

# A Literature Review on the Impact of Digital Hindrance Stressors on Employees' Psychological Need Satisfaction

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**Abstract:** The digital economy is taking off at an astonishing speed, and against this backdrop, digital transformation has become a key force propelling enterprises toward high-quality growth. This wave of change opens up exciting new opportunities for businesses, yet it also places heavy new demands on their workforce. In today's workplaces, digital tools are everywhere, and employees often find themselves wrestling with what we call digital hindrance stressors as they go about their daily tasks. These stressors include things like being overwhelmed by too much technology, having their workflow constantly interrupted, or feeling that the digital tools they have to use just aren't effective. Essentially, these are pressures that stem from using digital technology on the job, and they tend to take a toll on people's psychological well-being and their overall satisfaction with work. That said, the existing literature hasn't really dug deep into how these particular stressors relate to employees' basic psychological needs being met. Given that these digitally-induced pressures can stir up a fair bit of trouble, Therefore, against the backdrop of digital transformation, this study systematically examines the relationship between digital hindrance stressors and the fulfillment of employees' basic psychological needs.

**Keywords:** Digital Hindrance Stressors; Self-Determination Theory; Psychological Need Satisfaction.

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## 1. Introduction

The ongoing progression and extensive penetration of digital technologies are fundamentally reshaping both the internal operational frameworks of organizations and the nature of employees' daily working practices (Parviainen et al., 2017). With the rapid uptake of cloud infrastructures, mobile connectivity, artificial intelligence, and social networking platforms, what was once considered digitally oriented work has now expanded well beyond specific industrial sectors, becoming a near-universal feature of contemporary employment across diverse organizational settings (Gimpel et al., 2025). Concurrently, however, these technological advancements have given rise to a range of unintended adverse outcomes. Among these, technology-induced employee strain has gained increasing scholarly attention, positioning itself as a critical concern at the intersection of organizational behavior and information systems research (Fischer & Riedl, 2021; Tarafdar et al., 2007). Tracing the theoretical genealogy of stress scholarship, digitally induced stressors can be taxonomically bifurcated, based on their intrinsic properties, into challenge stressors and hindrance stressors (Cavanaugh et al., 2000;). Digital hindrance stressors—conceptualized as technology-related exigencies that obstruct workflow continuity, erode individual resources, and yield no contributory value toward goal accomplishment (Gimpel et al., 2025)—have attracted particular scholarly scrutiny by virtue of their enduring detrimental repercussions (Nastjuk et al., 2023).

Existing research has developed measurement tools for digital hindrance stressors from organizational and technological perspectives and preliminarily explored their direct effects on variables such as employee satisfaction (Gimpel et al., 2025). However, systematic studies on the path mechanisms through which digital hindrance stressors affect employee performance remain lacking. Self-Determination

Theory posits that situational factors significantly influence the degree to which individuals' basic psychological needs are satisfied, and the satisfaction of basic psychological needs further affects individuals' behaviors and performance (Deci and Ryan, 2000; Deci and Ryan, 2008; Ryan and Deci, 2001). Therefore, based on Self-Determination Theory, this study argues that digital hindrance stressors, as important situational factors in the workplace, may inhibit employee performance by interfering with the satisfaction of employees' basic psychological needs. Meanwhile, according to the theoretical perspective in Self-Determination Theory that the satisfaction of basic psychological needs is influenced by multiple situational factors (Deci, 1989).

## 2. Conceptual Connotation

### 2.1. Conceptual Connotation of Digital Hindrance Stressors

Digital hindrance stressors are essentially workplace pressures that come from using digital tools, and employees tend to see them as things that get in the way of doing their jobs properly—on top of that, they often end up affecting how people feel and behave on the job (Gimpel et al., 2025). After laying out this general idea, Gimpel and his colleagues (2025) went ahead and split it into five finer-grained categories: one is technology overload, which is about how digital tools can generate so much work that employees wind up feeling completely overwhelmed, and this particular stressor ties in pretty directly with how intense the work is and how much time pressure people are under; another is technology interruptions, which show up when digital systems don't really do what they're supposed to do for work tasks or actually make it harder to get things done—this can take the form of systems that aren't reliable, services that get disrupted, or situations where the technology just isn't there when it's needed; then there's technology ineffectiveness, which

captures that nagging feeling employees get when they can't seem to get their work done the way they should with the digital tools at hand, and this kind of stressor might have something to do with roles that aren't clearly defined, systems that are overly complicated, or a sense that they're not really accomplishing much; next comes technology surveillance, where organizations keep tabs on how employees are performing through digital means and sometimes cross the line into personal privacy, and this tends to leave employees feeling like they're under constant watch while also taking away some of their sense of independence; and finally there's technology rumination, which is all about those nagging thoughts and anxious feelings employees have concerning the darker side of digital tech—things like worrying about job security, feeling uncertain about what's coming down the pipeline, or sensing that their personal space is being intruded upon.

## **2.2. Conceptual Connotation of Psychological need satisfaction**

What does self-determination actually mean? In essence, it's about individuals making their own choices when it comes to behavior, and these choices are shaped by both personal needs and what's going on around them in the environment. Self-determination theory tells us that people have three basic psychological needs that are pretty much universal—these are autonomy, competence, and relatedness (Ryan and Deci, 2000). The autonomy piece is all about wanting to act according to one's own preferences when doing different things, and it also involves having the freedom to call the shots on one's own actions and decisions without outside interference; competence, on the other hand, is about how strongly someone believes in their own ability to get things done—the more confident they feel, the more they trust they can handle the tasks at hand; and relatedness refers to the need employees feel for belonging within their organization, which often shows up as wanting care and support from the people around them (Ryan and Deci, 2000; Ryan and Sapp, 2007). According to self-determination theory, when the environment gives individuals room to act on their own, these three core psychological needs stand a much better chance of being satisfied (Ryan and Deci, 2000). Researchers have also looked at this from a stressor angle, and what they've found is that when employees run into things like time pressure or complicated work tasks, their autonomy and competence needs tend to go unmet, and this in turn has a noticeable effect on how emotionally drained they feel and how satisfied they are with their jobs (Giebe and Rigotti, 2022).

## **3. The Impact of Digital Hindrance Stressors on Psychological Need Satisfaction**

### **3.1. The Impact on Autonomy Need Satisfaction**

According to self-determination theory, the satisfaction people get from having their autonomy needs met is closely tied to the psychological freedom they experience when carrying out work tasks—this sense of freedom is really about feeling like they have room to make choices as they go along. The argument here is that inhibitory digital stressors tend to eat away at how well employees' autonomy needs are satisfied. Take technology overload, for instance: when it gets too

intense, employees end up having to push through an excessive amount of work in too little time (Gimpel et al., 2025), and that pretty much forces them to set aside their own preferences and schedules, which in turn chips away at their sense of autonomy (Deci and Ryan, 2008). Then there's the issue of technology interruptions—when these happen a lot, they break up the flow of work and pull attention in different directions, making it tough for employees to stay focused on what they're doing (Galluch et al., 2015), and this kind of outside interference leaves them feeling like the rhythm of their work is being dictated by someone else or by the system itself rather than by their own choices, which doesn't do much for their autonomy either. On top of that, when technology proves ineffective, it doesn't just pile on extra learning demands—it also leaves employees scratching their heads about what tasks should take priority (Gimpel et al., 2025), and that eats into their ability to pick and choose how they approach their work and what tools they use, which cuts down on their decision-making freedom. Meanwhile, heavy doses of technology surveillance mean that organizations are using digital systems to keep a close watch on employees' every move (Ayyagari et al., 2011), and under that kind of pressure, employees might feel like they have to stick to the rules just to dodge negative feedback from all that monitoring, rather than making choices based on what they think is best or what they're good at, and that takes a real toll on their autonomy satisfaction. And finally, there's technology rumination—this one brings on anxiety and restlessness, and on top of that, it lets work thoughts creep into off-hours, making it harder to keep work and personal life separate, which only ends up shrinking employees' psychological freedom even further.

### **3.2. The Impact on Competence Need Satisfaction**

According to self-determination theory, whether people feel good about their competence really comes down to how they see their own skills and how much control they think they have over the tasks they're dealing with (Deci and Ryan, 2008). The argument here is that inhibitory digital stressors get in the way of employees' competence needs being satisfied, and this tends to play out in a few key ways. For one thing, when technology overload and technology interruptions are running high, employees aren't just expected to get more work done than usual within a given period—they also have to keep picking up new skills and adapting to digital tools that seem to change all the time just to keep up with what the job demands (Gimpel et al., 2025), and all this constant pressure and unpredictability can easily make them feel like they're losing their grip on things, which then leads them to start questioning whether they're actually up to the task. Then there's the issue of technology ineffectiveness—when that's at a high level, it doesn't just make it harder for employees to see what really matters in their work or to get a clear handle on their responsibilities and what's expected of them; it also makes the whole process of figuring out and using new digital systems seem a whole lot more complicated and difficult than it should be (Gimpel et al., 2025), so employees end up struggling to actually make sense of these tools or put them to good use, and that feeling of not being able to do what they need to do eats away at their confidence and leaves them second-guessing their own abilities. And finally, with all that constant online tracking of how employees are performing and the added layer of watching how colleagues are handling digital tools, high levels of technology surveillance and

technology rumination don't just stir up a tense workplace atmosphere where people feel like they're not really trusted—they also push employees to start comparing themselves negatively with their coworkers, and that shift in focus pulls their attention away from the work itself and onto worries about how they're measuring up.

### 3.3. The Impact on Relatedness Need Satisfaction

Getting relational needs met really comes down to whether people feel like their ideas and opinions are valued by others, and whether they're able to form meaningful connections with the people around them (Ryan and Deci, 2000). The thinking here is that obstructive digital stressors tend to throw a wrench into how well employees' relational needs are satisfied. Take technology overload, for example—when it gets to be too much, employees end up pouring all their energy into just getting their work done, and that leaves very little time or mental space for building relationships with coworkers, which can easily make them feel like they're on their own at work (Sonnetag and Fritz, 2015). Then there's the issue of technology interruptions—when these happen frequently, they mess with the natural rhythm of work and throw off the coordination between individuals and their teams, which hurts how smoothly and efficiently the group works together and makes it harder to build team relationships that are both harmonious and productive (Galluch et al., 2015). On top of that, when technology proves ineffective, it doesn't just make it tougher for employees to really get a handle on new digital tools—it also raises the chances that they'll end up getting called out or blamed by their bosses (Gimpel et al., 2025), and that sort of thing creates distance and friction between employees and their managers, gets in the way of forming good working relationships with supervisors (Ayyagari et al., 2011), and ultimately does a number on employees' relational need satisfaction. And finally, when technology surveillance is intense, it sends a pretty clear message that organizations and managers don't really trust their people, while technology rumination only makes employees more suspicious of their coworkers (Gimpel et al., 2025)—both of these things eat away at the social climate in the workplace, get in the way of employees interacting effectively with colleagues and managers, make it tough to build decent relationships on either front, and end up suppressing the fulfillment of relational needs across the board.

## 4. Summary

Drawing on self-determination theory, this study takes a closer look at how obstructive digital stressors end up shaping employee performance, and it does so by zeroing in on whether employees' basic psychological needs are being met—an angle that adds something new to what we already know about how these stressors actually work. The core idea behind self-determination theory is that when autonomy, competence, and relatedness—those three fundamental psychological needs—get satisfied, it makes a real difference in how people behave (Ryan and Deci, 2000). Building on that, the current research approaches the question of what drives employee performance by looking at psychological need fulfillment as the starting point, and it points to obstructive digital stressors as the key factor to consider. What really matters here is figuring out what's going on inside that "black box" of employee performance, and the answer

seems to lie in whether those three basic needs—autonomy, competence, and relatedness—are actually being satisfied. In doing so, this work builds on and extends earlier studies that looked at how both general challenging stressors and obstructive stressors affect employees' psychological need fulfillment.

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