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REVIEW

Digital Dilemmas: Unpacking Identity, Leisure, and Mental Health in a Screen-Saturated World

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Abstract

Purpose of Review This paper explores how interactive media use (e.g., video gaming, social media) relates to mental health during identity development. We examine whether problematic use is better understood as a cause or consequence of poor mental health and propose societal values as a contextual factor influencing this dynamic.

Recent Findings While research consistently links high media use to mental health concerns, causal pathways remain ambiguous. Emerging models emphasize the importance of how media are used rather than how much. The self-determination theory (SDT) and dualistic model of passion offer promising frameworks for distinguishing between adaptive and maladaptive engagement.

Summary We argue that media use-related well- or ill-being depends more on the psychological needs satisfied by activities than on duration of use. Harmonious versus obsessive passion further clarifies when high engagement becomes problematic. This perspective informs more effective prevention and intervention strategies while avoiding moral panic and over-pathologization.

Keywords Problematic media use · Self-determination theory (SDT) · Ecological context · Social factors · Causality

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Introduction: Interactive Media and Mental Health

The worldwide increase in mental health problems among adolescents and young adults over the last several decades has often been attributed to the use of internet and interactive screen technologies, such as social media and video games [1, 2]. In response to such discourse, society, popular media, and even some scientists have often adopted a polarized approach which either consists of pathologizing technology and screen use (e.g., equating screen-based activities to "digital drugs") or of dismissing concerns about screen use as manifestations of *moral panic* (e.g., viewing psychological problems related to screen-based activities as social constructions). However, neither of these approaches captures the complexity of digital behaviors and their relationship with mental health. Multiple factors, including individual differences (e.g., in personality traits or coping strategies, [3–6], the nature of the impact itself [7, 8] as well as a range of mediating variables [9, 10] influence these associations). Moreover, specific algorithms, design features and affordances of digital platforms may contribute to the development of problematic uses, particularly among vulnerable individuals [11–13].

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Meta-analyses of the relationship between video gaming (VG) and mental health point to significant heterogeneity in moderating influences [14, 15]. This heterogeneity is not inherently problematic – it reflects the diverse ways in which mental health challenges manifest and are influenced by different personal and contextual factors. Gaming motives, self-regulation skills, and the benefits individuals seek from gaming often outperform time spent gaming in predicting both risk and resilience (e.g., [3, 4, 16]). A recent meta-analysis of longitudinal studies [17] highlighted that while gaming time is often associated with problematic gaming behaviors, such as internet gaming disorder (IGD) [DSM-5], other factors – particularly personality traits acting as risk factors (e.g., neuroticism) or protective factors (e.g., conscientiousness) – play an important role. Interestingly, aspects like parent–child relationships appeared to have a comparatively weaker influence. However, these findings warrant caution, as many effect sizes were extracted from zero-order correlations averaged over time, raising questions about the temporal relationships and thus potentially the causal nature of these influences.

Depression and anxiety have been shown to moderate the relationship between gaming intensity and disordered gaming, potentially intensifying gaming's emotional rewards and contributing to the development of disordered use [18]. Although incorporating such mental health variables substantially improves the explanatory power of predictive models, clinical practice places less emphasis on explained variance and more on the diagnostic validity and clinical utility of assessment tools like the IGD criteria [19] — particularly their ability to distinguish pathological gaming from high engagement [20, 21].

Similar conclusions emerge for social media (SM). A recent review shows that time spent on SM does explain 6% of the variance in problematic use [22]. Motivations, activities, and behaviors are better predictors of SM effects than frequency or time spent [22–24]. Evidence for a causal association between time spent on SM and psychological ill-being is weak and heterogeneous, with cross-sectional effect sizes ranging from −0.57 to+0.59 [25]. While the clinical utility and diagnostic criteria of social media use disorder has yet to be fully recognized [26], the ICD-11 criteria for Gaming Disorder may be a good starting point to develop a standardized conceptualization [27–29].

The scarcity of causal evidence is unsurprising since truly causal designs would be unethical; one could not force someone to use interactive media if negative consequences (e.g., addictive or compulsive usage) were predicted. Standard scientific tools can only indirectly probe that putative relationship between screen time and mental health [30] and underlying risk factors, such as sleep disturbances [31], which have been recognized as the strongest predictor of mental illness in adolescents [32]. We must confront the ambiguity of the causal question itself and the difficulty of defining a reference group to determine the harmfulness of digital media use behaviors [33]. Beyond causality, however, screen time remains the most consistent and strongest risk factor for problematic interactive media use, though not the most relevant conceptually and methodologically [34]. High involvement, however, is not equal to problematic involvement [35] and reducing screen time may not effectively address the issue of problematic usage and its negative impact on mental health [36–38].

Despite their appeal, restrictive policy responses like China's playtime mandate to reduce heavy gaming [38], the Belgian loot box regulation [39], and, more recently, smartphone school policies in Australia [36], see also [40] have shown limited, but not zero, efficacy so far. While more time may be needed to assess their impact, the "prohibition" approach has mostly failed when applied to media use [41], calling for more personalized strategies. Although effective at reducing screen time [42–45], some strategies have not improved mental health in excessive gamers [38]. A recent randomized controlled trial found that screen time reductions in students were associated with small to medium improvements in depressive symptoms, stress, sleep quality, and well-being, but both screen time and mental health increased and returned to baseline after the intervention [46]. Current evidence on "digital detox" interventions is limited and inconsistent [47], with no consensus on a precise definition and great variability in effectiveness. Interventions focused on reducing, rather than eliminating, social media or smartphone use appear more beneficial for well-being. However, effects differ by outcome type, duration, and individual factors such as age, gender, and context. Given these variations, high-quality, empirical research is needed to determine when, for whom, and why/how "digital detox" interventions are effective.

Our goal is to provide a narrative review of the literature on digital media effects, focusing on relevant psychological constructs, self-determination theory and the dual model of passion, and discuss their impact from a social and ecological perspective.

Methods

This selective narrative review of the literature involved the following steps. The first step involved formulating and refining the research question and objectives. This allowed us to converge on 3 major constructs of interest: (a) self-determination theory and basic needs satisfaction, (b) the dualistic model of passions and (c) environmental/contextual influences, which were approached from an ecological

systems' perspective. Then, the first author conducted a literature search using keywords related to the constructs considered. References considered as relevant by the first author were further reviewed and summarized. Additional references were then identified and added by the other authors, based on their knowledge and their own literature searches.

Results

Addictive vs. Problematic Use

Although it is important to differentiate between problematic and addictive usage patterns, it is not an intuitive distinction. Addictive use is a clinical construct referring to the repetitive or continuous engagement in pleasurable (but unnecessary) behaviors despite harmful consequences and often associated with symptoms of loss of control and functional impairment. This has been reflected in ICD-11 categorization of addictive behaviors among addictive disorders category, namely for Gaming disorder and Gambling disorder. Addictive pattern of use implies neurobiological mechanisms related to reward processing (reinforcement learning, habit formation), and impulse control. Motives can be driven sometimes by maladaptive coping, poor self-regulation, or situational stress [48]. Problematic use is an intermediate pattern of dysfunctional use not reaching diagnostic requirement for a disorder. It refers to patterns of use that can interfere with or impair healthy function, such as sleep, nutrition, relationships, and productivity. Depending on the field of practice or research or population age groups, there can be reluctance to use the term addiction, and over-pathologization of digital media is to be carefully considered and avoided. Problematic use is a term that is also preferred to account for excessive online behaviors not conceptualized as addictive behaviors (e.g., when an over-involvement in social network sites or videogames is a maladaptive coping behavior displayed to face psychological distress or unmet needs) [49, 50].

Understanding Interactive Media Use in Ecological Context

Similar conclusions have been reached regarding the effects on well-being of time spent in non-technology-mediated activities. Working long hours has been linked to poorer well-being, however, this relationship varies considerably across working populations based on the nature of the job, working conditions, worker age, gender, and other factors [51]. Isolating causal influences is particularly difficult because working hours are moderated by complex, mostly bidirectional and non-linear relationships with both individual differences in self-determination goals [52] and social factors [53], which differ across work contexts [54]. In screen media use, a similar contextualization appears to be needed.

Several recent studies point to a non-linear relationship between interactive media consumption and mental health, with an inverted U-shape where moderate consumption shows some benefits but sustained consumption shows negative impact [55]. A challenging feature of this work is that the inflection point, the transition from beneficial to harmful, varies across types of media and online activities (1h/day for smartphone vs. 2-3 hours/day for video games, [51]) and effects (well-being vs depression vs anxiety). Moreover, the strength of the relationships may vary over time and depend on the time unit of the analysis (e.g., days, weeks, months, or years, [52, 53]).

An important shift is to reconceptualize problematic interactive media use as a problem of behavioral regulation rather than as an addictive disorder. This aligns with recent proposals suggesting that specific design features contribute to dysregulated usage [11, 12]. Although many clinicians would agree that the addiction formulation from the 1990s is no longer (and may have never been) accurate or productive in today's digital ecosystem, problematic media use patterns remain generally conceived as addictive disorders, requiring prevention and intervention on the harmful activity (e.g., playing video games or using SM). In many cases, problematic interactive media usage can be viewed as a coping mechanism to alleviate negative affective states (e.g., anxiety, depression, loneliness) or to compensate for frustrated needs [54–57]. In those situations, targeting the technology-mediated activity would result in ineffective or unnecessary treatment [58–60].

Clinicians feel ill-prepared for helping the increasing number of tweens and teens struggling with problematic interactive media use. The addiction model is currently the most influential when it comes to diagnose, assess, and treat problematic online behaviors. Moreover, gaming disorder is defined as an addictive disorder in ICD-11. However, alternative etiological models are also being considered to account for problematic online behaviors (Obsessive-compulsive disorders, impulse-control disorders, or simply maladaptive coping strategies) [61–63]. Detractors of the addiction model have argued that this model can create a dilemma when the goal of addiction treatment is abstinence or reduced/controlled use. Since interactive media has become a necessary tool for effective functioning and an important resource for leisure, learning, connecting, and communicating, over-pathologizing digital products should be avoided (for an example on gaming, see [64]). Thus, even the restriction of specific devices, applications, or platforms, is not a realistic or desirable option. Healthcare and education trainees need the necessary information to recognize

problematic interactive media use sufficiently early, and strategies to empower the youth to self-regulate and use interactive in media productively and healthily ways.

We argue that the relationships between media use and mental health will only be unraveled by taking into consideration behavioral motivators and social contexts [3, 65–67], as well as their temporal dynamics [68]. For example, a depressed teen with efficient self-regulation skills may be less affected by negative SM feedback than one with weaker self-regulation skills; creating different paths to both problematic use and potential intervention points [69]. Those relationships are supported by longitudinal studies highlighting how different personality traits in youth (e.g., disinhibition) influence the development of problematic interactive media behaviors later on [70].

Understanding Motivators and Social Contexts of Screen Use

Motivations driving what we choose to invest our time and attention on can be understood through the self-determination theory (SDT, [71]). Individuals tend to favor activities that satisfy their needs of autonomy, competence, or social relatedness, each of which contributes to their personal growth and self-development. If need satisfaction can motivate individuals to spend more time on some activities, does it also contribute to increased problematic activities or behaviors? A second framework that helps differentiate high consumption from problematic use is the dualistic model of passion [72, 73], which distinguishes between "harmonious" and "obsessive" passions. In a nutshell, people with harmonious passion have a strong connection with an activity that typically fulfills basic needs like those conceptualized in the SDT but does not interfere with other aspects of their lives. In contrast, people with obsessive passion pursue an activity in uncontrolled and inflexible ways to compensate for frustrated needs, ultimately promoting negative consequences and functional impairment [74]. Recent work by Infanti et al. [75] supports the idea that (1) these two types of passion are helpful at the user level (to differentiate types of gamers) and (2) at the variable level (to map types of passion to different symptoms). At the user level, this framework allows better differentiation between risky gamers (who showed high levels of both harmonious and obsessive passion), engaged gamers (who showed predominantly harmonious passion), and casual gamers who scored low on both types of passion. Phenomenological analysis of interviews also suggest that while players seeking medical support for their gaming report that gaming interferes with what they want to be, do or have throughout life, professional e-sport players instead report their gaming to be integrated into self throughout life [76]. At the variable level, harmonious passion was positively associated with manifestations such as salience, mood modification, tolerance (which are typically not able to distinguish engagement from addiction, see [20, 35], and low levels of conflict, while obsessive passion was more strongly associated with manifestations of withdrawal, conflict, and relapse/loss of control).

Although time spent remains, unsurprisingly, the most consistent and strongest correlate of problem gaming, it provides little in the way of an explanation. Numerous studies have documented reciprocal links between time spent gaming and problem gaming (or life satisfaction), with motivation and basic needs satisfaction, acting as moderating factors [77–79]. For example, gaming to escape reality seems to be associated with longer play times and more problematic behaviors [57, 72, 73], suggesting that the mental health problems preceded the onset of problematic use, and that gaming was used as a coping strategy to self-soothe — recognizing in some studies PG symptoms sometimes precede the onset of mental health problems(e.g., [80]). Similarly, reciprocal links between social media use and well-being [8] can be better understood by relating particular behaviors and design features that promote these behaviors with basic needs satisfaction [4, 11, 81]. For example, social media can help teens explore their sense of identity and build more autonomy from their parents [82]. Similarly, gaming for social compensation may have mitigated the experienced emotional distress for some people during the COVID-19-related lockdown [83, 84].

Similar patterns of findings have been observed at work: job characteristics (e.g., salary, hierarchy, work-life balance, job demands) and social identity factors (e.g., feedback and expectations from peers, family, cultural values and peers) have been shown to affect both working hours and well-being (i.e., job/life satisfaction, [54], including similar debates surrounding the concept of "work addiction" [85]).

Spending more time in one activity often leads to higher sense of autonomy, higher competence, and typically feeds social relatedness through stronger in-group bonding by being part of a community. The critical question here is why investing time in some consuming activities (e.g., academic research) is conducive to identity building/well-being, while for others (e.g., social media or video game use) it may hinder identity formation and contribute to ill-being? In the next section, we highlight the role of societal values and norms in shaping how the choice of activities bears on self-image [86].

Social Values and Context

Social, environmental, and contextual factors strongly influence behavior and well-being in many domains. Social values and norms shape individuals' behavior over time [87]

(see also [88]'s comment on [89]). Access and quality of education and health systems, neighborhood and built environments, and social and community context all greatly contribute to well-being. In light of this, it might be that excessive involvement in screen-based activities for some be a result of that multi-determined ecosystem. For example, children having access to a screen in their bedroom tend to consume greater total amounts of screen media, which displaces time from other activities, promotes exposure to violent content [90], and contributes to sleep disturbances [91]. Yet, high screen time may instead reflect meaningful engagement with digital tools for learning, social connection, and self-expression, particularly in environments where corresponding offline activities are limited or unequal and in a social context that is becoming heavily based on online presence. This highlights the necessity of going beyond time spent on screen vs non-screen activities and the importance of considering social values, in addition to individual differences and contextual factors, to understand their effects.

An argument can be made that social and environmental influences are fundamentally misaligned for adolescents and young adults when it comes to media use. Teens frequently find themselves navigating between different social circles—each with its own, often contrasting views and expectations about how digital media should be used [92]. At the broadest level, society tends to focus on the risks of interactive media use for young people, shaped by cultural and moral concerns. Within families, schools, and communities, the conversation often centers around control and restriction. This is largely driven by the widening intergenerational digital divide [93]. Parents and children frequently hold conflicting views about interactive media. Many adults are skeptical or uneasy about platforms they do not use or even understand; video games are often dismissed as a waste of time. Watching young people navigate the digital ecosystem can be both fascinating and anxiety-inducing for adults. While these generational divides have long existed, they have become even more pronounced in today's fast-evolving digital landscape, generating mixed feelings, especially among older adults [94]. Naturally, anxieties and potential resistance can occur with the adoption of emerging technologies [95].

To progress and thrive in the digital ecosystem that we have, we must change how we talk about interactive media—recognizing the real benefits it can offer, even as it challenges some traditional values. At the same time, it is important to acknowledge that it is adults who are building digital tools that can exploit young users' vulnerabilities. Yet, children and adolescents often get blamed for using these tools in a way that is not perceived as acceptable and are expected to regulate their screen time responsibly. This highlights the need to rethink our societal values, not just in how we educate about media use, but also in how we design technologies to optimize their positive effects on developing minds and behavior [96, 97].

Toward Socially Responsible Design and Education about Interactive Media Use

Interactive media have transformed social interactions, increasing both interpersonal connectivity and exposure to predatory design features and potential harm. Many platforms exploit adolescents' heightened sensitivity to social rewards and impulsivity through mechanisms such as infinite scrolling, algorithmic reinforcement, and variable rewards, which potentiate compulsive use [11, 91, 92]. Social network "Likes" have been suggested to promote unhealthy social comparison [98], while loot boxes mimic gambling mechanics, increasing engagement and self-reported anxiety [99]. Although regulatory measures such as China's playtime mandate have had mixed results [39, 42], transparency among technology developers, child health experts, and consumers remains crucial to ensuring developmentally optimal design, while still putting consumer protection at the center [100].

Another key lever is that of education. Countries like France, Finland, Canada, and Singapore have implemented school-based programs that foster critical thinking self-regulation and informed media engagement. Meta-analyses show that such structured interventions can improve resilience and reduce problematic interactive media use behaviors, especially when started early and supported by parental involvement [101, 102]. Media literacy interventions have been shown to improve critical thinking, media knowledge, and self-regulation skills, with small-to-moderate positive effects across various populations [103]. To be most effective, formal media literacy programs must start early, around the age of 5, when children begin to show executive attention better and the ability to separate reality from fantasy. As they start formal schooling, they can naturally adapt to developmental and technological changes, supported at home by parents modeling and fostering the development of healthy media use habits. By pairing ethical technology design with evidence-based education, we can empower youth to navigate digital spaces more intentionally and reduce the risk of harm. Such programs can complement and synergize with programs such as the Bootstrap Project (https://www.internetandme.eu/), which is co-constructed with youth from different cultures and aims at developing evidence-based strategies to enhance critical skills such as emotion regulation, inhibitory control, social competence, or stress regulation [104, 105].

Conclusion: Moving Forward

To move beyond polarized narratives about digital media, we must adopt a nuanced understanding rooted in established psychological frameworks. Self-Determination Theory (SDT) highlights how autonomy, competence, and relatedness shape motivations for media use. The Dualistic Model of Passion helps distinguish between healthy (harmonious) and unhealthy (obsessive) engagement. These motivations, in turn, influence identity formation—especially during adolescence, a critical period of self-concept development.

Furthermore, an ecological perspective reveals that individual behaviors are embedded within layers of influence—family, peers, educational institutions, and societal norms—all of which shape how digital media are used and experienced. Addressing mismatches between youth needs and these social expectations is essential for fostering resilience.

Future efforts should prioritize aligning interactive media use with core psychological needs, supporting harmonious passion, and designing responsible, empowering digital environments. Through such integrative approaches, digital tools can be harnessed to support rather than undermine well-being and identity growth.

Key References

- Orben A, Przybylski AK, Blakemore SJ, Kievit RA. Windows of developmental sensitivity to social media. Nat Commun. 2022 Mar 28;13(1):1649.

  A groundbreaking study highlighting sensitive developmental periods when social media use may particularly influence adolescent mental health, shaping future developmental psychology and policy.

- Flayelle M, Brevers D, King DL, Maurage P, Perales JC, Billieux J. A taxonomy of technology design features that promote potentially addictive online behaviours. Nat Rev Psychol. 2023 Mar;2(3):136–50.

  This paper proposes a comprehensive taxonomy of persuasive digital design features contributing to potentially addictive behaviors, providing a critical framework for both research and policy.

- Zhuang X, Zhang Y, Tang X, Ng TK, Lin J, Yang X. Longitudinal modifiable risk and protective factors of internet gaming disorder: A systematic review and meta-analysis. J Behav Addict. 2023 Jun 29;12(2):375–92.

  Identifies modifiable traits such as personality and self-regulation as key in the development of internet gaming disorder, supporting more personalized interventions.

- Marciano L, Lin J, Sato T, Saboor S, Viswanath K. Does social media use make us happy? A meta-analysis on social media and positive well-being outcomes. SSM - Mental Health. 2024 Dec 1;6:100331.

  Offers an updated and balanced meta-analysis, challenging simplistic narratives and supporting more nuanced assessments of social media's effects on well-being.

- Marciano L, Ostroumova M, Schulz PJ, Camerini AL. Digital Media Use and Adolescents' Mental Health During the Covid-19 Pandemic: A Systematic Review and Meta-Analysis. Frontiers in Public Health [Internet]. 2022 [cited 2022 Sep 3];9.

  Synthesizes evidence from the pandemic era to reveal how context and vulnerability moderate the mental health impacts of digital media use.

- Santos RMS, Mendes CG, Sen Bressani GY, de Alcantara Ventura S, de Almeida Nogueira YJ, de Miranda DM, et al. The associations between screen time and mental health in adolescents: a systematic review. BMC Psychology. 2023 Apr 20;11(1):127.

  Offers a comprehensive synthesis showing that screen time alone is a poor predictor of mental health outcomes without considering mediators and moderators..

- Hill ED, Kashyap P, Raffanello E, Wang Y, Moffitt TE, Caspi A, et al. Prediction of mental health risk in adolescents. Nat Med. 2025 Mar 5;1–7.

  This study uses large-scale longitudinal data to identify predictive markers of adolescent mental health, emphasizing the role of digital behaviors alongside sleep and emotion regulation.

- Lemahieu L, Vander Zwalmen Y, Mennes M, Koster EHW, Vanden Abeele MMP, Poels K. The effects of social media abstinence on affective well-being and life satisfaction: a systematic review and meta-analysis. Sci Rep. 2025 Mar 4;15(1):7581.

  Reviews the effectiveness of "digital detox" interventions, showing mixed and often limited mental

health benefits, underscoring the need for better targeted strategies.

- Zendle D, Flick C, Gordon-Petrovskaya E, Ballou N, Xiao LY, Drachen A. No evidence that Chinese playtime mandates reduced heavy gaming in one segment of the video games industry. Nat Hum Behav. 2023 Oct;7(10):1753–66.

  This empirical study critically evaluates a major national policy intervention, finding limited impact, and suggesting the need for more nuanced, context-sensitive regulatory approaches.

- Marciano L, Jindal S, Viswanath K. Digital Detox and Well-Being. Pediatrics. 2024 Oct 1;154(4):e2024066142.

  Highlights that while reducing digital use can offer short-term benefits, sustained well-being improvements depend on deeper behavioral and motivational factors.

- Giardina A, Schimmenti A, Starcevic V, King DL, Di Blasi M, Billieux J. Problematic gaming, social withdrawal, and Escapism: The Compensatory-Dissociative Online Gaming (C-DOG) model. Computers in Human Behavior. 2024 Jun 1;155:108187.

  Introduces the Compensatory-Dissociative Online Gaming (C-DOG) model, a new framework that explains problematic gaming as a continuum from adaptive "active escapism" to maladaptive "dissociation," emphasizing how individuals use gaming to cope with unmet psychological needs in the physical world. It highlights escapism as a key psychological process distinct from immersion or avoidance, offering clinical insights for assessing and treating gaming-related issues, including social withdrawal conditions like hikikomori.

- Liu Y, Marciano L. Appnome analysis reveals small or no associations between social media app-specific usage and adolescent well-being. Sci Rep. 2024 Dec 28;14(1):30836.

  Uses granular app-level data to debunk overgeneralized claims about social media's negative effects, emphasizing context and content over total time.

- Infanti A, Valls-Serrano C, Perales JC, Vögele C, Billieux J. Gaming passion contributes to the definition and identification of problematic gaming. Addictive Behaviors. 2023 Dec 1;147:107805.

  Demonstrates how distinguishing between obsessive and harmonious passion provides better diagnostic clarity in identifying problematic gaming.

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B.B., A.N.-D., and L.M. conducted the literature review and drafted the initial manuscript.
J.B., S.A. and M.R. contributed expertise on clinical relevance and diagnostic frameworks. J.B., L.M. and M.R. contributed to structuring policy implications and educational recommendations. D.A.G. contributed to contextualizing the findings within youth media psychology. All authors critically reviewed and revised the manuscript and approved the final version.

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Declarations

Human and Animal Rights and Informed Consent This article does not contain any studies with human or animal subjects performed by any of the authors.

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References

1. Twenge JM. iGen: Why today's super-connected kids are growing up less rebellious, more tolerant, less happy--and completely unprepared for adulthood--and what that means for the rest of us. Reprint edition. Atria Books; 2017. p. 533. https://www.amazon.com/iGen-Super-Connected-Rebellious-Happy-Adulthood/dp/1501151983

2. Twenge JM, Campbell WK. Media use is linked to lower psychological well-being: evidence from three datasets. Psychiatr Q. 2019;90(2):311–31.
3. Achab S, Nicolier M, Mauny F, Monnin J, Trojak B, Vandel P, et al. Massively multiplayer online role-playing games: comparing characteristics of addict vs non-addict online recruited gamers in a French adult population. BMC Psychiatry. 2011;26(11):144.
4. Achab S, Rothen S, Giustiniani J, Nicolier M, Franc E, Zullino D, et al. Predictors of gaming disorder or protective from it, in a French sample: a symptomatic approach to self-regulation and pursued rewards, providing insights for clinical practice. Int J Environ Res Public Health. 2022;19(15):9476.
5. Lopez-Fernandez O, Romo L, Kern L, Rousseau A, Graziani P, Rochat L, et al. Perceptions underlying addictive technology use patterns: insights for cognitive-behavioural therapy. Int J Environ Res Public Health. 2022;19(1):544.
6. Fernández OL, Romo L, Rousseau A, Lelonek-Kuleta B, Chwaszcz J, Männikkö N, et al. Problematic internet use among adults: a longitudinal European study. Adicciones [Internet]. 2025 [cited 2025 May 6];37(1). Available from: https://adicciones.es/index.php/adicciones/article/view/1948
7. Griffioen N, Lichtwarck-Aschoff A, van Rooij M, Granic I. From wellbeing to social media and back: a multi-method approach to assessing the bi-directional relationship between wellbeing and social media use. Front Psychol [Internet]. 2021 [cited 2024 May 13];12. Available from: https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2021.789302/full
8. Orben A, Przybylski AK, Blakemore SJ, Kievit RA. Windows of developmental sensitivity to social media. Nat Commun. 2022;13(1):1649.
9. Bayer JB, Triệu P, Ellison NB. Social media elements, ecologies, and effects. Annu Rev Psychol. 2020;71(4):471–97.
10. Makas S, Koç M. The mediating effect of emotional schemas in the relationship between online gaming addiction and life satisfaction. Sci Rep. 2025;15(1):430.
11. Flayelle M, Brevers D, King DL, Maurage P, Perales JC, Billieux J. A taxonomy of technology design features that promote potentially addictive online behaviours. Nat Rev Psychol. 2023;2(3):136–50.
12. Flayelle M, Andronicos M, King DL, Billieux J. Understanding the interplay between video game design features and dysregulated gaming patterns: a call to anchor future research directions in interactionist frameworks. Addict Behav Rep. 2025;1(21):100609.
13. Achab S. Écrans et production stratégique d'addiction. Rev Med Suisse. 2024;17(882):1384–1384.
14. Coșa IM, Dobrean A, Georgescu RD, Păsărelu CR. Parental behaviors associated with internet gaming disorder in children and adolescents: a quantitative meta-analysis. Curr Psychol. 2023;42(22):19401–18.
15. Ropovik I, Martončik M, Babinčák P, Baník G, Vargová L, Adamkovič M. Risk and protective factors for (internet) gaming disorder: a meta-analysis of pre-COVID studies. Addict Behav. 2022;17:107590.
16. Kiraly O, Toth D, Urban R, Demetrovics Z, Maraz A. Intense video gaming is not essentially problematic. Psychol Addict Behav. 2017;31(7):807–17.
17. Zhuang X, Zhang Y, Tang X, Ng TK, Lin J, Yang X. Longitudinal modifiable risk and protective factors of internet gaming disorder: a systematic review and meta-analysis. J Behav Addict. 2023;12(2):375–92.
18. Strojny P, Żuber M, Strojny A. The interplay between mental health and dosage for gaming disorder risk: a brief report. Sci Rep. 2024;14(1):1257.
19. Rochat L, Achab S. Classification et diagnostic du trouble du jeu vidéo dans les addictions et différences DSM-5 / CIM-11. In 2024.
20. Billieux J, Flayelle M, Rumpf HJ, Stein DJ. High involvement versus pathological involvement in video games: a crucial distinction for ensuring the validity and utility of gaming disorder. Curr Addict Rep. 2019;6(3):323–30.
21. Reed GM, First MB, Billieux J, Cloitre M, Briken P, Achab S, et al. Emerging experience with selected new categories in the ICD-11: complex PTSD, prolonged grief disorder, gaming disorder, and compulsive sexual behaviour disorder. World Psychiatry. 2022;21(2):189–213.
22. Marciano L, Lin J, Sato T, Saboor S, Viswanath K. Does social media use make us happy? A meta-analysis on social media and positive well-being outcomes. SSM - Mental Health. 2024;1(6):100331.
23. Course-Choi J, Hammond L. Social media use and adolescent well-being: a narrative review of longitudinal studies. Cyberpsychol Behav Soc Netw. 2021;24(4):223–36.
24. Marciano L, Ostroumova M, Schulz PJ, Camerini AL. Digital media use and adolescents' mental health during the covid-19 pandemic: a systematic review and meta-analysis. Front Public Health [Internet]. 2022 [cited 2022 Sep 3];9. Available from: https://www.frontiersin.org/articles/10.3389/fpubh.2021.793868
25. Huang C. A meta-analysis of the problematic social media use and mental health. Int J Soc Psychiatry. 2022;68(1):12–33.
26. Brand M, Rumpf HJ, Demetrovics Z, Müller A, Stark R, King DL, et al. Which conditions should be considered as disorders in the international classification of diseases (ICD-11) designation of "other specified disorders due to addictive behaviors"?. 2020 [cited 2025 Apr 24]; Available from: https://akjournals.com/view/journals/2006/11/2/article-p150.xml
27. Moretta T, Wegmann E. Toward the classification of social media use disorder: clinical characterization and proposed diagnostic criteria. Addict Behav Rep. 2025;1(21):100603.
28. Moretta T, Buodo G, Demetrovics Z, Potenza MN. Tracing 20 years of research on problematic use of the internet and social media: theoretical models, assessment tools, and an agenda for future work. Compr Psychiatry. 2022;1(112):152286.
29. Paschke K, Austermann MI, Thomasius R. ICD-11-based assessment of social media use disorder in adolescents: development and validation of the social media use disorder scale for adolescents. Front Psychiatry. 2021;22(12):661483.
30. Santos RMS, Mendes CG, Sen Bressani GY, de Alcantara VS, de Almeida Nogueira YJ, de Miranda DM, et al. The associations between screen time and mental health in adolescents: a systematic review. BMC Psychology. 2023;11(1):127.
31. Hale L, Dzierzewski JM. Screens and sleep health—it's almost bedtime, time to put your phone away. JAMA Pediatr. 2024;178(10):963–4.
32. Hill ED, Kashyap P, Raffanello E, Wang Y, Moffitt TE, Caspi A, et al. Prediction of mental health risk in adolescents. Nat Med. 2025;5:1–7.
33. Magnusson K, Johansson F, Przybylski AK. Harmful compared to what? The problem of gaming and ambiguous causal questions. Addiction. 2024;119(8):1478–86.
34. Kaye LK, Orben A, Ellis DA, Hunter SC, Houghton S. The conceptual and methodological mayhem of "screen time." Int J Environ Res Public Health. 2020;17(10):3661.
35. Charlton JP, Danforth IDW. Distinguishing addiction and high engagement in the context of online game playing. Comput Human Behav. 2007;23(3):1531–48.
36. Goodyear VA, Randhawa A, Adab P, Al-Janabi H, Fenton S, Jones K, et al. School phone policies and their association with mental

wellbeing, phone use, and social media use (SMART Schools): a cross-sectional observational study. Lancet Reg Health – Eur [Internet]. 2025 [cited 2025 Apr 10];51. Available from: https://www.thelancet.com/journals/lanepe/article/PIIS2666-7762(25)00003-1/fulltext
37. Lemahieu L, Vander Zwalmen Y, Mennes M, Koster EHW, Vanden Abeele MMP, Poels K. The effects of social media abstinence on affective well-being and life satisfaction: a systematic review and meta-analysis. Sci Rep. 2025;15(1):7581.
38. Zendle D, Flick C, Gordon-Petrovskaya E, Ballou N, Xiao LY, Drachen A. No evidence that Chinese playtime mandates reduced heavy gaming in one segment of the video games industry. Nat Hum Behav. 2023;7(10):1753–66.
39. Xiao LY. Breaking ban: Belgium's ineffective gambling law regulation of video game loot boxes. Vazire S, editor. Collabra: Psychol. 2023;9(1):57641.
40. King DL, Radunz M, Galanis CR, Quinney B, Wade T. "Phones off while school's on": evaluating problematic phone use and the social, wellbeing, and academic effects of banning phones in schools. J Behav Addict. 2024;13(4):913–22.
41. Király O, Griffiths MD, King DL, Lee HK, Lee SY, Bányai F, et al. Policy responses to problematic video game use: a systematic review of current measures and future possibilities. J Behav Addict. 2018;7(3):503–17.
42. Jones A, Armstrong B, Weaver RG, Parker H, von Klinggraeff L, Beets MW. Identifying effective intervention strategies to reduce children's screen time: a systematic review and meta-analysis. Int J Behav Nutr Phys Act. 2021;18(1):126.
43. Maniccia DM, Davison KK, Marshall SJ, Manganello JA, Dennison BA. A meta-analysis of interventions that target children's screen time for reduction. Pediatrics. 2011;128(1):e193-210.
44. Wahi G, Parkin PC, Beyene J, Uleryk EM, Birken CS. Effectiveness of interventions aimed at reducing screen time in children: a systematic review and meta-analysis of randomized controlled trials. Arch Pediatr Adolesc Med. 2011;165(11):979–86.
45. Wu L, Sun S, He Y, Jiang B. The effect of interventions targeting screen time reduction: a systematic review and meta-analysis. Medicine (Baltimore). 2016;95(27):e4029.
46. Pieh C, Humer E, Hoenigl A, Schwab J, Mayerhofer D, Dale R, et al. Smartphone screen time reduction improves mental health: a randomized controlled trial. BMC Med. 2025;23(1):107.
47. Marciano L, Jindal S, Viswanath K. Digital detox and well-being. Pediatrics. 2024;154(4):e2024066142.
48. Wegmann E, Antons S, Schmidt LD, Klein L, Montag C, Rumpf HJ, et al. Feels good, and less bad: problematic use of the Internet is associated with heightened experiences of both gratification and compensation. J Behav Addict. 2025;14(1):263–75.
49. Giardina A, Schimmenti A, Starcevic V, King DL, Di Blasi M, Billieux J. Problematic gaming, social withdrawal, and escapism: the compensatory-dissociative online gaming (C-DOG) model. Comput Hum Behav. 2024;1(155):108187.
50. Kardefelt-Winther D. A conceptual and methodological critique of internet addiction research: towards a model of compensatory internet use. Comput Human Behav. 2014;31:351–4.
51. Ganster DC, Rosen CC, Fisher GG. Long working hours and well-being: what we know, what we do not know, and what we need to know. J Bus Psychol. 2018;33(1):25–39.
52. Gutiérrez OI, Polo JD, Zambrano MJ, Molina DC. Meta-analysis and scientific mapping of well-being and job performance. Span J Psychol. 2020;27(23):e43.
53. Ng TWH, Feldman DC. Long work hours: a social identity perspective on meta-analysis data. J Organ Behav. 2008;29(7):853–80.
54. Shao Q. Does less working time improve life satisfaction? Evidence from European social survey. Heal Econ Rev. 2022;12(1):50.
55. Przybylski AK, Weinstein N. A large-scale test of the goldilocks hypothesis: quantifying the relations between digital-screen use and the mental well-being of adolescents. Psychol Sci. 2017;28(2):204–15.
56. Liu Y, Marciano L. Appnome analysis reveals small or no associations between social media app-specific usage and adolescent well-being. Sci Rep. 2024;14(1):30836.
57. Marciano L, Driver CC, Schulz PJ, Camerini AL. Dynamics of adolescents' smartphone use and well-being are positive but ephemeral. Sci Rep. 2022;12(1):1316.
58. Billieux J, Schimmenti A, Khazaal Y, Maurage P, Heeren A. Are we overpathologizing everyday life? A tenable blueprint for behavioral addiction research. J Behav Addict. 2015;4(3):119–23.
59. Santoro G, Musetti A, Costanzo A, Schimmenti A. Self-discontinuity in behavioral addictions: a psychodynamic framework. Addict Behav Rep. 2025;1(21):100601.
60. Schimmenti A. Beyond addiction: rethinking problematic internet use from a motivational framework. Clin Neuropsychiatry. 2023;20(6):471–8.
61. Achab S, Simon O, Müller S, Thorens G, Martinotti G, Zullino D, et al. Internet addiction. In: Textbook of addiction treatment: international perspectives [Internet]. Springer, Milano; 2015 [cited 2025 Aug 18]. p. 1499–513. Available from: https://link.springer.com/rwe/10.1007/978-88-470-5322-9_128
62. Fineberg NA, Demetrovics Z, Potenza MN, Mestre-Bach G, Ekhtiari H, Roman-Urrestarazu A, et al. Global action on problematic usage of the internet: announcing a lancet psychiatry commission. Lancet Psychiatry. 2025;12(1):11–3.
63. Solly JE, Albertella L, Ioannidis K, Fineberg NA, Grant JE, Chamberlain SR. Recent advances in understanding how compulsivity is related to behavioural addictions over their timecourse. Curr Addict Rep. 2025;12(1):26.
64. Cekic S, Bediou B, Achab S, Rich M, Green CS, Bavelier D. Going beyond video game consumption when considering internet gaming disorder. Compr Psychiatry. 2024;10:152500.
65. Barrangou-Pouyes-Darlas M, Grall-Bronnec M, Achab S. Investiguer la conduite de jeu vidéo dans le contexte personnel et social de la personne. In: Trouble du jeu vidéo [Internet]. RSM Editions; 2024 [cited 2025 Apr 10]. (L'essentiel). Available from: https://www.revmed.ch/livres/trouble-du-jeu-video-l-essentiel#tab=tab-shop
66. Thorens G, Achab S, Billieux J, Khazaal Y, Khan R, Pivin E, et al. Characteristics and treatment response of self-identified problematic internet users in a behavioral addiction outpatient clinic. J Behav Addict. 2014;3(1):78–81.
67. Hurel E, Grall-Bronnec M, Bouillard O, Chirio-Espitalier M, Barrangou-Poueys-Darlas M, Challet-Bouju G. Systematic review of gaming and neuropsychological assessment of social cognition. Neuropsychol Rev. 2024;34(3):738–67.
68. Carter MC, Powell N, Bediou B, Tsappis M, Bickham DS, Rich F Michael J. Placing problematic media use in context: a research synthesis, person-centric framework, and chart review among a clinical sample of US youth [submitted]. Front Psychol Front Psychiatry (under review)Carter, M. C., Powell, N., Bediou, B., Tsappis, M., Bickham, D., & Rich, M. (2025). Placing problematic media use in context: A research synthesis, person-centric framework, and chart review among a clinical sample of US youth. Frontiers in Psychiatry, 16. https://doi.org/10.3389/fpsyt.2025.1574502
69. Larrieu M, Fombouchet Y, Billieux J, Decamps G. How gaming motives affect the reciprocal relationships between video game use and quality of life: a prospective study using objective playtime indicators. Comput Hum Behav. 2023;1(147):107824.
70. Marciano L, Schulz PJ, Camerini AL. How smartphone use becomes problematic: application of the ALT-SR model to study

the predicting role of personality traits. Comput Hum Behav. 2021;1(119):106731.
71. Deci EL, Ryan RM. Intrinsic motivation and self-determination in human behavior [Internet]. Boston, MA: Springer US; 1985 [cited 2025 Apr 10]. Available from: http://link.springer.com/10.1007/978-1-4899-2271-7
72. Vallerand RJ. Chapter 3 - on passion for life activities: the dualistic model of passion. In: Advances in Experimental Social Psychology [Internet]. Academic Press; 2010 [cited 2025 Apr 10]. pp. 97–193. (Advances in Experimental Social Psychology; vol. 42). Available from: https://www.sciencedirect.com/science/article/pii/S0065260110420031
73. Vallerand RJ. The dualistic model of passion. In: Vallerand RJ, editor. The psychology of passion: a dualistic model [Internet]. Oxford University Press; 2015 [cited 2025 Apr 9]. p. 0. Available from: https://doi.org/10.1093/acprof:oso/9780199777600.003.0003
74. Przybylski AK, Weinstein N, Ryan RM, Rigby CS. Having to versus wanting to play: background and consequences of harmonious versus obsessive engagement in video games. CyberPsychology & Behavior. 2009;12(5):485–92.
75. Infanti A, Valls-Serrano C, Perales JC, Vögele C, Billieux J. Gaming passion contributes to the definition and identification of problematic gaming. Addict Behav. 2023;1(147):107805.
76. Karhulahti VM, Siutila M, Vahlo J, Koskimaa R. Phenomenological strands for gaming disorder and esports play: a qualitative registered report. Collabra: Psychology. 2022;8(1):38819.
77. Bäcklund C, Elbe P, Gavelin HM, Sörman DE, Ljungberg JK. Gaming motivations and gaming disorder symptoms: a systematic review and meta-analysis. J Behav Addict. 2022;11(3):667–88.
78. Wang HY, Cheng C. The associations between gaming motivation and internet gaming disorder: systematic review and meta-analysis. JMIR Ment Health. 2022;9(2):e23700.
79. Weinstein N, Przybylski AK, Murayama K. A prospective study of the motivational and health dynamics of internet gaming disorder. PeerJ. 2017;29(5):e3838.
80. Gentile DA, Choo H, Liau A, Sim T, Li D, Fung D, et al. Pathological video game use among youths: A two-year longitudinal study. Pediatrics. 2011;127(2).
81. Orben A, Meier A, Dalgleish T, Blakemore SJ. Mechanisms linking social media use to adolescent mental health vulnerability. Nat Rev Psychol. 2024;7:1–17.
82. Davis K. Friendship 2.0: adolescents' experiences of belonging and self-disclosure online. J Adolesc. 2012;35(6):1527–36.
83. King DL, Achab S, Higuchi S, Bowden-Jones H, Müller KW, Billieux J, et al. Gaming disorder and the COVID-19 pandemic: treatment demand and service delivery challenges. J Behav Addict. 2022;11(2):243–8.
84. Giardina A, Di Blasi M, Schimmenti A, King DL, Starcevic V, Billieux J. Online gaming and prolonged self-isolation: evidence from Italian gamers during the covid-19 outbreak. Clin Neuropsychiatry. 2021;18(1):65–74.
85. Griffiths MD, Demetrovics Z, Atroszko PA. Ten myths about work addiction. 2018 [cited 2025 May 6]; Available from: https://akjournals.com/view/journals/2006/7/4/article-p845.xml
86. Tajfel H, Turner JC. Tajfel: an integrative theory of multigroup conflict. In; 1979 [cited 2025 Apr 10]. Available from: https://scholar.google.com/scholar_lookup?&title=An%20integrative%20theory%20of%20inter-group%20conflict&pages=33-47&publication_year=1979&author=Tajfel%2CH&author=Turner%2CJC
87. Battu B. Co-evolution of conditional cooperation and social norm. Sci Rep. 2023;13(1):16625.
88. Reynolds KJ. Social norms and how they impact behaviour. Nat Hum Behav. 2019;3(1):14–5.
89. Pryor C, Perfors A, Howe PDL. Even arbitrary norms influence moral decision-making. Nat Hum Behav. 2019;3(1):57–62.
90. Gentile DA, Berch ON, Choo H, Khoo A, Walsh DA. Bedroom media: one risk factor for development. Dev Psychol. 2017;53(12):2340–55.
91. Barlett ND, Gentile DA, Barlett CP, Eisenmann JC, Walsh DA. Sleep as a mediator of screen time effects on US children's health outcomes: a prospective study. J Child Media. 2012;6(1):37–50.
92. Paulus MP, Zhao Y, Potenza MN, Aupperle RL, Bagot KS, Tapert SF. Screen media activity in youth: a critical review of mental health and neuroscience findings. J Mood Anxiety Disord. 2023;1(3):100018.
93. Marzo RR. Bridging the gap: understanding and fostering intergenerational communication in the digital age. In: Intergenerational relations - contemporary theories, studies and policies [Internet]. IntechOpen; 2024 [cited 2025 Apr 10]. Available from: https://www.intechopen.com/chapters/1155846
94. Maulod A, Lee JML, Lu SY, Cheng GHL, Chan A, Thang LL, et al. Mismatch between older persons' generative concern and internalized generative capacities: leveraging on generative ambivalence to enhance intergenerational cohesion. J Aging Soc Policy. 2023;27:1–25.
95. Walsh JP. Social media and moral panics: assessing the effects of technological change on societal reaction. Int J Cult Stud. 2020;23(6):840–59.
96. King D, Koster E, Billieux J. Study what makes games addictive. Nature. 2019;573(7774):346.
97. Orben A, Blakemore SJ. How social media affects teen mental health: a missing link. Nature. 2023;614(7948):410–2.
98. Rosenthal-von der Pütten AM, Hastall MR, Köcher S, Meske C, Heinrich T, Labrenz F, et al. "Likes" as social rewards: their role in online social comparison and decisions to like other people's selfies. Comput Hum Behav. 2019;92:76–86.
99. Zendle D, Flick C, Halgarth D, Ballou N, Demediuk S, Drachen A. Cross-cultural patterns in mobile playtime: an analysis of 118 billion hours of human data. Sci Rep. 2023;13(1):386.
100. King DL, Delfabbro PH, Gainsbury SM, Dreier M, Greer N, Billieux J. Unfair play? Video games as exploitative monetized services: an examination of game patents from a consumer protection perspective. Comput Hum Behav. 2019;1(101):131–43.
101. d'Haenens L, Joris W. Media literacy in a digital age: taking stock and empowering action. Media Commun [Internet]. 2025 [cited 2025 Mar 13];13(0). Available from: https://www.cogitatiopress.com/mediaandcommunication/article/view/9759
102. Huang G, Jia W, Yu W. Media literacy interventions improve resilience to misinformation: a meta-analytic investigation of overall effect and moderating factors. Commun Res. 2024;4:00936502241288103.
103. Jeong SH, Cho H, Hwang Y. Media literacy interventions: a meta-analytic review. J Commun. 2012;62(3):454–72.
104. Müller SM, Antons S, Schmid AM, Thomas TA, Kessling A, Joshi M, et al. Self-control abilities in specific types of problematic usage of the internet: findings from clinically validated samples with neurocognitive tasks. Am J Psychiatry. 2025;182(7):660–70.
105. Fineberg NA, Menchón JM, Hall N, Dell'Osso B, Brand M, Potenza MN, et al. Advances in problematic usage of the internet research – a narrative review by experts from the European network for problematic usage of the internet. Compr Psychiatry. 2022;118:152346.

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