workplace telepressure and workaholism, to date, there has been little research that has directly examined their relationship. The extant research focuses on how workplace telepressure is distinct from workaholism (Barber & Santuzzi, 2015). However, the current study broadens our understanding and contributes to research on workplace telepressure and workaholism by supporting their association. Additionally, we filled a major gap in the research literature by testing whether ICT boundary creation serves as a moderator in the workaholism - workplace telepressure relationship. Adverse outcomes associated with these variables mainly affect individuals, but they could also influence an organization. Prior research has shown that an increase in work-life conflict often leads to lower job satisfaction, which, in turn, is linked to turnover intentions (Tsai & Wu, 2010; Wright et al., 2014). For this reason, ICT boundary creation could benefit workers and their organization. Furthermore, as technology develops, more employees can work outside of their office space, leading to issues separating work and home life. ICT boundary creation could help employees clarify the line between these two domains. Doing so is more relevant than ever, with the percentage of Americans working from home due to COVID-19 increasing by about 51% (Parker et al., 2020).

First, we investigated the relationship between workaholism and workplace telepressure. It was hypothesized that they would have a positive relationship due to both having a compulsive aspect, as well as relating to similar constructs. Moreover, there is currently a dearth of research on their association, with one study claiming an individual's predisposition to workaholism explains part of workplace telepressure (Grawitch et al., 2018). Their similar associations with adverse outcomes such as poor job satisfaction and work-life balance suggest a positive link (Barber et al., 2019; Clark et al., 2016). The findings supported H1, such that workaholism and workplace telepressure were positively related.

Emily Wilder, Shahnaz Aziz, Karl Wuensch

Next, the relationship between workplace telepressure and ICT boundary creation was examined. It was hypothesized that they would have a negative association. The work/family boundary theory explains that some people attempt to separate their work and life domain to avoid mixing the two (Clark, 2000). Based on this theory, perhaps the stronger the boundary between work and home life, the less likely workaholics will be able to give in to their compulsion to stay connected to work through ICTs when at home. Furthermore, work/family boundaries allow employees to psychologically detach from work and work-related tasks better. Past research has found that high levels of psychological detachment are related to lower levels of workplace telepressure (Santuzzi & Barber, 2018). Thus, ICT boundary creation could help facilitate psychological detachment. As hypothesized, workplace telepressure and ICT boundary creation had a negative relationship, thereby supporting H2a.

Furthermore, the relationship between workaholism and ICT boundary creation was investigated. It was predicted that they would have a negative association. Based on the work/family boundary theory, we asserted that ICT boundary creation could prevent boundary crossing behaviors that allow workaholics to continue to work incessantly while at home. Moreover, the separation may enable workaholics to psychologically detach from their work, which would permit them to recover (Taris et al., 2005). As predicted, the relationship between workaholism and ICT boundary creation was negative, which supports H2b.

Lastly, ICT boundary creation's potential moderating influence between workaholism and workplace telepressure was explored. While little research exists on ICT boundary creation, it could potentially weaken the relationship between workaholism and workplace telepressure by providing time for workers to psychologically detach from work (Barber et al., 2019; Taris et al., 2005). Past studies have mentioned that a lack of psychological detachment from work may explain why workplace telepressure has detrimental outcomes (Barber et al., 2019). Furthermore, as indicated by the work/family boundary theory, employees can prevent their work and home life from blending by having a strong divide between the two areas (Clark, 2000). Additionally, ICT boundary creation causes individuals to self-limit their own impulses regarding those technologies. The results did not support H3, as ICT boundary creation did not significantly moderate the relationship between workaholism and workplace telepressure.

STUDY LIMITATIONS

The current study findings support past research and also fill gaps in the research literature; however, some study limitations exist. First, the data were collected during the COVID-19 pandemic, which might have affected participants' responses; the results may have differed if the study had taken place before COVID-19. Also, the participants were recruited from a pool of higher education employees at a large Southeastern university. Therefore, the majority of respondents had higher degrees such as doctorate (49%) and master's (27%). Furthermore, half of the respondents reported being a type of professor (50%), which may explain why the majority claimed to be working variable (65%) as opposed to fixed hours (35%). In addition, more women (61%) participated than men (39%), and they had significantly higher levels of workplace telepressure and ICT boundary creation. Moreover, the majority of participants identified themselves as Caucasian/White (85%). Future researchers should sample from a group that is more balanced in terms of gender, and includes a more diverse array of races/ethnicities as well as educational backgrounds, to improve generalizability.

The self-report nature of the study is another limitation. While self-reports can make data collection more convenient for researchers, past studies have shown that they may result in response bias (Adams et al., 1999). Despite these drawbacks, however, selfreports still provide researchers with insight into how individuals feel about various aspects of their jobs (Spector, 1994). This was key when investigating concepts such as workaholism, workplace telepressure, and ICT boundary creation, as they are all intangible subjective constructs. Self-report data might be inaccurate, as individuals may skew their responses. However, Conway and Lance (2010) did not find common method bias to be a concern, citing the construct validity of self-report ratings and evidence refuting claims of inferiority relative to other methods.

Lastly, the use of a cross-sectional design might entail some limitations. Data were collected at one point in time, which does not enable potential changes in the participants' scores to be assessed over time, or causal inferences to be made (Spector, 1994). In the current study, a cross-sectional design was used to establish a relationship between workaholism and workplace telepressure; the focus was on ICT boundary creation moderating this relationship and not how these constructs change over time. As argued by Spector (2019), cross-sectional designs can pro-

vide researchers with valuable information, such as associations, and can rule out potential explanations without giving causal connections. Future researchers should conduct longitudinal studies in order to make causal conclusions and examine trends to further expand the literature (Rindfleisch et al., 2008).

ORGANIZATIONAL AND PRACTICAL IMPLICATIONS

Workaholism and workplace telepressure both negatively influence employees in their work and home life. Workaholics are more likely to have high levels of burnout and work stress (Ackerley et al., 1988). Similarly, workplace telepressure is related to worklife imbalance and burnout (Kao et al., 2020; Santuzzi & Barber, 2018). Since both variables relate to similar negative organizational constructs, it is crucial to gain more knowledge on workaholism and workplace telepressure so that organizations can mitigate their levels amongst employees and enhance employee wellbeing. In turn, this would expand what it means to be a workaholic by adding a technological aspect that was not originally considered when the term was first coined. Furthermore, this could result in more policies encouraging employees to disconnect from work, ranging from a simple discussion with one's manager about working hours to organization-wide initiatives (e.g., webinars, scenarios) about use of ICTs.

Due to our society becoming more technologically advanced, it has become easier for employees to continue work-related tasks after their work hours. Accordingly, workaholics and those with high levels of workplace telepressure have more opportunities to succumb to their compulsive need to work and/or stay connected to work via ICT. Mainly due to COVID-19, as of July 2020, 42% of the American workforce worked from home through a computer (Wang, 2020). With more employees working from home, they have lost their physical boundaries and must create nonphysical ones.

ICT boundary creation allows individuals to set limits of when they use ICTs for work-related purposes after work hours (Barber & Santuzzi, 2015). The 71% of the US workforce working at home by way of ICTs and other devices now relies on ICT boundary creation as their primary boundary (Parker et al., 2020). Fewer boundaries make it more difficult for employees to psychologically detach from work and recover from their day. Managers can use this knowledge to help develop and implement training programs (e.g., education program, training course) for their employees which promote awareness of and teach ICT boundary creation. Similarly, based on their findings, Pfaffinger et al. (2022) suggest that interventions geared toward decreasing the harmful effects of ICT demands (e.g., workplace telepressure)

should focus on enabling worker detachment (via communication policies).

REFERENCES

- Ackerley, G. D., Burnell, J., Holder, D. C., & Kurdek, L. A. (1988). Burnout among licensed psychologists. *Professional Psychology: Research and Practice*, 19, 624. https://doi.org/10.1037//0735-7028.19.6.624
- Adams, A. S., Soumerai, S. B., Lomas, J., & Ross-Degnan, D. (1999). Evidence of self-report bias in assessing adherence to guidelines. *International Journal for Quality in Health Care, 11*, 187–192. https://doi.org/10.1093/intqhc/11.3.187
- Andreassen, C. S., Pallesen, S., & Torsheim, T. (2018). Workaholism as a mediator between work-related stressors and health outcomes. *International Journal of Environmental Research and Public Health*, *15*, 73. https://doi.org/10.3390/ijerph15010073
- Aziz, S., Bellows, J., & Wuensch, K. L. (2021). The relationship between workaholism and negative affect: Mindfulness matters! *International Journal of Mental Health and Addiction*, *19*, 1605–1614. https://doi.org/10.1007/s11469-020-00249-5
- Barber, L. K., Conlin, A. L., & Santuzzi, A. M. (2019). Workplace telepressure and work-life balance outcomes: The role of work recovery experiences. *Stress and Health*, *35*, 350–362. https://doi.org/10.1002/smi.2864
- Barber, L. K., & Jenkins, J. S. (2013). Creating technological boundaries to protect bedtime: Examining work-home boundary management, psychological detachment, and sleep. *Stress and Health, 30*, 259–264. https://doi.org/10.1002/smi.2536
- Barber, L. K., & Santuzzi, A. M. (2015). Please respond ASAP: Workplace telepressure and employee recovery. *Journal of Occupational Health Psychology*, 20, 172–189. https://doi.org/10.1037/a0038278
- Boswell, W. R., & Olson-Buchanan, J. B. (2007). The use of communication technologies after hours: The role of work attitudes and work-life conflict. Journal of Management, 33,592–610. https://doi.org/10.1177/0149206307302552
- Brenan, M. (2020, April 3). *U.S. workers discovering af-finity for remote work*. Retrieved from https://news.gallup.com/poll/306695/workers-discovering-affinity-remote-work.aspx
- Christensson, P. (2010, January 4). *ICT*. Retrieved from https://techterms.com/definition/ict
- Clark, S. C. (2000). Work/family border theory: a new theory of work/family balance. *Human Relations*, 53, 747–770. https://doi.org/10.1177/00187267005 36001
- Clark, M. A., Michel, J. S., Zhdanova, L., Pui, S. Y., & Baltes, B. B. (2016). All work and no play? A meta-analytic examination of the correlates and outcomes of workaholism. *Journal of Manage*-

Workplace telepressure, ICT boundary creation, and workaholism

- ment, 42, 1836–1873. https://doi.org/10.1177/01492 06314522301
- Clark, M. A., Smith, R. W., & Haynes, N. J. (2020). The Multidimensional Workaholism Scale: Linking the conceptualization and measurement of workaholism. *The Journal of Applied Psychology*, 105, 1281–1307. https://doi.org/10.1037/apl0000484
- Conway, J. M., & Lance, C. E. (2010). What reviewers should expect from authors regarding common method bias in organizational research. *Journal of Business Psychology*, 25, 325–334. https://doi.org/10.1007/s10869-010-9181-6
- DeSilver, D. (2020, March 20). Before the coronavirus, telework was an optional benefit, mostly for the affluent few. Retrieved from https://www.pewresearch.org/fact-tank/2020/03/20/before-the-coronavirus-telework-was-an-optional-benefit-most-ly-for-the-affluent-few/
- Global Workplace Analytics (2020, April 12). *Work-at-home after COVID-19 our forecast*. Retrieved from https://globalworkplaceanalytics.com/work-at-home-after-covid-19-our-forecast
- Grawitch, M. J., Werth, P. M., Palmer, S. N., Erb, K. R., & Lavigne, K. N. (2018). Self-imposed pressure or organizational norms? Further examination of the construct of workplace telepressure. *Stress and Health*, 34, 306–319. https://doi.org/10.1002/smi.2792
- Griffiths, M. (2005). Workaholism is still a useful construct. *Addiction Research & Theory, 13*, 97–100. https://doi.org/10.1080/16066350500057290
- Hu, X., Santuzzi, A. M., & Barber, L. K. (2019). Disconnecting to detach: The role of impaired recovery in negative consequences of workplace telepressure. Revista De Psicología Del Trabajo y De Las Organizaciones, 35, 9–15. https://doi.org/10.5093/jwop2019a2
- Kao, K., Chi, N., Thomas, C. L., Lee, H., & Wang, Y. (2020). Linking ICT availability demands to burnout and work-family conflict: The roles of work-place telepressure and dispositional self-regulation. *The Journal of Psychology*, 154, 325–345. https://doi.org/10.1080/00223980.2020.1745137
- Matuska, K. M. (2010). Workaholism, life balance, and well-being: a comparative analysis. *Journal of Occupational Science*, *17*, 104–111. https://doi.org/10.1080/14427591.2010.9686681
- Oates, W. (1971). *Confessions of a workaholic: The facts about work addiction*. World Publishing.
- Olson-Buchanan, J. B., & Boswell, W. R. (2006). Blurring boundaries: Correlates of integration segmentation between work and family. *Journal of Vocational Behavior*, 68, 432–445. https://doi.org/10.1016/j.jvb.2005.10.006
- Park, Y., & Jex, S. M. (2011). Work-home boundary management using communication and information technology. *International Journal Stress Management*, 18, 133–152. https://doi.org/10.1037/a0022759

- Parker, K., Menasce Horowitz, J., & Minkin, R. (2020, December). How the coronavirus outbreak has and hasn't changed the way Americans work. Retrieved from https://www.pewresearch.org/socialtrends/2020/12/09/how-the-coronavirus-outbreak-has-and-hasnt-changed-the-way-americans-work/
- Pew Research Center (2019, June 12). *Mobile fact sheet*. Retrieved from https://www.pewresearch.org/internet/fact-sheet/mobile/
- Porter, G. (2001). Workaholic tendencies and the high potential for stress among co-workers. *International Journal of Stress Management*, 8, 147–164. https://doi.org/10.1023/A:1009581330960
- Pfaffinger, K. F., Reif, J. A. M., & Spieß, E. (2022). When and why telepressure and technostress creators impair employee well-being. *International Journal of Occupational Safety and Ergonomics*, 28, 958–973. https://doi.org/10.1080/10803548.2020.1846376
- Rindfleisch, A., Malter, A. J., Ganesan, S., & Moorman, C. (2008). Cross-sectional versus longitudinal survey research: Concepts, findings, and guidelines. *Journal of Marketing Research*, *45*, 261–279. https://doi.org/10.1509/jmkr.45.3.261
- Robinson, B. E., & Post, P. (1997). Risk of addiction to work and family functioning. *Psychological Reports*, *81*, 91–95. https://doi.org/10.2466/pr0.1997.81.1.91
- Salanova, M., López-González, A. A., Llorens, S., del Líbano, M., Vicente-Herrero, M. T., & Tomás-Salvá, M. (2016). Your work may be killing you! Workaholism, sleep problems and cardiovascular risk. Work & Stress, 30, 228–242. https://doi.org/10.1080/02678373.2016.1203373
- Santuzzi, A. M., & Barber, L. K. (2018). Workplace telepressure and worker well-being: The intervening role of psychological detachment. *Occupational Health Science*, 2, 337–363. https://doi.org/10.1007/s41542-018-0022-8
- Schaufeli, W. B., Shimazu, A., & Taris, T. W. (2009). Being driven to work excessively hard the evaluation of a two-factor measure of workaholism in the Netherlands and Japan. *Cross-Cultural Research*, *43*, 320–348. https://doi.org/10.1177/1069397109337239
- Sinclair, R. R., Allen, T., Barber, L. Bergman, M., Britt, T. Butler, A., Ford, M., Hammer, L., Kath, L. Probst, T., & Yuan, Z. (2020). Occupational health science in the time of COVID-19: Now more than ever. Occupational Health Science, 4, 1–22. https:// doi.org/10.1007/s41542-020-00064-3
- Spector, P. E. (1994). Using self-report questionnaires in OB research: a comment on the use of a controversial method. *Journal of Organizational Behavior*, 15, 385–392. https://doi.org/10.1002/job.4030150503
- Spector, P. E. (2019). Do not cross me: Optimizing the use of cross-sectional designs. *Journal of Business and Psychology, 34*, 125–137. https://doi.org/10.1007/s10869-018-09613-8
- Taris, T. W., Schaufeli, W. B., & Verhoeven, L. C. (2005). Workaholism in the Netherlands: Measurement

Emily Wilder,

Shahnaz Aziz,

Karl Wuensch

- and implications for job strain and work-nonwork conflict. *Applied Psychology, 54*, 37–60. https://doi.org/10.1111/j.1464-0597.2005.00195.x
- Torp, S., Lysfjord, L., & Hovda Midje, H. (2018). Workaholism and work-family conflict among university academics. *Higher Education*, *76*, 1071–1090. https://doi.org/10.1007/s10734-018-0247-0
- Tsai, Y., & Wu, S. (2010). The relationships between organisational citizenship behaviour, job satisfaction and turnover intention. *Journal of Clinical Nursing*, 19, 3564–3574. https://doi.org/10.1111/j.1365-2702.2010.03375.x
- Van Laethem, M., van Vianen, A. E. M., & Derks, D. (2018). Daily fluctuations in smartphone use, psychological detachment, and work engagement: The role of workplace telepressure. *Frontiers in Psychology*, *9*, 1808. https://doi.org/10.3389/fpsyg.2018.
- Wright, K. B., Abendschein, B., Wombacher, K., O'Connor, M., Hoffman, M., Dempsey, M., Krull, C., Dewes, A., & Shelton, A. (2014). Work-related communication technology use outside of regular work hours and work life conflict: The influence of communication technologies on perceived work life conflict, burnout, job satisfaction, and turnover intentions. *Management Communication Quarterly*, 28, 507–530. https://doi.org/10.1177/0893318914533332

Workplace telepressure, ICT boundary creation, and workaholism