The Information Systems Perspective on Obsessive Technology Use: Insights and Research Gaps from a Literature Analysis

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Abstract

Research into obsessive technology use has garnered significant attention in the information systems (IS) discipline. Despite this interest, inconsistent conceptualizations, diversity of perspectives, and non-representative samples jointly make a fragmented body of research that is challenging to generalize and comprehend. To consolidate extant knowledge and identify areas for future research, this study performs a literature analysis among 27 identified publications on obsessive technology use to reveal the research trends, focal themes, theoretical underpinnings, methodological approaches, contextual settings, and demographic samples. We then apply social cognitive theory to provide an integrated account of the variables related to obsessive technology use. We finally discuss the key findings and propose directions for future research while noting the limitations.

Keywords: Obsessive technology use, information systems research, senior scholars' basket, literature analysis

1. Introduction

The pervasive integration of information technologies (ITs) into everyday life has led to a marked increase in their potentially obsessive use. Such a phenomenon is evidenced by a growing number of individuals engaging in impulsive online purchasing without pre-existing needs (Chan et al., 2017), regularly using ITs for information seeking (Gerlach & Cenfetelli, 2020), experiencing a powerful urge to use their smartphone but lack impulsive control over it (Wang & Lee, 2020), and uncontrollably utilizing ITs, such as social networking sites and online games services, even at the expense of their normal functioning (Lee et al., 2021; Tarafdar et al., 2020; Turel et al., 2011). These behaviors exemplify the obsessive patterns of technology use (Gong et al., 2021). Empirical data further substantiates the prevalence of these obsessive usage patterns. It is estimated that over half of all transactions in online shopping are impulsive in nature (Liu et al., 2013; Wei et al., 2024; Wu et al., 2020; Zheng et al., 2019). In the United States, nearly two-thirds of children are reported to use smartphones for more than four hours daily (Howarth, 2024). Moreover, 57% of Americans admit their addiction to smartphones, checking their devices an average of 144 times per day (Schewale, 2024). Such pervasive and obsessive interactions with technology not only jeopardize social and professional lives but also have detrimental effects on mental and physical well-being (Vaghefi et al., 2017).

The burgeoning recognition among IS researchers of the potential negative impacts of technology has led to a greater focus on what has been termed the "dark side" of technology (Tarafdar et al., 2013; Venkatesh et al., 2019). Within this domain, the phenomenon of obsessive technology use has become a pivotal topic of inquiry (Gong et al., 2021; Tarafdar et al., 2013). Our preliminary review suggests that prior research has addressed these issues across diverse technological environments, employing a variety of terms such as "excessive smartphone use", "impulsive purchasing", "compulsive Internet use", "online game addiction", and "pathological social network sites use" (Gong et al., 2021; Kwon et al., 2016; Lee et al., 2021; Tarafdar et al., 2020; Turel et al., 2011; Wang & Lee, 2020). The lack of terminological consistency, the variability in conceptualizations, and the diverse measurement approaches have contributed to a fragmented body of knowledge, posing challenges for researchers and practitioners seeking to derive coherent implications. In response to these challenges, this review aims to: (1) reveal the state of research on obsessive technology use within the IS discipline and (2) consolidate the variables of obsessive technology use into an integrative framework. Specifically, we first present the research trends, foci, theories or frameworks, methods, contextual settings, and samples. Then, we apply social cognitive theory to structure the identified literature and then leverage the insights gained from our analysis to propose promising avenues for future research.

This review proceeds as follows. We begin by delineating the concept of obsessive technology use, thereby establishing a clear scope of our review. In

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Section 3, we outline our literature search and identification strategies. In Section 4, we present the descriptive analysis results. In Section 5, we apply social cognitive theory as the guiding framework to synthesize the identified literature and then propose specific research directions for future inquiry. Finally, we acknowledge the limitations.

2. Obsessive technology use

The concept of obsessive technology use is characterized by an obsessive usage pattern of technology resulting in negative outcomes that further lead to adverse effects on users' well-being (Gong et al., 2021; James et al., 2017). This term encompasses various deviant patterns of technology interaction, such as impulsive use, excessive use, compulsive use, and addictive use, each indicative of the dark side of technology engagement (Gong et al., 2021). To address the challenges posed by divergent definitions and to deepen the understanding of this multifaceted issue, Gong et al. (2021) proposed a typology of obsessive technology use grounded in dual-system theory (Hofmann et al., 2009). This framework categorizes obsessive technology use along two axes: the state of obsessive technology use (behavioral urge versus usage behavior) and the users' recognition of negative consequences (unawareness versus awareness).

Through this lens, four distinct archetypes of obsessive technology use emerge: (1) impulsive use, characterized by the spontaneous technology engagement driven by immediate behavioral urge, with users often remaining oblivious to the resultant negative consequences (Gong et al., 2021; Parboteeah et al., 2009), e.g., impulsive purchase and urge to buy impulsively (Chan et al., 2017; Ho & Lim, 2018); (2) compulsive use, referring to the repetitive use of technology in response to a behavioral urge in which users are sufficiently aware of the negative consequences of its usage (Gong et al., 2021; James et al., 2017), e.g., obsessive-compulsive disorder (Wang & Lee, 2020); (3) excessive use, described as an obsessive pattern of technology usage behavior, with users typically allocating significantly more time to technology usage than intended and not recognizing the detrimental consequences of such behavior (Cao et al., 2018; Gong et al., 2021), e.g., IT-mediated state-tracking (Gerlach & Cenfetelli, 2020); (4) addictive use, referring to an obsessive pattern of technology usage behavior in which users prioritize technology use over essential daily activities or functions while maintaining an awareness of the negative consequences yet continuing to engage in (Gong et al., 2021; Turel et al., 2011), e.g., Internet addiction (Venkatesh et al., 2019) and online game addiction (Lee et al., 2021).

Our investigation into obsessive technology use is driven by several critical concerns. Primarily, the increasing prevalence of individual users' obsessive technology engagement is alarming due to its potential to undermine individual, interpersonal, and societal wellbeing (Gong et al., 2021; James et al., 2017). IS researchers are uniquely positioned to dissect the intricate factors contributing to this issue, thereby offering valuable insights to academic peers, industrial leaders, and policy-makers. A meticulous and retrospective analysis of the related literature will definitely enable us to pinpoint prevailing limitations and unearth new avenues for research, particularly in the context of the dark side of IT and deviant IT use patterns. Secondly, the lack of uniformity in conceptualizing obsessive technology use and the diverse theoretical lenses adopted by current studies pose significant challenges to the establishment of a coherent research trajectory and systematic and integrative investigations. This fragmentation also complicates the task for researchers and practitioners in deriving actionable insights. Lastly, existing review works from the fields of psychology and psychiatry tend to adopt narrow focuses, examining specific facets of obsessive technology use, such as online social network site addiction (Andreassen, 2015), Internet addiction in young adults (Lozano-Blasco et al., 2022), measurements of problematic smartphone use (Harris et al., 2020), global prevalence of digital addiction (Meng et al., 2022), and problematic use of the internet and social media (Moretta et al., 2022). An encompassing literature review based on the umbrella term "obsessive technology use" would be instrumental in discerning overarching research patterns, integrating the fragmented knowledge, identifying research gaps, and guiding future research.

3. Literature search and identification

The primary aim of this study is to consolidate the current understanding of obsessive technology use in information systems research and to delineate avenues for future investigation. To this end, we selected a corpus of papers that represent high-quality research across a spectrum of IS topics, all sourced from journals that are widely recognized and readily accessible to the international IS academic community. Specifically, our selection encompasses publications from the AIS senior scholars' basket of eight journals, namely: *MIS Quarterly* (MISQ), *Information Systems Research* (ISR), *Journal of Management Information Systems* (JMIS), *Journal of Association for Information Systems* (JAIS), *Information Systems Journal* (ISJ), *European Journal of Information Systems* (EJIS), *Journal of Strategic Information Systems* (JSIS), and *Journal of Information Technology* (JIT)). According to previous review works in the IS field (e.g., Clarke, Davison, & Jia (2020), Tarafdar & Davison (2018)), the "Basket of 8" journals are deemed as a representative sampling frame, given their reputation for publishing articles that are both highly cited and extensively read within the IS community.

We conducted a literature search using SCOPUS. No time period was specified during the literature search process. To be specific, we executed a full-text query across the "Basket of 8" journal, as identified by their respective ISSN numbers (e.g., SOURCE-ID (12321) corresponds to the *Information Systems Journal*). We identified the search terms based on Gong et al.'s (2021) typology of obsessive technology use studies. All search terms were combined with the Boolean operator "OR" (Obsessive OR Addict* OR Impulsive OR Excessive OR Problematic OR Dependence OR Pathological).

The initial search yielded a pool of 857 articles. However, this set included articles that were not relevant to our study. To refine this collection and distill the most applicable research, we further applied the inclusion and exclusion criteria. For the inclusion process, we reviewed the titles, abstracts, and keywords to identify articles that at least referenced specific obsessive patterns of technology use (e.g., impulsive use, excessive use, problematic use, compulsive use, obsessive-compulsive disorder, and technology addiction). After the application of inclusion criteria, 30 papers were retained. For the exclusion process, we went through each retained article in detail to exclude ones that (1) did not make obsessive technology use a core focus; (2) were not regular research articles (e.g., editorials) with rigorous research design. After the application of exclusion criteria, 24 papers were retained. To guarantee comprehensive coverage and to ensure no relevant articles were overlooked, we also manually reviewed the abstract of all articles published in the "Basket of 8" journals through screening each journal's online archive. This screening process led to the identification of three additional articles of interest. Finally, we obtained a pool of 27 articles that provided in-depth examinations of obsessive technology use and were deemed suitable for subsequent analyses.

4. State of IS research on obsessive technology use

To structurally guide the following literature analysis, synthesis, and discussion, we applied five guided questions regarding the general state of research (e.g., Chan et al., 2017; Chan et al., 2021) and addressed each in subsequent five sub-themes. These include an examination of publication trends, research foci, theories or frameworks employed, research methods utilized, as well as the settings and samples of the research. This systematic approach allows us to effectively structure the literature review and obtain an overview of the existing body of knowledge from different perspectives (Chan et al., 2017; Chan et al., 2021). During the analysis, the first author independently coded each study to identify the research foci, classify the theories and frameworks, and categorize the variables related to obsessive technology use. The other authors reviewed the results and discussed to reach a consensus when there was discrepancy.

4.1. Research trends

The phenomenon of obsessive technology use has captured the attention of IS researchers for over two decades. The initial phase of research, commencing around 2003, predominantly addressed the impulsive buying behaviors of online consumers. It was not until 2011 that Turel et al. (2011) introduced the concept of "technology addiction" to the IS field, exploring its impacts in the context of online auction addiction. In their seminal work, technology addiction served as a comprehensive label encompassing, for instance, Internet addiction disorder, compulsive Internet use, problematic Internet use, pathological Internet use, and computer addiction (Turel et al., 2011). Over the subsequent years, IS researchers have actively pursued the identification of various forms of obsessive technology use, along with their risk factors and consequent effects. The number of related studies peaked in 2020, subsequently experiencing a mild decline. In the past three years, scholarly discourse around the conceptualization, measurement, and etiology of obsessive technology use has continued unabated. This ongoing debate has spurred diverse academic efforts aiming at offering more systematic and comprehensive examinations of the underlying mechanism (e.g., Lee et al., 2021; Wang & Lee, 2020) and transforming the predominant variance-based research paradigm towards alternative process-based explanations (Vaghefi et al., 2023).

European Journal of Information Systems (EJIS) published the most obsessive technology use-related studies (n=6), followed by *MIS Quarterly* (MISQ) (n=5), *Journal of the Association for Information Systems* (JAIS) (n=5), and *Information Systems Journal* (ISJ) (n=5). The sustained inclusion of related research within the esteemed "Basket of 8" journals not only underscores the pivotal role of IS researchers in dissecting and elucidating the phenomenon of obsessive technology use phenomenon but also highlights the field's potential for continued exploration of this critical topic.

4.2. Research foci

Four research streams emerged among the identified studies on obsessive technology use, as summarized in Table 1. As demonstrated, most of the identified studies focused on the underlying psychological mechanisms of obsessive technology use, with limited ones investigating the conceptualization, theorization, ramification, and countermeasures of it. Specifically, the first stream of research focuses on uncovering the nature of obsessive technology use, conceptualizing the phenomenon, and building theoretical foundations.

The second research stream focuses on the antecedents of obsessive technology use, encompassing both etiology (risk factors) and pathology (underlying mechanisms). Studies in this stream have pinpointed three primary categories of antecedents, including individual internal differences (e.g., personal innovativeness in IT and perceived loneliness, Kuem et al., 2021), design or functional features of technology (e.g., interactivity of mobile social networking sites, Wang & Lee, 2020), and social-environmental elements (e.g., parenting behaviors, Venkatesh et al., 2019). Notably, a growing number of studies are adopting a comprehensive approach by integrating two or all three categories of antecedents to systematically examine the psychological mechanisms that drive individuals' obsessive technology use. Moreover, an interaction perspective may help elucidate why and how the interaction between user and technology contributes to different forms of obsessive technology use, as done by Xu et al. (2022) (social networking addiction) and Lee et al. (2021) (massively multiplayer online role-playing game addiction).

The third research stream delves into the ramifications of obsessive technology use, assessing the perceptual (e.g., system-referenced perceptions, Turel et al., 2011), behavioral (e.g., behavioral usage intentions, Turel et al., 2011), and performance-related impacts on users (e.g., students' academic performance, Turel & Qahri-Saremi, 2016), alongside the spillover effects in interpersonal domains (e.g., family-to-work conflict, Venkatesh et al., 2019).

The fourth stream of research diverges to scrutinize the determinants that lead to IT use reduction or discontinuance, casting light on potential remedies or preventative strategies. For example, Osatuyi and Turel (2020) explained the process by which users recognize the negative consequences of addiction to social networking sites and develop intentions to reduce use and further validated the effectiveness of potential self-monitoring and reporting strategies through an experimental design.

Table 1. An overview of research foci.

Stream	Focus	Study
Phenomenon	Nature or patterns	(Kwon et al., 2016)
	Conceptualiza-tion	(Gerlach & Cenfetelli, 2020; Gong et al., 2021; Kuem et al., 2021)
	Theorization	(Vaghefi et al., 2017; Vaghefi et al., 2023)
Antecedent	Individual differences	(Gong et al., 2021; Ho & Lim, 2018; James et al., 2017; Kuem et al., 2021; Parboteeah et al., 2009; Polites et al., 2018; Soror et al., 2015; Tarafdar et al., 2020; Thomas et al., 2003; Turel & Qahri-Saremi, 2016; Turel & Serenko, 2012; Wang & Lee, 2020; Wells et al., 2011; Xu et al., 2022)
	Technical features	(Ho & Lim, 2018; Jung et al., 2019; Parboteeah et al., 2009; Thomas et al., 2003; Wang & Lee, 2020; Wells et al., 2011; Xu et al., 2022; Xu et al., 2012)
	Social-environmental elements	(Gong et al., 2021; Venkatesh et al., 2019)
Consequence	Individual outcomes	(Jung et al., 2019; Kuem et al., 2021; Turel & Qahri-Saremi, 2016; Turel et al., 2011)
	Spillover effects	(Venkatesh et al., 2019)
Use reduction	Psychological mechanisms	(Chen et al., 2020; Turel, 2015)
	Interventions	(Osatuyi & Turel, 2020)

4.3. Theories and frameworks

Prior IS studies have adopted diverse theoretical perspectives to examine obsessive technology use. Table 2 provides a collection of the theories and frameworks adopted. We categorized these theories and frameworks based on their distinctive analytical perspectives. We observed that perspectives from individual differences and cognitive patterns were the most frequently used ones. Theories and frameworks supporting the roles of technical features and social forces were less frequently adopted.

The first group encompasses theories that prioritize internal psychological factors as pivotal in driving obsessive technology use. In this category, the dual-system theory is the relatively popular one, offering insights into how the reflexive and reflective systems work jointly to lead to individuals' obsessive technology use (e.g., Gong et al., 2021; Polites et al., 2018; Soror et al., 2015; Turel & Qahri-Saremi, 2016).

The second group of theories emphasizes the significant roles of technological features. The majority of these theories or frameworks consider specific design elements or functionalities, e.g., the interactivity of mobile social networking sites (Wang & Lee, 2020), web characteristics (Parboteeah et al., 2009), and media formats (Thomas et al., 2003), as external stimuli of obsessive technology use.

The third category acknowledges the impact of social forces, such as peers and families. Attachment theory, for example, has been adopted to understand how parental behaviors influence children's Internet addiction (Venkatesh et al., 2019). Meanwhile, the social cognitive theory has been introduced to explain the role of external social forces, such as peers, in shaping the judgment process of self-reaction in response to self-observation (Osatuyi & Turel, 2020).

The interactive approach, e.g., the technology affordance perspective (Lee et al., 2021), represents a relatively novel theoretical lens in this line of research. Additionally, specific methodological theories, such as the grounded theory approach (Gerlach & Cenfetelli, 2020), IS typological theory (Vaghefi et al., 2017), catastrophe theory, and qualitative simulation approach (Wei et al., 2024), have been employed as scaffolds for theoretical development in previous IS studies on obsessive technology use.

Table 2. An overview of theories and frameworks.

Perspective	Theories or frameworks	Study
Individual differences and cognitive patterns	Protection motivation theory	(Chen et al., 2020)
	Dual-systems theory	(Gong et al., 2021; Polites et al., 2018; Soror et al., 2015; Turel & Qahri-Saremi, 2016)
	(IT) Identity theory	(Gong et al., 2021; Polites et al., 2018)
	Need-to-belong theory	(James et al., 2017)
	Incentive-sensitization theory	(Kuem et al., 2021; Xu et al., 2022)
	Rational addiction framework	(Kwon et al., 2016)
	Hedonic management model of addiction	(Lee et al., 2021)
	IS habit theory	(Soror et al., 2015; Turel & Sereno, 2012)
	Theory of technology frames	(Tarafdar et al., 2020)
	Coping theory	(Tarafdar et al., 2020)
	Technology acceptance model	(Turel et al., 2011)
	IS enjoyment theory	(Turel & Sereno, 2012)
	Social cognitive theory	(Osatuyi & Turel, 2020; Turel, 2015)
	Cybernetic theory	(Vaghefi et al., 2023)
	Latent state-trait theory	(Wells et al., 2011)
	Theory of mood congruence	(Ho & Lim, 2018)
Technical features	Feature-rich information technology	(Tarafdar et al., 2020)
	Stimulus-response-reinforcement perspective	(Wang & Lee, 2020)
	Stimulus-organism-response model	(Parboteeah et al., 2009)
Social forces	Attachment theory	(Venkatesh et al., 2019)
	Social cognitive theory	(Osatuyi & Turel, 2020)

4.4. Research method

Among identified obsessive technology use studies published in "Basket of 8" journals, surveys have emerged as the most popular research method. The preference for self-reported surveys, which typically measure various constructs, can be partially attributed to the covert nature of obsessive technology use. Individuals may conceal their obsessive use patterns or related feelings, making direct observations by others challenging. Additionally, the scenario-based survey was also adopted to manipulate fear appeals against the background of problematic smartphone game use (Chen et al., 2020).

The experiment method was frequently utilized in the context of impulsive use, such as impulsive purchase or urge to buy (e.g., Ho & Lim, 2018; Parboteeah et al., 2009; Thomas et al., 2003) in that it may be deemed unethical to potentially expose users to the risk of getting addicted to other ITs. Since digital platforms (e.g., social mobile apps and E-commerce websites) allow for user data documentation, the modeling approach based on panel data served as an alternative method for obsessive technology use research (Jung et al., 2019; Kwon et al., 2016; Xu et al., 2022). Semi-structured interviews or open-ended surveys were adopted to provide qualitative data for conceptualization (Gerlach & Cenfetelli, 2020) and theorization (Vaghefi et al., 2017; Vaghefi et al., 2023). Furthermore, all three methods were employed in pairs to bolster empirical findings. For example, the experimental design always served as the methodology for follow-up studies to better make causal inferences, such as validating potential intervention methods (Osatuyi & Turel, 2020) or deepening understanding of the underlying mechanisms previously identified through surveys (Wells et al., 2011).

Wei et al.'s (2024) investigation into group-level online impulsive buying behavior is the only identified study adopting the mixed-method approach. In their study, qualitative simulation (QSIM) was combined with survey-based research to better identify the mechanism underlying sudden changes in online impulsive buying.

4.5. Research setting and sample

The identified obsessive technology use studies were mainly conducted under the settings of the general Internet environment, smartphones, E-commerce websites, social networking sites, online gaming, and online dating platforms. The majority of identified studies focused on social networking sites (n=10), followed by those conducted within the context of E-commerce (n=6), smartphone usage (n=5), and online gaming (n=5). Additionally, some investigations explored the general Internet context, as exemplified by the work of Venkatesh et al. (2019), or delved into the online dating platform (e.g., Jung et al., 2019).

All studies under review incorporated human subjects in their data collection and reported their demographics. Being aware of the potential age or generational effects in various dark side of IT/IS use phenomena (e.g., Kwon et al., 2016; Wang et al., 2019; Zhitomirsky-Geffet & Blau, 2016), we paid particular attention to the age distribution of these samples here. Sixteen of the 27 identified studies reported the age range of all their samples, among which 14 focused solely on individuals aged 60 or below. Among the rest 11 studies, 5 of them claimed that most of their samples were aged 60 or below (Gong et al., 2021; James et al., 2017; Lee et al., 2021; Tarafdar et al., 2020; Wang & Lee, 2020); another 3 of them identified their samples as university or undergraduate students (Ho & Lim, 2018; Parboteeah et al., 2009; Wells et al., 2011).

5. Discussion

Obsessive technology use has attracted extensive scholarly attention from the IS field. However, the fragmented knowledge still hinders the advancement of research aimed at unveiling the underlying mechanisms and informing effective intervention or treatment strategies. To synthesize the findings of the identified literature, the present study applied social cognitive theory (SCT) to synthesize the variables related to obsessive technology use and then identified research gaps and avenues for future research.

5.1. An integrative framework of variables related to obsessive technology use

SCT frames individual behaviors as the triadic reciprocal interaction results of personal factors, environmental factors, and behavioral factors (Bandura, 2009). In the obsessive technology use context, personal factors refer to the individual differences or characteristics that individuals inherently bring or emerge from experiences. Environmental factors encompass salient situational cues that shape obsessive use-related behaviors. Behavioral factors are specific usage patterns before obsessively using technologies or responses and actions after obsessive technology use. Interactively, these three categories of determinants push individuals toward or refrain them from obsessive patterns of technology use.

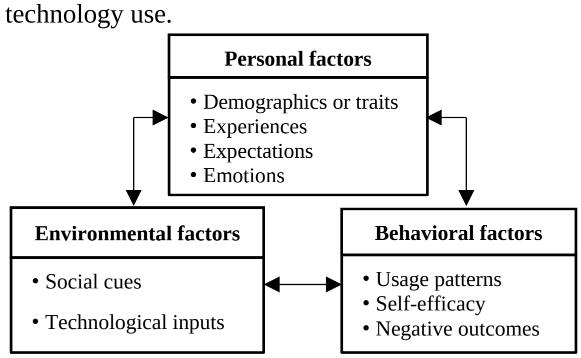

Figure 1. An integrative framework of variables related to obsessive technology use

SCT is applicable to our context as the integrated framework since it encapsulates the key theoretical components in the identified literature, enabling us to parsimoniously structure the wide spectrum of variables related to obsessive technology use. We further categorized the related variables examined in the identified literature into the SCT framework, as shown in Table 3.

Table 3. The categorization of variables into SCT

Personal factors	
Demographics or traits	Age; gender; inherent impulsiveness; openness to experience
Experiences	Belongingness to technology; cognitive-emotional preoccupation; distraction within/outside technology; embeddedness; fear; group homogeneity; group familiarity; guilt feelings; instant gratification; intragroup communication; IT identity; IT-induced stressors; personal innovativeness in IT fear; perceived ease of use; perceived enjoyment; perceived severity; perceived usefulness; perceived vulnerability; perception of loneliness; personal norm; satisfaction; sense of quantified self; social identity; subjective norms; use & gratification; withdrawal
Expectations	Realization; response efficacy; response costs
Emotions	Perceived positive mood enhancement/negative mood reduction; positive/negative affects/emotions/moods
Environmental factors	
Social cues	Injunctive norm; pareting behaviors; peer use reduction
Technological inputs	Functional features of online game; interactivity of mobile SNS; media formats; MMORPG affordances; social network/communication characteristics; task/mood-relevant cues on website; ubiquity, impulsivity, and disinhibition of mobile dating app; web personalization (e.g., taste, need, location matching); website quality
Behavioral factors	
Usage patterns	Comprehensiveness of usage; extent of usage; frequency of use; habitual use; subsequent behavioral usage; time of use
Self-efficacy	Self/cognitive-behavioral control; self-efficacy (to reduce use/discontinuance); self-efficacy (to use); self-regulation
Negative consequences	Academic performance; conflict; job outcomes (organizational commitment, job satisfaction, work exhaustion)

5.2. Future research directions

Upon reviewing the literature, we have discerned the following five promising directions with significant potential for advancing obsessive technology use research.

First, a more systematic approach to investigating obsessive technology use is essential for developing a robust body of knowledge. As demonstrated in Table 3, prior works mainly focused on personal factors, with environmental and behavioral factors being less studied. Additionally, a diversity of theoretical perspectives and analytical lenses led to a fragmented understanding of this phenomenon. Future researchers may consider adopting the proposed integrated framework to encompass individual differences, life conditions, social interactions, user experiences, and most importantly, contextualized technological features. By doing so, it would facilitate a cohesive and comprehensive theoretical explanation of the phenomenon, as well as the more granular investigation into the topic. Moreover, as discussed, a lack of consistency in terminologies, conceptualizations, and measurements challenged the rigor of research on obsessive technology use. Most (n=15) of the identified studies operationalized the construct of obsessive technology use as addictive use. Six studies focused on impulsive use. Only three studies examined excessive use and the other two studies investigated compulsive use. Future research may consider empirically validating and enriching the proposed typology of obsessive technology use (Gong et al., 2021), particularly focusing on the development and evolution of all archetypes of obsessive technology use, as well as the distinct mechanisms and outcomes associated with each.

Second, it is crucial to delve into strategies that could alleviate the potential adverse effects of specific archetypes of obsessive technology use. Research within leading IS journals on potential interventions or treatments to counteract the detrimental consequences of obsessive technology use is noticeably sparse. On one side, there is a need to assess the applicability and effectiveness of existing therapeutic interventions for specific obsessive patterns of technology use that need treatments (Andreassen, 2015). In addition, the influence of role models, norms, and policies requires more in-depth examinations to inform practitioners and policymakers. On the other side, the design of human-computer interactions may be useful for mitigating excessive or addictive technology use patterns. For example, Wickord and Quaiser-Pohl (2023) found that greyscale settings of smartphones may decrease usage time, serving as a convenient and potential tool for reducing problematic smartphone use.

Third, there is a need to explore further the ramifications of obsessive technology use. Our review of the literature indicates that identified studies mainly discussed the perceptual, behavioral, and performance-related impacts on individual users. As many IS researchers have started inquiring into the various unanticipated consequences of IT on individuals, organizations, and societies (Serenko & Turel, 2022; Turel, 2021), we recommend future research continue exploring the impact of obsessive technology use on various IS-related phenomena. To this end, IS researchers may consider integrating findings from adjacent fields such as psychology, psychiatry, and public health. This interdisciplinary approach can help identify the broader ramifications of obsessive technology use, including its associations with individuals' emotional (e.g., anxiety), relational (e.g., social isolation and family conflicts), performance (e.g., reduced productivity), and mental or physical wellbeing-related (e.g., depression and sleep difficulties) problems (Andreassen, 2015; Vaghefi et al., 2017).

Forth, the study of obsessive technology use may benefit from diversifying the research samples and extending the traditional research settings to specific emerging contexts. While there is no universally accepted rule of distinguishing the young from the old, our observation still depicted a pronounced inclination towards relatively younger participants in the research. The inclusion of older participants was not only scarce but also lacked a detailed examination that takes into account the nuances of generational variations. This tendency to focus on younger cohorts may stem from some statistics or reports suggesting that, for example, adolescents aged between 18 and 29 were considered active Internet users (Parboteeah et al., 2009), and those within the 18-32 age range were active online purchasers (Wells et al., 2011). As a lot of IT tools and their myriad applications evolve to address the life needs of all life stages, individuals in later adulthood, even the elderly, increasingly interact with technologies and become no less active IT users than the younger generations. According to the 2020 data from Statistics Canada, approximately 12% of individuals aged 65 and above checked their smartphones at least every 30 minutes, and more than 22% said it was the first thing they did after waking up. This latent risk of obsessive use across all age groups calls for examining the phenomenon in a more diverse sample, which would significantly improve the generalizability of the research findings. Furthermore, prior research predominantly focused on the general contexts of the Internet, smartphones, social networking sites, E-commerce, and online gaming. However, burgeoning contexts like metaverse (Bojic, 2022), short video apps (Chen et al., 2023), and live-streaming shopping (Ye & Ching, 2023) exhibit potentially unique characteristics that may influence compulsive, excessive, impulsive, or addictive usage patterns. It is also worth noticing that examining obsessive technology use from a collective action standpoint, especially in settings that involve group interactions like online group-buying or multiplayer gaming, could provide valuable insights into how group dynamics influence various forms of obsessive technology use (Chan et al., 2017; Gong et al., 2019; Wei et al., 2024). What's more, to strengthen the applicability of previous research findings, established measurements of obsessive technology use should also undergo contextual validation.

While surveys were the most prevalent research method among the studies reviewed, they are susceptible to social desirability bias, particularly in such sensitive contexts of technology addiction or excessive use, in which respondents tend to underreport their actual behaviors or related perceptions (Kwak et al., 2019). Future research may leverage the neurophysiological approach recommended by Chan et al. (2017) while combining the traditional survey or experiment methods. Alternatively, with the growing interest in understanding the role of genetics in explaining heterogeneity in behaviors, particularly in the IS field (Brown & Sias, 2023), exploring the relationship between molecular genetics and obsessive technology use seems a research direction with great potential.

5.3. Limitations

Limitations should be noted before applying this review's findings. The sampling of the literature was confined to studies featured within the "AIS senior scholars' basket of eight" journals. While this selection captures a seminal and influential corpus of IS literature, it is advisable for subsequent inquiries to expand the sampling scope to other journals. Future IS research may also benefit from integrating findings from other fields, such as public health and psychiatry. Such cross-disciplinary expansion would yield a more comprehensive view of the literature about obsessive technology use. Despite the limitation, we believe that our review of prior works and the proposed future research avenues can help guide researchers to constantly contribute to the study of the dark side of IS and deviant IS use.

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