

## **Too Much of a Bad Thing? The Curvilinear Relationship between Technostress and Interpersonal Deviance**

### *Abstract*

Due to the ubiquitous nature of information and communication technology (ICT) in organizations today, individuals often experience technostress, or stress related to using ICT at work. Recent research has detailed a robust and persistent positive relationship between technostress and subsequent negative outcomes. However, previous research assumes that those relationships are linear, with high levels of technostress resulting in increasingly negative outcomes. However, there are theoretical and practical reasons to question whether the assumption of linearity holds true for all levels of technostress. In this investigation, we explore the relationship between technostress and one of the many potential behavioral manifestations of technostress, increased interpersonal deviance. Our analyses suggest that the relationship may best be represented as curvilinear. We conclude by highlighting the implications for both theory and practice.

**Keywords:** Technostress; Interpersonal Deviance; Nonlinear.

## **Too Much of a Bad Thing? The Curvilinear Relationship between Technostress and Interpersonal Deviance**

Information and communication technologies (ICT) are ubiquitous in the workplace. In fact, ICT communication at work, through multiple channels, is increasingly pervasive and inescapable (Gadeyne et al., 2018; Hislop et al., 2015; Kossek, 2016; Park et al., 2018). The good news is that ICT has the potential to increase productivity and performance (Becker et al., 2022; Cavazotte, et al., 2014); the not-so-good news is that ICT use has been identified as a significant workplace stressor (Day et al., 2010; La Torre et al., 2020). As such, ICT is often characterized as a double-edged sword (Diaz, et al., 2011) with “dark side” implications (Salanova et al., 2014; Tarafdar et al., 2011) because ICT use has negative effects in the workplace and spillover effects in the non-work environment (Chesley, 2005; Day et al., 2010; Gadeyne et al., 2018; Hislop et al., 2015). The strain of ICT stress manifests in psychological, physiological, and behavioral domains (Chesley, 2005; Day et al., 2010; Ďuranová, & Ohly, 2016; Salanova et al., 2014). Of particular concern in the workplace, stress from ICT use has the potential to result in immediate negative behavioral interactions between organizational members leading to potential conflict and organizational dysfunction. This research seeks to illuminate the relationship between ICT stress and one such potential consequence, interpersonal deviance.

Stress associated with ICT use is often referred to as *technostress* (Fuglseth & Sorebo, 2014). Technostress is defined as the mental stress that employees experience from using ICT on the job (Weil & Rosen, 1997). Research on technostress has found it to be associated with important work-related outcomes including decreased job performance (e.g., Tarafdar et al., 2007; Tarafdar et al., 2015) increased burnout (Tu et al., 2005), end-user dissatisfaction (Tarafdar & Tu, 2010), and dissatisfaction with ICT (Fuglseth & Sorebo, 2014). The general

assumption regarding technostress, however, is that as technostress increases, bad things caused by technostress (e.g., lower job performance, burnout, dissatisfaction) increase commensurately. This assumption of linearity may adequately describe those relationships, but such a proposition (linearity) has not been adequately tested for most/all variables under study. The implications of linearity (or non-linearity) are important both theoretically and practically. If the assumption of linearity does not hold, the theory which underlies the extant research may need revision. And if the assumption of linearity does not hold, the implications for managerial practice might suggest additional/contradictory interventions. We believe that such possibilities are worth investigating.

The goals of this research are straightforward: 1) to investigate the nature of the relationship between technostress and (interpersonal) deviance; 2) to suggest new theoretical support for a different proposed relationship; and 3) to provide useful recommendations for researchers and practitioners in light of our findings. As such, we seek to extend theory and practice with regard to the management of technostress in organizations.

## **Theoretical Background**

### **Technostress**

The nature of the stress-strain relationship is a familiar body of inquiry for organizational researchers. Lazarus (1991) long ago suggested that people monitor and appraise events in the environment and that certain events perceived to be threats to well-being are job stressors that induce negative emotional reactions (Spector & Jex, 1998). Affective events theory (AET) (Weiss & Cropanzano, 1996) and cognitive appraisal theories (Lazarus, 1991; Scherer, 2001) provide useful theoretical frameworks to assess the relevance and potential impacts of ICT-related events. Both theories start with an individual's cognitive appraisal of an event. In the initial appraisal, a person detects whether an event is relevant (and congruent) to his or her goals,

and subsequently evaluates whether the event is beneficial or harmful (Lazarus, 1991; Scherer, 2001). Furthermore, the affective state elicited by the appraisal of an event is related to subsequent attitudes and behaviors (Weiss & Cropanzano, 1996). Weiss and Cropanzano's (1996) AET suggests that particular events in a person's work life can precipitate a range of emotions and subsequent emotionally driven behaviors.

Advances in information tools and technologies in the workplace do not seem to be slowing. As such, keeping up with these advances has become a significant source of stress for organizational participants (Brown et al., 2014; Reinke et al., 2016). Employees report challenges coping with, and adapting to, ICT in the workplace (Tarafdar et al., 2011). Tarafdar Tu, and Ragu-Nathan (2010) defined technostress as "stress caused by an inability to cope with the demands of organizational computer usage" (pg. 304). Some examples of technostress are stress resulting from constant connectivity, frequent system upgrades, the necessity and constant need for relearning, job-related insecurities due to ICT, information overload, multitasking, and emerging platforms and systems. Not surprisingly, previous research on technostress has found it to be associated with a number of negative outcomes including decreased job performance, dissatisfaction with ICT, and higher levels of job burnout (e.g., Fuglseth & Sorebo, 2014; Tarafdar et al., 2007; Tarafdar et al., 2015; Tarafdar et al., 2010; Tu et al., 2005).

Strain is a manifestation of the job stress process and can be psychological (e.g., job dissatisfaction), physical (e.g., physiological changes such as increased blood pressure), or behavioral (e.g., withdrawal from work). Deviance (either organizational or interpersonal) is a specific manifestation of behavioral strain and, as such, interpersonal deviance is the focus of our investigation.

### **Interpersonal Deviance**

Lim, Cortina, and Magley (2008) found that workplace stressors subsequently produced negative emotions in employees. This stressor-emotion relationship is common in investigations of counterproductive work behaviors (CWB) (Eissa et al., 2019; Spector & Fox, 2005). Bennett and Robinson (2000) noted that expressive motives often underlie and drive negative (deviant) workplace behavior. Workplace deviance (Bennett et al., 2019; Robinson & Bennett, 1995) has been described as voluntary behavior that violates organizational norms. Examples of deviant behavior include theft, fraud, vandalism, sabotage, verbal abuse, illicit drug use, sexual harassment, physical abuse, and voluntary absenteeism, among others (Bennett & Robinson, 2000; Harper, 1990). Deviance can be directed toward the organization (e.g., theft, fraud) or toward organizational participants (e.g., interpersonal deviance) (Berry et al., 2007; Mackey et al., 2021). While organizational deviance can be costly to organizations (Duffy, 2012; Michalak et al., 2018), the insidious nature of interpersonal deviance makes it especially pernicious and impactful to interpersonal workplace relationships and individual participant well-being (Michalak et al., 2018). In this research, we were interested in understanding the relationship between the stressor ICT use and subsequent interpersonal deviance (Ferguson & Barry, 2011).

Interpersonal deviance, which Robinson and Bennett (1995) describe as deviance directed at another member of the organization, includes both direct contact (e.g., bullying, yelling) and behaviors targeted to others in indirect ways (e.g., spreading rumors) (Mackey et al., 2021). The prevailing view of interpersonal deviance is that it is a negative reaction to some antecedent condition or experience. In this research, we use the incidence of technostress to posit a relationship between the two variables. More specifically, we offer the following research hypothesis to guide our analysis.

*Hypothesis 1:* Technostress is positively related to interpersonal deviance.

### **Theoretical Support for the Relationship**

Mackey et al. (2021) examined many different theoretical frameworks to explain the incidence of organizational and interpersonal deviance, including affective events theory, the transaction theory of stress, social learning theory, and various personality theories. They came away concerned about the different and sometimes competing theoretical support for deviant responses. However, they did clarify that the relationship between affect, the transactional nature of stress, and the incidence of deviance, was robust. However, knowing that stressors and deviance behaviors are related does not tell us how they are related. For additional insight into the nature of the relationship, we consulted Conservation of Resources (COR) theory (Hobfoll, 1989; 2001).

COR (Hobfoll, 1989) suggests that individuals are motivated to protect and build their resources, and that when resource loss occurs, negative outcomes result. Resources are defined as conditions, personal characteristics, objects, and energies that assist people in meeting work and life goals. The threat or actual loss of these resources is thought to significantly explain stress-strain reactions. We theorize that the stress associated with ICT use necessitates a deployment of resources in the form of emotional labor, which is energy intensive (Valle et al., 2020). As resources are deployed to manage emotional reactions to ICT stressors, a resource loss may occur, creating a downward spiral of resource depletion. At some point, we believe that individuals experience a “break” or discontinuation in the continuous response pattern. In other words, the response to ICT stress may not follow a linear path.

In a slight modification of the “too much of a good thing” (TMGT) effect (Pierce & Aguinis, 2013), we submit that while ICT stressors may be positively related to interpersonal deviance generally, this relationship may be nonlinear. We suggest that interpersonal deviance

increases linearly with the incidence of ICT stress up to a point. At that point, we believe that the individual's resources are so depleted that a dramatic escalation in interpersonal deviance occurs ("too much of a bad thing"). In the words of Pierce and Aguinis (2013) "due to the TMGT effect, all seemingly monotonic positive relations reach context-specific inflection points after which the relations turn asymptotic ... resulting in an overall pattern of curvilinearity (p. 313).

Therefore, we posit the following with regard to the relationship between technostress and interpersonal deviance:

*Hypothesis 2:* Technostress is exponentially related to interpersonal deviance.

## **Method**

### **Sample and Procedure**

We utilized a chain-referral sampling methodology to gather our data (Hochwarter, 2014). Chain-referral sampling (or "snowball" sampling) is often used to gather data in hidden populations which are difficult for researchers to access. Given that this research was conducted during a world-wide pandemic, it was not possible for the research team to survey respondents in person. Previous studies have shown that chain-referral sampling has similar results to other survey data collection methods (Wheeler et al., 2013). Additionally, using subjects from a variety of organizations increases the generalizability of our results (Hochwarter, 2014). Using students who attended a university in the Western part of North America as recruiters, each student was given the opportunity to recruit three working individuals who all met the criteria for the study (e.g., working fulltime hours, a minimum age). Students who had respondents complete the study received extra credit in the course. There were manipulation/attention checks (e.g., "Respond strongly disagree to this question") built into the survey.

We cleaned the data to remove responses for those individuals who failed our attention checks. We also removed respondents who did not meet our inclusion criteria (e.g., greater than 18 years of age, working 35 or more hours per week). This resulted in a usable sample of 652 respondents. Participants represented a wide variety of organizations, public and private, large and small. Sample age averaged 41.88 years and was 56% female. Respondents worked on average 41.5 hours each week and had been with their organization a little over 9 years (average 9.07).

## **Measures**

*Technostress.* Technostress was measured with the 20-item scale from Ragu-Nathan, Tarafdar, Ragu-Nathan, & Tu (2008). The Cronbach alpha internal consistency estimate for this scale was 0.88. A sample item was “I am forced by Information Communication Technology to do more work than I can handle.” Scale anchors ranged from 1 (“strongly disagree”) to 5 (“strongly agree”).

*Interpersonal Deviance.* Interpersonal deviance was measured with the 7-item scale from Bennett and Robinson (2000). The Cronbach alpha internal consistency estimate for this scale was 0.89. Respondents were prompted with the question “How often do you engage in the following behaviors using a form of technology.” A sample item from the scale was “Say something hurtful to someone at work”. Scale anchors ranged from 1 (“never”) to 5 (“every day”).

## **Data Analysis and Results**

We used SPSS 27 to analyze the data. Table 1 shows the means, standard deviations, and intercorrelations between the study variables. As can be seen, the correlation between



technostress and deviance was 0.20. This shows that these variables were significantly related, but only at a moderate level.

-----  
Insert Table 1 about here  
-----

Table 2 provides the results of our hierarchical regression analysis. The hierarchical regression analyses involved two steps. In the first step, the linear technostress term was entered, and in the second step, the squared technostress term was entered. As can be seen in Table 2, the first step revealed that the linear technostress term was significantly related ( $B = .20, p < .01$ ) to interpersonal deviance. In the second step in Table 2, the squared technostress term was significantly related ( $B = 0.84, p < .01$ ) to interpersonal deviance. These results indicate that although technostress was linearly related to interpersonal deviance, the best depiction of these results was actually curvilinear. To understand the exact nature of the association between technostress and interpersonal deviance, we graphed the regression output between these variables. This graph is shown in Figure 1 and shows that, generally, the relationship between technostress and deviance is positive. Surprisingly, at the lowest levels of technostress, the relationship with deviance is slightly negative up to an inflection point. The inflection point happens when the technostress value is 1.97 (which is slightly below the mean in our study). As technostress values increase above 1.97, the association between technostress and deviance is strongly positive. These results point to the fact that minimal amounts of technostress are not bad and are not associated with higher deviance. However, as technostress increases, the deviance that comes with higher and higher levels of technostress increases in a non-linear fashion.

-----  
Insert Table 2 about here

-----  
-----  
Insert Figure 1 about here

-----  
**Discussion**

This research provides an empirical investigation of the relationship between technostress and interpersonal deviance. More specifically, we examined the nature of the relationship between the study variables to determine whether the assumption of linearity was valid. Our sample consisted of full-time employees working in a range of industries across a wide geographic area, in both front-line and managerial positions.

The empirical results support our model and hypotheses. We hypothesized that technostress would be positively related to the incidence of interpersonal deviance. That hypothesis was supported. We also hypothesized that the true nature of the relationship would best be described as curvilinear. Hypothesis 2 was also supported. These results suggest that the experience of technostress causes negative affect resulting in increased interpersonal deviance, however, the nature of the deviance is such that as technostress increases beyond the individual's ability to cope with it, a "break" occurs that accelerates the incidence of interpersonal deviance behaviors. As COR theory would predict, ICT use causes stress that eventually leads to a significant loss of coping resources. Further, it appears as though technostress is low-moderate in

most situations, and results in limited incidents of interpersonal deviance. However, when technostress approaches higher levels, interpersonal deviance increases exponentially.

### **Practical Implications**

Our results indicate that the relationship between technostress and interpersonal deviance is not linear. In fact, at lower levels of technostress, interpersonal deviance decreases slightly. This may be due to the performance enhancing effects associated with some types of environmental stressors, or what Tarafdar, Cooper, and Stich (2019) refer to in the case of ICT use as “techno-eustress.” Environmental stressors may activate attention and focus at lower levels, thus contributing to enhanced performance. However, at higher levels of technostress, there is a clear acceleration of the incidence of interpersonal deviance. It is as if some type of “break” has occurred where an individual has put up with technostress to a point where functional adaptation and coping can no longer occur. At that point, the individual has experienced “too much of a bad thing” and lashes out in inappropriate ways.

The primary implication of this analysis suggests that managers shouldn't be quick to lessen or remove all technostress from the workplace. Some technostress may be helpful if it causes individuals to respond by learning new technologies, improving workflows, and enhancing organizational performance (Becker et al, 2022). A little stress can be a good thing. At higher levels of technostress, however, managers should be attuned to indications that individuals have exceeded their abilities to cope. Behavioral changes are most easily witnessed, and managers can address interpersonal deviance when it first rears its head. This may ameliorate the negative consequences of more severe forms of deviance, both personal and organizational, if caught in time. Concomitant with deviance behaviors, it is likely that individuals suffering from technostress are experiencing significant affective consequences, such

as mood changes, frustration and anger, whether exhibited or not. As such, managers may be in a better position to counsel affected individuals or provide the training and support necessary to deal with the technology (and technostress).

### **Limitations and Directions for Future Research**

Although there are strengths and contributions from this study, there are also limitations that must be acknowledged. One limitation is that our data were collected from the same source. Our moderate correlations provide evidence that common source variance was not a huge factor in results (Malhotra et al., 2006), but data from multiple sources would have allowed us to better gauge the incidence of interpersonal deviance. A final limitation is that although our findings revealed that the relationship between our study variables was curvilinear, other unspecified factors may affect this bi-variate relationship.

Directions for future research include explorations of other variables which might impact the technostress-deviance relationship, and more comprehensive structural models of the entire nomological network of technostress and outcomes. It may be that other consequences of technostress exhibit this curvilinear relationship. It might also be helpful to better understand the mechanisms which direct the perceived “break” in the magnitude of the behavioral response to an environmental stressor. Do other stress-strain relationships exhibit linear relationships with outcomes? Or is technostress unique?

In conclusion, we hope that this research sheds light on the true nature of the relationship between technostress and interpersonal deviance. ICT use is ubiquitous in organizations, as is the stress associated with dealing with technology. If managers (and individuals) can address the sources and consequences of technostress earlier or more effectively, we may see a decrease in

SA23030

the overall negative impacts of technostress (Becker et al., 2022). We might also save some important and critical relationships between co-workers in organizations.

## References

- Becker, J., Derra, N. D., Regal, C., & Kühlmann, T. M. (2022). Mitigating the negative consequences of ICT use: the moderating effect of active-functional and dysfunctional coping. *Journal of Decision Systems*, 31(4), 374-406.
- Bennett, R. J., Marasi, S., & Locklear, L. 2019. *Workplace deviance*. In *Oxford research encyclopedia of business and management: 1-25*. New York: Oxford University Press
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85(3), 349-360.
- Berry, C. M., Ones, D. S., & Sackett, P. R. (2007). Interpersonal deviance, organizational deviance, and their common correlates: A review and meta-analysis. *Journal of Applied Psychology*, 92(2), 410–424.
- Brown, R., Duck, J., & Jimmieson, N. (2014). E-mail in the workplace: The role of stress appraisals and normative response pressure in the relationship between e-mail stressors and employee strain. *International Journal of Stress Management*, 21(4), 325-347.
- Cavazotte, F., Lemos, A. H., & Villadsen, K. (2014). Corporate smart phones: Professionals' conscious engagement in escalating work connectivity. *New Technology, Work, and Employment*, 29, 72-87.
- Chesley, N. (2005). Blurring boundaries? Linking technology use, spillover, individual distress, and family satisfaction. *Journal of Marriage and Family*, 67, 1237-1248.
- Day, A., Scott, N., & Kelloway, K. E. (2010). Information and communication technology: Implications for job stress and employee well-being. In P. L. Perrewe & D. C. Ganster (Eds.), *Research in occupations stress and well-being, New developments in theoretical and conceptual approaches to job stress* (Vol. 8, pp. 317-350). Bingley: Emerald.

- Derks, D., van Mierlo, H., & Schmitz, E. B. (2014). A diary study on work-related smartphone use, psychological detachment and exhaustion: Examining the role of the perceived segmentation norm. *Journal of Occupational Health Psychology, 19*, 74–84.
- Diaz, I., Chiaburu, D.S., Zimmerman, R.D., & Boswell, W.R. (2011). Communication Technology: Pros and Cons of Constant Connection to Work. *Journal of Vocational Behavior, 80*, 500-508.
- Duffy, M. K., K. L. Scott, J. D. Shaw, B. J. Tepper & Aquino, K. (2012). A social context model of envy and social undermining. *Academy of Management Journal, 55*, 643–666.
- Ďuranová, L. and Ohly, S. (2016). *Persistent work-related technology use, recovery and well-being processes: Focus on supplemental work after hours*. Cham, Switzerland: Springer.
- Eissa, G., Lester, S.W., & Gupta, R. (2019). Interpersonal deviance and abusive supervision: The mediating role of supervisor negative emotions and the moderating role of subordinate organizational citizenship behavior. *Journal of Business Ethics, 166*, 577 - 594.
- Ferguson, M., & Barry, B. (2011). I know what you did: The effects of interpersonal deviance on bystanders. *Journal of Occupational Health Psychology, 16*(1), 80–94.
- Gadeyne, N., Verbruggen, M., Delanoëije, J., & De Cooman, R. (2018). All wired, all tired? Work-related ICT-use outside work hours and work-to-home conflict: The role of integration preference, integration norms and work demands. *Journal of Vocational Behavior, 107*, 86–99.
- Harper, D. (1990). Spotlight abuse-save profits. *Industrial Distribution, 79*, 47-51.
- Hislop, D., Axtell, C., Collins, A., Daniels, K., Glover, J., and Niven, K. (2015). Variability in the use of mobile ICTs by homeworkers and its consequences for boundary management and social isolation. *Information and Organization, 25*(4), 222–232.

- Hobfoll S. E. (1989). Conservation of resources. A new attempt at conceptualizing stress. *The American psychologist*, 44(3), 513–524.
- Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing Conservation of Resources theory. *Applied Psychology: An International Review*, 50(3), 337–370.
- Hochwarter, W. (2014). On the merits of student-recruited sampling: Opinions a decade in the making. *Journal of Occupational and Organizational Psychology*, 87(1), 27–33.
- Kossek, E. E. (2016). Managing work-life boundaries in the digital age. *Organizational Dynamics*, 45(3), 258–270.
- La Torre, G., De Leonardis, V., & Chiappetta, M. (2020). Technostress: how does it affect the productivity and life of an individual? Results of an observational study. *Public Health*, 189, 60-65.
- Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist*, 46(8), 819–834.
- Lim, S., Cortina, L. M., & Magley, V. J. (2008). Personal and workgroup incivility: Impact on work and health outcome. *Journal of Applied Psychology*, 93(1), 95-107.
- Mackey, J. D., McAllister, C. P., Ellen III, B. P., & Carson, J. E. (2021). A meta-analysis of interpersonal and organizational workplace deviance research. *Journal of Management*, 47(3), 597-622.
- Malhotra, N. K., Kim, S. S., & Patil, A. (2006). Common Method Variance in IS Research: A Comparison of Alternative Approaches and a Reanalysis of Past Research. *Management Science*, 52(12), 1865–1883.



- Michalak, Rebecca & Kiffin-Petersen, Sandra & Ashkanasy, Neal. (2018). 'I Feel Mad So I Be Bad': The Role of Affect, Dissatisfaction and Stress in Determining Responses to Interpersonal Deviance: Determining Responses to Interpersonal Deviance. *British Journal of Management*, 30.
- Park, Y., Fritz, C., and Jex, S. M. (2018). Daily cyber incivility and distress: The moderating roles of resources at work and home. *Journal of Management*, 44(7), 2535–2557.
- Park, Y., Fritz, C., & Jex, S. M. (2011). Relationships between work-home segmentation and psychological detachment from work: The role of communication technology use at home. *Journal of Occupational Health Psychology*, 16, 457-467.
- Pierce, J. R., & Aguinis, H. (2013). The too-much-of-a-good-thing effect in management. *Journal of Management*, 39(2), 313–338.
- Ragu-Nathan, T., Tarafdar, M., Ragu-Nathan, B.S. & Tu, Q. (2008). The consequences of technostress for end users in organizations: conceptual development and empirical validation. *Information Systems Research*, 19, 417–433.
- Reinke, K., Gerlach, G., Tarafdar, M., & Stock, R.M. (2016). ICT-Based communication events as triggers of stress: A mixed methods study. *International Conference on Interaction Sciences*.
- Robinson, S., & Bennett, R. (1995). A typology of deviant workplace behaviors: A multi-dimensional scaling study. *Academy of Management Journal*, 38, 555-572.
- Salanova, M., Llorens, S., & Ventura, M. (2014). Technostress: The dark side of technologies. In C. Korunka & P. Hoonakker (Eds.), *The impact of ICT on quality of working life* (pp. 87–103). Dordrecht: Springer

- Scherer, K.R.. (2001). Emotion, the psychological structure of emotions. *International Encyclopedia of the Social & Behavioral Sciences*. 4472-4477.
- Spector, P. E., & Fox, S. (2005). The stressor-emotion model of counterproductive work behavior. In S. Fox & P. E. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets* (pp. 151–174). Washington, DC: American Psychological Association.
- Spector, P. E., & Jex, S. M. (1998). Development of four self-report measures of job stressors and strain: Interpersonal conflict at work scale, organizational constraints scale, quantitative workload inventory, and physical symptoms inventory. *Journal of Occupational Health Psychology*, 3, 356-367.
- Tarafdar, M., Cooper, C.L., & Stich, J. (2019). The technostress trifecta - techno eustress, techno distress and design: Theoretical directions and an agenda for research. *Information Systems Journal*, 29, 42 - 6.
- Tarafdar, M., Pullins, E.B., & Ragu-Nathan, T.S. (2015). Technostress: negative effect on performance and possible mitigations. *Information Systems Journal*, 25, 103 - 132.
- Tarafdar, M., Tu, Q., & Ragu-Nathan, T.S. (2010). Impact of Technostress on End-User Satisfaction and Performance. *Journal of Management Information Systems*, 27, 303 - 334.
- Tarafdar, M., Tu, Q., Ragu-Nathan, B.S., & Ragu-Nathan, T.S. (2007). The Impact of Technostress on Role Stress and Productivity. *Journal of Management Information Systems*, 24, 301 - 328.

- Tarafdar, M., Tu, Q., Ragu-Nathan, B.S., & Ragu-Nathan, T.S.. (2011). Crossing to the dark side: Examining creators, outcomes, and inhibitors of technostress. *Communications of The ACM – CACM*, 54, 113-120.
- Tu, Q., Wang, K. and Shu, Q. (2005) Computer-Related Technostress in China. *Communications of the ACM*, 48, 77-81.
- Valle, M., Carlson, D. S., Carlson, J. R., Zivnuska, S., Harris, K. J., & Harris, R. (2020). Technology-Enacted Abusive Supervision and Its Effect on Work and Family. *Journal of Social Psychology*, 161 (3), 272-286.
- Weil, M. M. and Rosen, L.D. (1997). *Technostress: Coping with Technology @Work @Home @Play*. John Wiley & Sons Inc, Hoboken.
- Weiss, H. M., & Cropanzano, R. (1996). Affective Events Theory: A Theoretical Discussion of the Structure, Causes and Consequences of Affective Experiences at Work. In B. M. Staw, & L. L. Cummings (Eds.), *Research in Organizational Behavior: An Annual Series of Analytical Essays and Critical Reviews* (pp. 1-74). Greenwich, CT: JAI Press.
- Wheeler, A. R., Shanine, K. K., Leon, M. R., & Whitman, M. V. (2014). Student-recruited samples in organizational research: A review, analysis, and guidelines for future research. *Journal of Occupational and Organization Psychology*, 87(1), 1–26.

Table 1

*Means, Standard Deviations, and Intercorrelations between the Variables in this Study*

Variable	Mean	SD	1.	2.
1. Technostress	2.57	0.58	-	
2. Deviance	1.21	0.42	.20**	-

N=652, \*\* p&lt;.01

Table 2

*Hierarchical Regression Results Predicting Deviance*

	Step 1	Step 2
Technostress	.20**	-.63**
Technostress Squared		.84**

---

N=652, \*\* p<.01

Figure 1

*Plot of Technostress and Deviance*

