

Digital Addiction and Mental Health among Generation Z: A Recent Structured Review

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DOI: <https://doi.org/10.47772/IJRISS.2026.100700782>

Received: 15 June 2026; Accepted: 20 June 2026; Published: 12 August 2026

ABSTRACT

Digital addiction has emerged as a growing public health concern among Generation Z due to the widespread use of smartphones, social media platforms, online gaming, and internet-based applications. Excessive engagement with digital technologies has been increasingly associated with adverse mental health outcomes, including anxiety, depression, psychological distress, loneliness, and reduced well-being. Despite the expanding body of research in this area, existing evidence remains fragmented, making it difficult to obtain a comprehensive understanding of the relationship between digital addiction and mental health among Generation Z. Therefore, this systematic literature review aims to synthesize current evidence on the associations between digital addiction and mental health among Generation Z. The review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. An advanced search strategy was performed using the Scopus and Web of Science (WoS) databases, employing the keywords “digital addiction,” “mental health,” and “Generation Z.” Only articles published in 2025 were considered. After the identification, screening, eligibility, and inclusion processes, a total of 28 primary studies were retained for final analysis. The thematic synthesis revealed three major themes: (1) Digital Addiction and Psychological Distress, (2) Psychosocial, Family, and Interpersonal Determinants, and (3) Academic, Behavioural, and Protective Mechanisms. The findings indicate that digital addiction is consistently associated with increased levels of anxiety, depression, stress, loneliness, and psychological vulnerability. Family dynamics, social relationships, resilience, and interpersonal support were identified as important determinants influencing digital addiction behaviours. Furthermore, academic stress, procrastination, self-regulation difficulties, and behavioural factors emerged as significant predictors, while physical activity, mindfulness, resilience, and social support functioned as protective mechanisms. Overall, the review demonstrates that digital addiction and mental health are interconnected through complex psychological, social, familial, and academic pathways. These findings highlight the need for multidimensional intervention strategies and evidence-based policies to promote digital well-being and mental health among Generation Z.

Keywords: digital addiction, mental health, generation Z

INTRODUCTION

Digital technologies have become embedded in the daily lives of adolescents and young adults, making Generation Z uniquely exposed to risks of **digital addiction** and related mental health problems [1], [2], [3], [4]. Recent systematic reviews consistently report that high levels of screen exposure, problematic social media use, and digital media addiction are associated with increased symptoms of depression, anxiety, stress, self-harm, sleep problems, and reduced well-being among youth [5], [6], [7] (Keles et al., 2019; Boers et al., 2019; Santos et al., 2023; Shannon et al., 2021; Barthorpe et al., 2020; Wacks & Weinstein, 2021; Hilty et al., 2023; Marciano et al., 2022). During the COVID-19 pandemic, intensified reliance on online platforms further amplified these

concerns, with evidence of increased internet dependence, sleep disturbances, and adverse emotional reactions among university students understood as Generation Z [8](Silveira et al., 2022; Marciano et al., 2022). Cross-sectional and longitudinal studies show that greater time on social media and screens is linked to higher depressive symptoms and lower self-esteem, with some support for mechanisms such as upward social comparison, reinforcing spirals, and fear of missing out [9], [10] (Boers et al., 2019; Asadipour & Rostami, 2026; Barthorpe et al., 2020; Marciano et al., 2022; Li et al., 2025). At the same time, research indicates that digital use is heterogeneous: certain forms of purposeful or one-to-one online communication can mitigate loneliness and stress, suggesting a complex, bidirectional relationship rather than a uniformly harmful effect (Hilty et al., 2023; Marciano et al., 2022).

Despite growing evidence, the field remains fragmented in theory, measures, and populations, and recent work explicitly calls for deeper examination of mechanisms, longitudinal pathways, diverse contexts, and nuanced patterns of digital engagement [11] (Keles et al., 2019; Santos et al., 2023; Shannon et al., 2021; Asadipour & Rostami, 2026; Hilty et al., 2023; Marciano et al., 2022; Kennard et al., 2025; Li et al., 2025; Calvert et al., 2025). A systematic review focused on "Digital Addiction and Mental Health among Generation Z" is therefore needed to synthesize post-pandemic evidence across forms of digital addiction (social media, smartphone, internet, gaming), clarify mental health and academic outcomes in this specific cohort, and map methodological and contextual gaps. By integrating heterogeneous strands of research, distinguishing harmful from potentially protective uses, and foregrounding Generation Z as a socio-generational context, such a review can refine conceptual boundaries, inform theory on digital addiction mechanisms, and provide an evidence base to guide prevention, policy, and intervention strategies tailored to this high-risk generation.

LITERATURE REVIEW

The pervasive integration of digital technology into the lives of Generation Z (Gen Z) has created a dual-edged phenomenon, offering both opportunities and challenges. This review synthesizes existing research on the intersection of digital addiction and mental health within this demographic, highlighting key findings, implications, and potential interventions.

Digital addiction, characterized by excessive, compulsive, and impulsive use of digital devices, is increasingly recognized as a behavioral addiction with significant mental health implications. Symptoms such as anxiety, depression, and social isolation are frequently observed among Gen Z individuals, who are often described as "digital natives" due to their lifelong exposure to technology [12] [13] [14]. Excessive social media use, in particular, has been linked to heightened anxiety, self-comparison, and depressive symptoms, as users navigate curated online realities and seek validation through likes and comments [15] [16] [17]. The relentless pursuit of online approval and exposure to idealized personas exacerbate feelings of inadequacy and social fatigue, underscoring the psychological toll of hyperconnectivity [16] [18].

The mental health challenges faced by Gen Z are further compounded by cultural and societal pressures amplified through digital platforms. Academic stress, family expectations, and societal norms around beauty and success are intensified in the digital realm, leading to identity strain and emotional distress [18] [19]. Studies also highlight the role of information overload and social media fatigue in contributing to psychological disorders, including anxiety and depression [17] [20]. The COVID-19 pandemic has further exacerbated these issues, with increased screen time and social isolation amplifying mental health concerns [21] [22].

Despite these challenges, digital platforms also offer opportunities for resilience and support. Peer networks, digital counseling tools, and mindfulness-based interventions have shown promise in mitigating the negative effects of digital addiction. For instance, digital detox practices and mindfulness-based art therapy have been found to reduce cognitive overload and improve emotional regulation among Gen Z individuals [19] [23] [24]. Additionally, innovations such as AI-based chatbots and virtual reality counseling provide accessible mental health support, though their efficacy

requires further investigation [25] [26].

Interventions targeting digital addiction must adopt a multidimensional approach, addressing both individual behaviors and systemic factors. Educational initiatives to promote digital literacy and mindful technology use are critical, as they empower users to navigate the digital landscape responsibly [14] [27]. Policymakers and platform designers also play a crucial role in creating healthier online environments by reducing algorithmic pressures and promoting positive content [20] [28]. Furthermore, tailored support systems in educational and workplace settings can help address the unique mental health needs of Gen Z, fostering resilience and long-term well-being [21] [29].

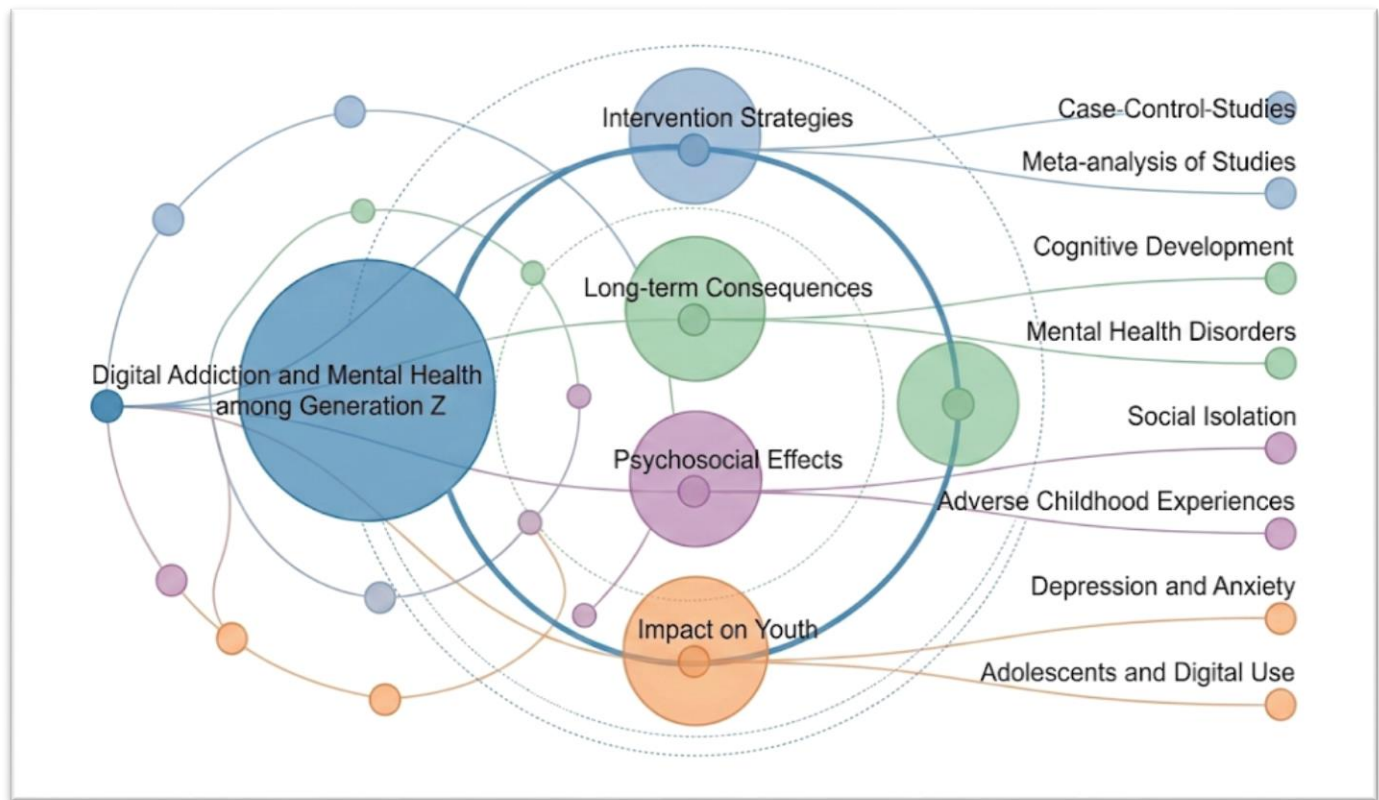


Figure 1: Concept Map of the Literature on Digital Addiction and Mental Health among Generation Z

Figure 1 presents a concept map of the literature related to digital addiction and mental health among Generation Z, highlighting four major research domains: intervention strategies, long-term consequences, psychosocial effects, and impact on youth. The intervention strategies domain focuses on approaches used to address digital addiction, including evidence derived from case-control studies and meta-analyses. The long-term consequences domain emphasizes the potential effects of excessive digital engagement on cognitive development and the emergence of mental health disorders. The psychosocial effects domain explores how digital addiction contributes to social isolation and is associated with adverse childhood experiences, which may further influence psychological well-being. Meanwhile, the impact on youth domain concentrates on adolescents' patterns of digital use and their relationship with depression and anxiety. Overall, the concept map demonstrates that digital addiction is a multidimensional issue affecting the cognitive, emotional, social, and psychological development of Generation Z. The existing literature suggests that excessive digital engagement may increase vulnerability to various mental health challenges, highlighting the importance of effective intervention strategies, preventive measures, and continuous research to promote healthier digital habits and improve the overall well-being of young individuals.

In conclusion, while digital addiction poses significant risks to the mental health of Generation Z, it

also presents opportunities for innovation in mental health support. A balanced approach that leverages the benefits of technology while mitigating its risks is essential. Future research should focus on longitudinal studies to better understand the long-term effects of digital addiction and the efficacy of interventions. By fostering digital literacy, promoting mindful usage, and implementing systemic changes, stakeholders can help Gen Z navigate the complexities of the digital age while safeguarding their mental health.

Research Question

Research questions (RQs) constitute the cornerstone of a Systematic Literature Review (SLR), as they establish the conceptual foundation and determine the overall direction of the review process. Well-defined research questions provide a clear scope and focus, guiding the identification, selection, and evaluation of relevant studies while ensuring that the review remains aligned with its intended objectives. By delineating the boundaries of the investigation, RQs facilitate a comprehensive and systematic search strategy, enabling the inclusion of pertinent evidence and reducing the likelihood of selection bias. Furthermore, research questions serve as an analytical framework for organizing, categorizing, and synthesizing findings across studies, thereby supporting the development of meaningful interpretations and evidence-based conclusions. They also enhance the transparency, rigor, and reproducibility of the review process by providing a structured pathway that can be replicated or extended by future researchers. Ultimately, research questions ensure that the review addresses significant scholarly issues, whether identifying research gaps, examining determinants and outcomes, evaluating interventions, or exploring emerging trends within a specific field.

Specifying the research questions is widely recognized as one of the most critical stages in the planning phase of an SLR because it shapes and drives the entire review methodology [30]. In line with the objective of this review—to examine and synthesize the current state of knowledge on digital addiction and mental health among Generation Z—the PICO framework proposed by [31] was employed to formulate the research questions. PICO is a mnemonic framework commonly used in qualitative evidence synthesis and comprises three key elements: **Population (P)**, referring to Generation Z; **Interest (I)**, referring to digital addiction and mental health; and **Context (Co)**, referring to the educational, social, family, and digital environments in which these phenomena occur. The application of the PICO framework enabled the development of focused and theoretically grounded research questions that guided the identification, analysis, and thematic synthesis of the selected studies.

RQ1: How does digital addiction influence psychological distress among Generation Z, particularly in relation to anxiety, depression, loneliness, psychological distress, and overall mental well-being?

RQ2: What psychosocial, family, and interpersonal factors contribute to the development and maintenance of digital addiction among Generation Z?

RQ3: How do academic, behavioural, and protective mechanisms influence digital addiction among Generation Z, and what factors may mitigate its adverse effects on mental health?

MATERIAL AND METHODS

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework is widely recognized as the gold standard for conducting systematic literature reviews, ensuring transparency, methodological rigor, and reproducibility throughout the review process [32]. By following the PRISMA guidelines, researchers can systematically identify, evaluate, and synthesize relevant evidence while minimizing potential sources of bias. This structured approach enhances the reliability and credibility of review findings, thereby strengthening the evidence base for future research and practice. In the present study, two leading multidisciplinary databases, Scopus and Web of Science, were selected due to their extensive coverage of high-quality scholarly publications and

comprehensive indexing of peer-reviewed literature.

The PRISMA framework comprises four interconnected phases: identification, screening, eligibility, and inclusion. During the identification phase, a comprehensive search strategy is employed to retrieve potentially relevant studies from selected databases. The screening phase involves the removal of duplicate records and the preliminary assessment of titles and abstracts against predetermined inclusion and exclusion criteria. Subsequently, the eligibility phase requires a detailed full-text evaluation to determine the suitability of the remaining studies for inclusion in the review. Finally, the inclusion phase focuses on data extraction, synthesis, and analysis of the selected studies to generate meaningful insights and evidence-based conclusions. By adopting this systematic and transparent methodology, the review process ensures a high level of methodological rigor, enhances the validity of the findings, and provides a robust foundation for advancing knowledge within the field.

Identification

According to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, the identification stage serves as the initial step in the systematic literature review (SLR) process, aiming to comprehensively capture all potentially relevant studies related to the research topic. In the present study, a systematic search was conducted using two internationally recognized databases, Scopus and Web of Science (WoS), due to their extensive coverage of high-quality peer-reviewed publications and strong indexing standards. The search strategy was developed based on three core concepts central to the study, namely digital addiction, mental health, and Generation Z. Relevant keywords and their associated synonyms were combined using Boolean operators to maximize search sensitivity and ensure broad retrieval of the existing literature. As a result, 5,059 records were identified from Scopus and 2,234 records from Web of Science, yielding a total of 7,293 records for further screening and assessment, as shown in Figure 2.

The large volume of records retrieved highlights the increasing scholarly attention devoted to the intersection of digital addiction and mental health among Generation Z, a cohort widely recognized as the first generation to grow up in a fully digital environment. Notably, Scopus contributed approximately 69.4% of the total records, while Web of Science accounted for 30.6%, reflecting the broader journal coverage and multidisciplinary scope of Scopus. Nevertheless, the inclusion of both databases was essential to enhance the comprehensiveness of the review and reduce the risk of publication bias. The identification of 7,293 records indicates a substantial and rapidly expanding body of literature, underscoring the global significance of digital addiction as a contemporary public health and psychological concern. This extensive dataset provides a robust foundation for the subsequent screening, eligibility, and inclusion stages of the PRISMA process, ensuring that the final review is grounded in a comprehensive and evidence-based selection of studies.

TABLE 1 The search string.

Database Search Strategy Table

Database	Search Strategy / Search String	Filters / Limits	Date of Access
Scopus	TITLE-ABS-KEY (("Digital Addiction" OR "Internet Addiction" OR "Smartphone Addiction" OR "Social Media Addiction" OR "Technology Addiction" OR "Mobile Phone Addiction" OR "Problematic Internet Use" OR "Problematic Smartphone Use" OR "Digital Dependency" OR "Screen Addiction" OR "Online Addiction" OR "Cyber Addiction"	Publication Year: 2025; Document Type: Article; Language: English; Publication Stage: Final; Source Type: Journal; Subject Area: Psychology (PSYC); Exact Keywords: Internet Addiction, Internet Addiction Disorder,	June 2026

	OR "Digital Media Overuse" OR "Compulsive Internet Use") AND ("Mental Health" OR "Psychological Well-being" OR "Psychological Wellbeing" OR "Emotional Well-being" OR "Emotional Wellbeing" OR "Psychological Health" OR "Mental Wellness" OR "Psychological Distress" OR Depression OR Anxiety OR Stress OR Loneliness OR "Emotional Health") AND ("Generation Z" OR "Gen Z" OR "Digital Natives" OR Adolescents OR Youth OR "Young Adults" OR Teenagers OR "Emerging Adults" OR "College Students" OR "University Students" OR "Undergraduate Students"))	Young Adult	
Web of Science (WoS)	("Digital Addiction" OR "Internet Addiction" OR "Smartphone Addiction" OR "Social Media Addiction" OR "Technology Addiction" OR "Mobile Phone Addiction" OR "Problematic Internet Use" OR "Problematic Smartphone Use" OR "Digital Dependency" OR "Screen Addiction" OR "Online Addiction" OR "Cyber Addiction" OR "Digital Media Overuse" OR "Compulsive Internet Use") AND ("Mental Health" OR "Psychological Well-being" OR "Psychological Wellbeing" OR "Emotional Well-being" OR "Emotional Wellbeing" OR "Psychological Health" OR "Mental Wellness" OR "Psychological Distress" OR Depression OR Anxiety OR Stress OR Loneliness OR "Emotional Health") AND ("Generation Z" OR "Gen Z" OR "Digital Natives" OR Adolescents OR Youth OR "Young Adults" OR Teenagers OR "Emerging Adults" OR "College Students" OR "University Students" OR "Undergraduate Students"))	Publication Year: 2025; Document Type: Article; Language: English; Research Area: Psychology	June 2026

Screening

The screening stage was conducted to refine the initial pool of studies and ensure that only publications directly relevant to the research objectives were retained for further analysis. From the 7,293 records identified during the identification phase, a total of 7,057 records were excluded based on predefined inclusion and exclusion criteria, as shown in Table 2. Specifically, studies published in languages other than English, publications released before 2025, conference proceedings, book chapters, review articles, and in-press publications were removed. In addition, studies outside the field of psychology, those not specifically addressing internet addiction or digital addiction, and research focusing on populations other than Generation Z and young adults were excluded. This rigorous screening process resulted in 236 eligible records, comprising 186 publications from Scopus and 50 publications from Web of Science.

Following the screening phase, a duplication check was performed to ensure the accuracy and integrity of the dataset. Duplicate records commonly occur when the same publication is indexed across multiple databases.

Consequently, nine duplicate records were identified and removed, reducing the final dataset to 227 unique studies. The substantial reduction from 7,293 to 236 records demonstrates the effectiveness of the screening criteria in filtering out irrelevant literature and maintaining a focused evidence base. Furthermore, the removal of duplicate records enhanced the reliability of the review by preventing the overrepresentation of individual studies and ensuring that each publication contributed equally to the subsequent stages of analysis.

TABLE 2 The selection criterion is searching

Criterion	Inclusion	Exclusion
Language	English	Non-English
Time line	2025	< 2025
Literature type	Journal (Article)	Conference, Book, Review
Publication Stage	Final	In Press
Subject Area	Psychology	Besides Psychology
Keyword	Internet Addiction Young Adult Internet Addiction Disorder	Besides Internet Addiction Young Adult Internet Addiction Disorder
Country	Malaysia	Besides Malaysia

Eligibility

The eligibility stage represents a critical phase in the PRISMA framework, as it ensures that only studies with strong relevance and sufficient methodological quality are retained for final analysis. Following the screening process, a total of 225 articles were retrieved and subjected to a comprehensive full-text assessment, as shown in Figure 2. During this stage, each study was carefully evaluated against the research objectives, inclusion criteria, and thematic focus on digital addiction and mental health among Generation Z. The full-text review allowed for a deeper examination of the conceptual framework, research design, target population, and empirical findings of each publication, thereby enhancing the rigor and credibility of the selection process.

As a result of the eligibility assessment, 197 articles were excluded due to several factors, including being outside the scope of the study, having titles that did not sufficiently reflect the research focus, abstracts that were not aligned with the study objectives, and the unavailability of full-text access. The exclusion of these studies was necessary to maintain the relevance and quality of the evidence base. Consequently, only 28 studies met all eligibility requirements and were included in the qualitative analysis. The substantial reduction from 225 to 28 studies demonstrates the strict application of the eligibility criteria and highlights the importance of quality control in systematic reviews. These 28 studies provide a focused and robust body of evidence, ensuring that the final synthesis accurately reflects current knowledge regarding the relationship between digital addiction and mental health among Generation Z.

Data Abstraction and Analysis

An integrative analysis approach was adopted in this study to systematically examine, compare, and synthesize findings from diverse research designs. This method was selected to facilitate a comprehensive understanding of the existing literature and to identify key themes and subthemes related to digital addiction and mental health among Generation Z. The thematic development process began with data extraction, whereby relevant information was systematically collected from the selected studies. As illustrated in Figure 2, the authors conducted an in-depth review of 28 eligible publications, carefully examining statements, findings, and evidence directly associated with the objectives of the study. Particular attention was given to the research methodologies employed, study contexts, participant characteristics, and major findings reported across the selected literature.

Following data extraction, the studies were systematically analyzed to identify recurring patterns, emerging trends, and significant relationships within the literature. The authors collaboratively reviewed and interpreted

the evidence to develop meaningful themes grounded in the collected data. Throughout the analytical process, a detailed audit trail was maintained to document analytical decisions, reflections, interpretations, and emerging insights, thereby enhancing the transparency and credibility of the review. The preliminary themes were subsequently examined and refined through continuous discussions among the co-authors to ensure conceptual consistency and methodological rigor. Any discrepancies in interpretation or thematic categorization were resolved through consensus-building and critical deliberation. This iterative process strengthened the trustworthiness of the findings and ensured that the final thematic framework accurately represented the current body of knowledge on digital addiction and mental health among Generation Z.

Table 3: Number and details of Primary Studies Database

Authors	Title	Year	Source title	Scopus	WoS
Su M.[33]	The relationship between smartphone addiction, academic procrastination, and anxiety: evidence from a diary-based approach	2025	Acta Psychologica	/	
Fan X.[34]	Mental health and internet addiction: prevalence and risk factors among vocational high school students in Henan, China	2025	Frontiers in Psychology	/	
Al-Khadher M.[35]	Under war: The relationship between smartphone addiction, psychological security, and psychological loneliness among Yemeni university students	2025	Acta Psychologica	/	
Kong L.[36]	The impact of academic anxiety on smartphone addiction among college students: the mediating role of self-regulatory fatigue and the moderating role of mindfulness	2025	BMC Psychology	/	
Piko B.F.[37]	Exploring contributors to FoMO (fear of missing out) among university students: The role of social comparison, social media addiction, loneliness, and perfectionism	2025	Acta Psychologica	/	
Yi Z.; Wang W.; Wang N.; Liu Y.[38]	The Relationship Between Empirical Avoidance, Anxiety, Difficulty Describing Feelings and Internet Addiction Among College Students: A Moderated Mediation Model	2025	Journal of Genetic Psychology	/	/
Lissitsa S.; Kagan M. [39]	Generations X, Y, Z: The Moderating Role of Self-Reliance in Relationships Between Loneliness, Social Media Addiction, and Life Satisfaction in Men	2025	Cyberpsychology, Behavior, and Social Networking	/	
Ergün N.; Özkan Z.; Griffiths M.D.[40]	Social Media Addiction and Poor Mental Health: Examining the Mediating Roles of Internet Addiction and Phubbing	2025	Psychological Reports	/	
Luo Z.; Li H.; Xiong Y.[41]	The double-edged perfectionist parenting: an examination of its impact on adolescent internet gaming addiction (IGA)	2025	BMC Psychology	/	
Zhu L.[42]	Exploring the dual mediators of anxiety and depression: How mobile phone	2025	Acta Psychologica	/	

	addiction shapes aggressive behaviour among Chinese medical students in Anhui				
Peng B.[43]	Stepping away from the scroll: a chain mediation model from physical exercise and adolescent short video addiction	2025	BMC Psychology	/	
Kalinkara Y.; Talan T. [44]	Psychological Balances in the Digital World: Dynamic Relationships Among Social Media Addiction, Depression, Anxiety, Academic Self-Efficacy, General Belongingness, and Life Satisfaction	2025	Journal of Genetic Psychology	/	
Yang Q.; Xu P.; Shi M.; Peng T.[45]	Will academic stress lead to internet addiction among adolescents? The role of self-concealment and academic performance	2025	Current Psychology	/	
Li Q.; Liu Z.[46]	Parental psychological control and adolescent smartphone addiction: roles of reactance and resilience	2025	BMC Psychology	/	
Wang X.; Gong H.; Lin Y.[47]	The role of anxiety factors in predicting smartphone addiction mediated by metacognition among university students: a two-stage SEM-ANN approach	2025	BMC Psychology	/	
Parpoula C.; Yotsidi V.; Adamopoulou F.-E.[48]	Internet addiction and psychological distress: Evidence from path analyses in Greek adolescents at different developmental stages; [Εθισμός στο διαδίκτυο και ψυχολογική δυσφορία: Εμπειρικά στοιχεία από αναλύσεις μονοπατιού σε Έλληνες εφήβους σε διαφορετικά αναπτυξιακά στάδια]	2025	Psychology	/	
Bağatarhan T.[49]	Investigating the mediating effect of resilience in the relationship between self-efficacy, happiness, social support, and Internet addiction in adolescents	2025	Current Psychology	/	
Zhao Y.; Qu D.; Wei X.; Chi X.[50]	How does internet addiction interact with depression at the symptom level? a joint perspective of undirected and directed networks	2025	Current Psychology	/	
Zhong Y.-J.; Wang Y.-S.; Guo W.-H.[51]	The Effect of Physical Exercise on Academic Burnout Among College Students: The Chain Mediating Role of Psychological Distress and Mobile Phone Addiction	2025	Perceptual and Motor Skills	/	
Guo J.[52]	The impact of perceived social support on anxiety and depression: the chain mediating effect of internet addiction and insomnia	2025	BMC Psychology	/	
Jing T.[53]	Smartphone addiction affects life satisfaction among Chinese university students: the serial mediation effects of social anxiety for social media users and mental well-being	2025	BMC Psychology	/	
Li Y.[54]	The role of mind wandering and anxiety in the association between internet	2025	BMC Psychology	/	

	addiction and hyperactivity-impulsivity: a serial mediation model				
Wang J.[55]	Effects of parental psychological control on mobile phone addiction among college students: the mediation of loneliness and the moderation of physical activity	2025	BMC Psychology	/	
Zhou Y.[56]	Predictors of smartphone addiction in adolescents with depression: combining the machine learning and moderated mediation model approach	2025	Behaviour Research and Therapy	/	
Süzen Keşen F.N.; Koçak O.; Keşan M.; Solmaz U.[57]	The Mediating Role of Anxiety Severity in the Relationship Between Family Cohesion and Social Media Addiction	2025	Journal of Evidence-Based Social Work (United States)	/	
Wang J.[58]	The relationship between physical activity and social network site addiction among adolescents: the chain mediating role of anxiety and ego-depletion	2025	BMC Psychology	/	
Liu Y.; Tong Y.; Huang G.[59]	Physical exercise and internet addiction among college students: Chain mediation of social anxiety and loneliness	2025	Social Behavior and Personality	/	
Zhao K.[60]	Mobile phone addiction and interpersonal problems among Chinese young adults: the mediating roles of social anxiety and loneliness	2025	BMC Psychology	/	

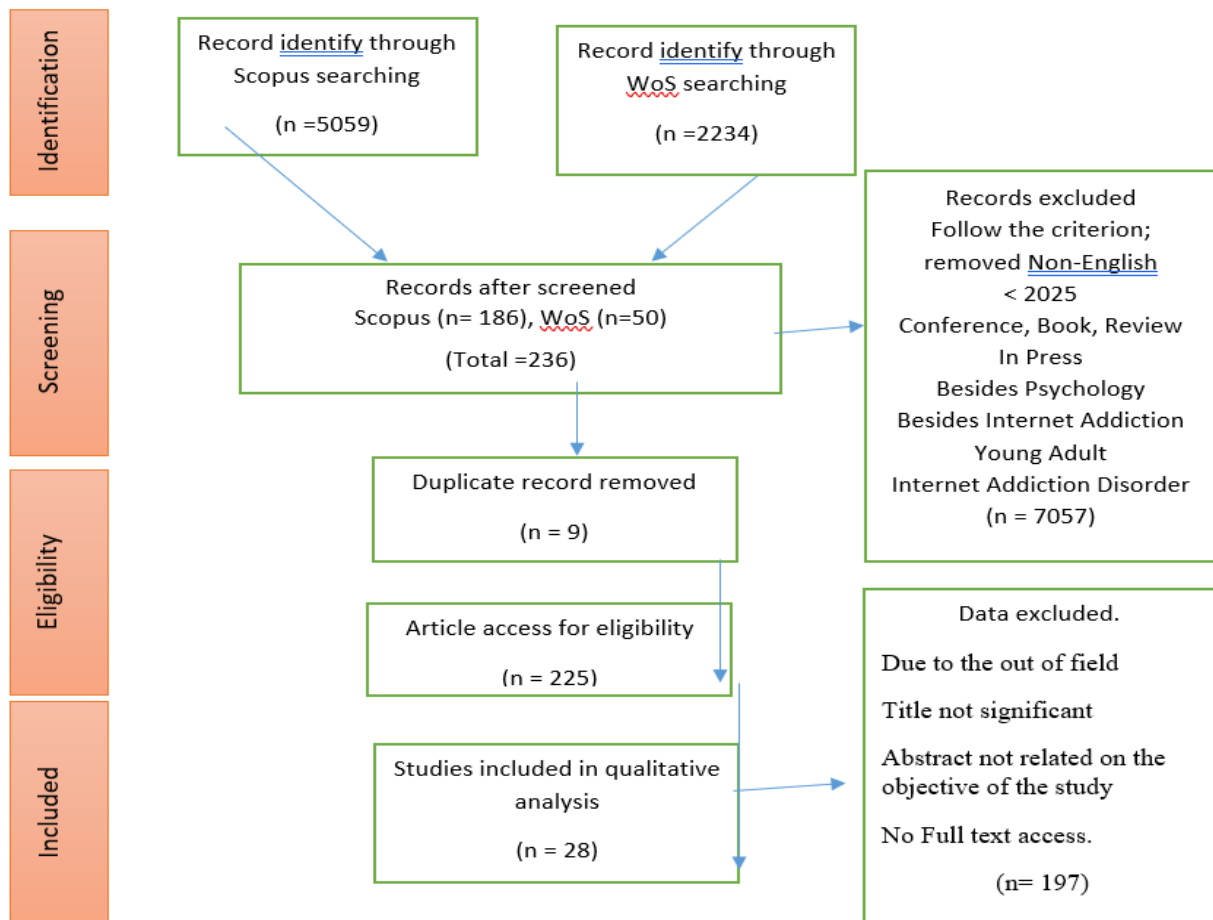


FIGURE 2. Flow diagram of the proposed searching study [1]

RESULT AND FINDING

Quality Assessment Analysis

The quality assessment results indicate that the selected studies were generally of satisfactory methodological quality and met the predefined inclusion threshold for this systematic literature review. All 28 studies achieved scores above the minimum acceptance criterion of 3.0, demonstrating adequate rigor in addressing the research objectives. Most studies clearly articulated their aims, highlighted the significance of the research problem, provided well-defined methodological procedures, and presented the key concepts underpinning their theoretical frameworks. Consequently, all studies received positive evaluations for QA1, QA2, QA3, and QA4. However, lower scores were observed for QA5 and QA6, as many abstracts did not explicitly compare their findings with previous studies or discuss potential limitations of the research. This limitation is common in abstract-based assessments, where space constraints often restrict detailed methodological and critical discussions. Overall, the studies achieved an average quality score of 4.27 out of 6 (71.2%), indicating a moderate to high level of quality. These findings suggest that the selected literature provides a reliable and robust evidence base for synthesizing current knowledge on digital addiction and its associated psychological outcomes.

Table 5: Quality Assessment Scores of the Included Studies (n = 28)

PS	QA1	QA2	QA3	QA4	QA5	QA6	Total Mark	Percentage (%)
PS1	Y	Y	Y	Y	P	N	4.5	75.0
PS2	Y	Y	Y	Y	N	N	4.0	66.7
PS3	Y	Y	Y	Y	P	Y	5.5	91.7
PS4	Y	Y	Y	Y	N	N	4.0	66.7
PS5	Y	Y	Y	Y	P	N	4.5	75.0
PS6	Y	Y	Y	Y	N	N	4.0	66.7
PS7	Y	Y	Y	Y	N	N	4.0	66.7
PS8	Y	Y	Y	Y	P	N	4.5	75.0
PS9	Y	Y	Y	Y	N	N	4.0	66.7
PS10	Y	Y	Y	Y	N	N	4.0	66.7
PS11	Y	Y	Y	Y	N	N	4.0	66.7
PS12	Y	Y	Y	Y	N	N	4.0	66.7
PS13	Y	Y	Y	Y	N	N	4.0	66.7
PS14	Y	Y	Y	Y	N	N	4.0	66.7
PS15	Y	Y	Y	Y	N	N	4.0	66.7
PS16	Y	Y	Y	Y	N	N	4.0	66.7
PS17	Y	Y	Y	Y	N	N	4.0	66.7
PS18	Y	Y	Y	Y	N	N	4.0	66.7
PS19	Y	Y	Y	Y	N	N	4.0	66.7
PS20	Y	Y	Y	Y	N	Y	5.0	83.3
PS21	Y	Y	Y	Y	N	N	4.0	66.7
PS22	Y	Y	Y	Y	N	N	4.0	66.7
PS23	Y	Y	Y	Y	Y	N	5.0	83.3
PS24	Y	Y	Y	Y	N	Y	5.0	83.3
PS25	Y	Y	Y	Y	N	N	4.0	66.7
PS26	Y	Y	Y	Y	N	N	4.0	66.7
PS27	Y	Y	Y	Y	N	N	4.0	66.7
PS28	Y	Y	Y	Y	N	N	4.0	66.7

Thematic Analysis

The thematic analysis of the 28 selected studies revealed three dominant research themes that characterize the current body of knowledge on digital addiction and mental health among adolescents and young adults. These themes emerged through a systematic examination of the studies' objectives, theoretical foundations, methodologies, key findings, and practical implications. The first theme, Digital Addiction and Psychological Distress, focuses on the relationship between various forms of digital addiction and adverse psychological outcomes, including anxiety, depression, loneliness, psychological distress, and reduced well-being. The second theme, Psychosocial, Family, and Interpersonal Determinants, highlights the influence of social environments, family dynamics, interpersonal relationships, and psychosocial factors in shaping digital addiction behaviours. The third theme, Academic, Behavioural, and Protective Mechanisms, examines the role of academic stressors, behavioural patterns, self-regulation processes, and protective factors such as resilience, mindfulness, and physical activity in either exacerbating or mitigating digital addiction. Together, these themes provide a comprehensive understanding of the multifaceted nature of digital addiction, illustrating how individual psychological factors, social contexts, and behavioural mechanisms interact to influence mental health outcomes in contemporary digital environments.

Table 6: Thematic Synthesis of Research on Digital Addiction and Mental Health among Generation Z

Theme	Focus Area	Main Research Direction
Theme 1: Digital Addiction and Psychological Distress	Anxiety, depression, loneliness, psychological distress, life satisfaction, mental well-being	Examines how smartphone, internet, social media, and mobile phone addiction are associated with negative psychological outcomes.
Theme 2: Psychosocial, Family, and Interpersonal Determinants	Family cohesion, parental control, social support, perfectionism, FoMO, interpersonal problems	Explores how social, family, and interpersonal factors shape vulnerability to digital addiction.
Theme 3: Academic, Behavioural, and Protective Mechanisms	Academic anxiety, procrastination, burnout, physical activity, resilience, self-regulation	Focuses on academic functioning and protective behaviours that influence or reduce digital addiction.

Digital Addiction and Psychological Distress

The reviewed abstracts indicate that digital addiction is closely associated with psychological distress among adolescents, university students, and young adults, particularly through symptoms of anxiety, depression, stress, loneliness, and reduced mental well-being. Fan et al. (2025) reported a high prevalence of mental health problems among vocational high school students with different levels of internet addiction, with loneliness, physical illness, and chronic constipation identified as consistent risk factors. Similarly, Parpoula et al. (2025) showed that internet addiction and stress formed a serial pathway between anxiety and depression among Greek adolescents, suggesting that psychological distress may develop through interconnected emotional processes. Ergün et al. (2025) further demonstrated that social media addiction was linked to poorer mental health through internet addiction and phubbing, especially in relation to anxiety, stress, and depression. Together, these findings suggest that digital addiction does not operate as a single behavioural problem but is embedded within broader emotional and psychological difficulties.

A strong pattern across the studies shows that anxiety functions as a major psychological mechanism connecting digital addiction with negative mental health outcomes. Yi et al. (2025) found that experiential avoidance predicted internet addiction among college students, while anxiety mediated this relationship and difficulty describing feelings strengthened the association between experiential avoidance and anxiety. Zhu et al. (2025) similarly found that mobile phone addiction influenced aggressive behaviour among medical students through anxiety, depression, and a sequential anxiety-to-depression pathway. Wang et al. (2025) added that social anxiety and future anxiety were important predictors of smartphone addiction, especially when mediated by negative

metacognition. These studies collectively suggest that anxiety is not merely an outcome of excessive digital engagement but also a key pathway through which emotional vulnerability increases the risk of addictive digital behaviour.

Depression also appeared as a recurring psychological outcome and mediating factor in the relationship between digital addiction and psychological distress. Zhao et al. (2025) found that internet addiction and depression were linked at the symptom level, with withdrawal symptoms, irritability when interrupted, worthlessness, and feelings of failure acting as central symptoms connecting both conditions. Guo et al. (2025) demonstrated that internet addiction and insomnia partially mediated the relationship between perceived social support and negative emotions, indicating that lower social support may increase internet addiction, sleep problems, anxiety, and depression. Kalinkara and Talan (2025) also reported that social media addiction significantly affected depression, stress, anxiety, academic self-efficacy, and general belongingness, although its direct effect on life satisfaction was not significant. These findings indicate that depression-related symptoms are frequently intertwined with problematic digital use, particularly when combined with poor sleep, low belongingness, and weak social support.

The abstracts further highlight loneliness, social anxiety, belongingness, and interpersonal difficulties as important social-emotional dimensions of digital addiction. Al-Khadher et al. (2025) examined Yemeni university students under war conditions and found an unusual pattern in which smartphone addiction was positively related to psychological security and negatively related to loneliness, suggesting that digital engagement may carry different meanings in conflict-affected contexts. Zhao et al. (2025) found that mobile phone addiction was positively associated with interpersonal problems among Chinese young adults, with loneliness and social anxiety serving as independent and sequential mediators. Jing et al. (2025) also showed that smartphone addiction was linked to social anxiety among social media users and lower mental well-being, which indirectly reduced life satisfaction. These findings show that the social consequences of digital addiction are complex, as digital devices may offer connection in some contexts while increasing loneliness, social anxiety, and interpersonal problems in others.

Several studies also identified cognitive and behavioural mechanisms that explain how digital addiction contributes to psychological distress. Li et al. (2025) found that internet addiction was associated with hyperactivity-impulsivity among adolescents through the serial mediating effects of mind wandering and anxiety. Zhou et al. (2025) focused on adolescents with depression and found that emotion-focused coping, rumination, and school bullying were the strongest predictors of smartphone addiction, with rumination mediating the relationship between bullying and smartphone addiction. Wang et al. (2025) further showed that negative metacognition was the strongest predictor of smartphone addiction, followed by future anxiety and social anxiety. These findings suggest that digital addiction is shaped not only by emotional symptoms but also by maladaptive cognitive patterns, including rumination, negative metacognition, mind wandering, and avoidance-based coping.

Overall, the reviewed studies suggest that digital addiction among Generation Z is strongly connected to psychological distress through multiple emotional, cognitive, behavioural, and social pathways. Anxiety, depression, loneliness, insomnia, rumination, social anxiety, and reduced mental well-being repeatedly appeared as important risk factors or outcomes across the selected abstracts. The evidence also indicates that the relationship between digital addiction and mental health is not always direct; instead, it is often explained by mediating mechanisms such as phubbing, insomnia, negative metacognition, mind wandering, social anxiety, and poor emotional regulation. Therefore, intervention strategies should not focus only on reducing screen time or restricting internet use. More comprehensive approaches are needed, including emotional regulation training, mental health counselling, sleep management, social support enhancement, and digital well-being education. Such strategies may help reduce the psychological risks associated with problematic internet, smartphone, and social media use among Generation Z.

Psychosocial, Family, and Interpersonal Determinants

The reviewed abstracts show that psychosocial factors have a strong role in explaining digital addiction among Generation Z, especially through loneliness, social comparison, FoMO, perfectionism, and reduced life satisfaction. Piko et al. (2025) found that social comparison was the strongest predictor of FoMO among university students, while social media addiction, loneliness, and perfectionism also contributed directly to FoMO. Lissitsa and Kagan (2025) showed that loneliness was related to social media addiction and life satisfaction across Generations X, Y, and Z, with Gen Z showing a similar pattern to Gen Y in the relationship between loneliness and social media addiction. Bağatarhan (2025) also found that self-efficacy, happiness, and social support were indirectly related to adolescent internet addiction through resilience. These findings indicate that digital addiction is closely linked with social-emotional vulnerability, where loneliness, low satisfaction, and weak personal resources may increase dependence on digital platforms.

Family-related factors also emerged as important determinants of problematic digital behaviour, particularly through parental psychological control, perfectionist parenting, family cohesion, and parental anxiety. Luo et al. (2025) reported that parental perfectionist expectations and parental perfectionist criticisms were significantly associated with adolescent internet gaming addiction, while psychological resistance became a key pathway linking family pressure to gaming-related problems. Li and Liu (2025) similarly found that parental psychological control was positively associated with adolescent smartphone addiction, with psychological reactance acting as a mediating mechanism. Wang et al. (2025) further showed that parental psychological control predicted mobile phone addiction among college students, while loneliness partially mediated this relationship. Together, these studies suggest that controlling, critical, or emotionally demanding family environments may increase the risk of digital addiction by creating psychological resistance, loneliness, and emotional discomfort.

Interpersonal and social support mechanisms further explain how digital addiction develops or becomes more severe among young people. Bağatarhan (2025) highlighted that social support strengthened resilience, which then reduced internet addiction among adolescents. Wang et al. (2025) found that loneliness mediated the relationship between parental psychological control and mobile phone addiction, while physical activity reduced the harmful effect of loneliness on mobile phone addiction. Süzen Keşen et al. (2025) also reported that family cohesion was negatively associated with anxiety severity, depression, and social media addiction, while life satisfaction showed a negative relationship with social media addiction. These findings indicate that supportive social and family environments may act as protective factors, while loneliness and weak family connectedness may increase vulnerability to excessive digital use.

The findings also point to several psychological protection and risk mechanisms that influence the relationship between psychosocial experiences and digital addiction. Li and Liu (2025) found that psychological resilience weakened the direct association between parental psychological control, psychological reactance, and problematic smartphone use, showing the protective role of resilience. Bağatarhan (2025) similarly demonstrated that resilience fully mediated the relationship between self-efficacy, happiness, social support, and adolescent internet addiction. Süzen Keşen et al. (2025) added that anxiety severity mediated the relationship between family cohesion and social media addiction, suggesting that emotional distress may explain how family relationships influence digital behaviour. Overall, the abstracts suggest that digital addiction among Generation Z is not only related to technology exposure, but also shaped by psychosocial pressure, family interaction patterns, emotional regulation, loneliness, and resilience. Prevention efforts may therefore benefit from strengthening family cohesion, reducing parental psychological control, improving resilience, supporting healthy peer relationships, and promoting balanced digital habits.

Academic, Behavioural, and Protective Mechanisms

The reviewed abstracts show that academic pressure is an important mechanism linked to digital addiction among Generation Z, particularly through anxiety, procrastination, self-concealment, and self-regulatory fatigue. Su et al. (2025) found that anxiety directly predicted academic procrastination and indirectly influenced

procrastination through smartphone addiction, showing that problematic smartphone use may become part of students' daily academic delay behaviour. Kong et al. (2025) reported that academic anxiety significantly predicted smartphone addiction among college students, with self-regulatory fatigue acting as a mediating factor. Yang et al. (2025) also found that academic stress was positively related to internet addiction among adolescents, while self-concealment mediated this association. These findings indicate that academic difficulties may not only produce emotional burden but also increase reliance on digital activities as an avoidance or coping response.

The findings also suggest that behavioural regulation problems play a central role in explaining the relationship between emotional distress and digital addiction. Kong et al. (2025) highlighted that self-regulatory fatigue served as a pathway between academic anxiety and smartphone addiction, suggesting that students with reduced self-control resources may become more vulnerable to excessive smartphone use. Wang et al. (2025) found that anxiety and ego-depletion sequentially mediated the relationship between physical activity and social network site addiction, showing that weakened psychological energy may increase addictive online behaviour. Su et al. (2025) further demonstrated that smartphone addiction was positively associated with academic procrastination at both individual and daily levels. In this sense, digital addiction appears closely connected with reduced behavioural control, emotional exhaustion, and poor academic self-management.

Physical exercise emerged as a consistent protective factor across several studies, especially in reducing digital addiction, psychological distress, depression, and academic burnout. Peng et al. (2025) showed that physical exercise reduced short video addiction directly and indirectly by improving psychological resilience and lowering depression among adolescents. Zhong et al. (2025) found that regular physical exercise reduced academic burnout, with psychological distress and mobile phone addiction acting as important mediating mechanisms. Wang et al. (2025) also reported that physical activity was negatively associated with social network site addiction, anxiety, and ego-depletion. These studies suggest that physical exercise may support better emotional regulation and reduce dependence on digital platforms by strengthening psychological resources.

Several abstracts also emphasized resilience, mindfulness, social anxiety, and loneliness as mechanisms that either protect against or intensify digital addiction. Peng et al. (2025) identified psychological resilience as a mediator linking physical exercise with lower depression and reduced short video addiction. Kong et al. (2025) found that mindfulness played a dual role, strengthening the relationship between academic anxiety and self-regulatory fatigue but weakening the relationship between self-regulatory fatigue and smartphone addiction. Liu et al. (2025) reported that physical exercise influenced internet addiction directly and indirectly through social anxiety, loneliness, and the chain pathway from social anxiety to loneliness. These findings show that protective mechanisms are not limited to reducing screen exposure, but include strengthening resilience, improving mindfulness, reducing loneliness, and supporting healthier social-emotional functioning.

Overall, the abstracts under this theme indicate that digital addiction among Generation Z is closely associated with academic strain, behavioural dysregulation, emotional exhaustion, and protective lifestyle factors. Academic anxiety, academic stress, procrastination, self-concealment, self-regulatory fatigue, and ego-depletion appear as important risk mechanisms, while physical exercise, resilience, mindfulness, and reduced loneliness function as protective elements. Su et al. (2025), Kong et al. (2025), and Yang et al. (2025) collectively show that academic-related stressors may increase problematic digital behaviour through avoidance and reduced self-regulation. Peng et al. (2025), Zhong et al. (2025), Wang et al. (2025), and Liu et al. (2025) further demonstrate that active behavioural strategies, especially physical exercise, may reduce digital addiction through improved emotional stability and stronger psychological resources. Therefore, interventions for Generation Z should combine academic support, self-regulation training, physical activity promotion, resilience development, and emotional well-being strategies.

CONCLUSION

This systematic literature review was conducted to synthesize current evidence concerning the relationship between digital addiction and mental health among Generation Z. Guided by the PRISMA framework, the

review employed a structured search strategy using the Scopus and Web of Science databases. The review focused exclusively on journal articles published in 2025 and addressed three key research questions related to the psychological consequences of digital addiction, the psychosocial and family-related determinants contributing to digital addiction, and the academic, behavioural, and protective mechanisms influencing digital addiction among Generation Z. Following the identification, screening, eligibility, and inclusion stages, a total of 28 primary studies were selected and subjected to thematic analysis.

The findings reveal that digital addiction is a multidimensional phenomenon closely connected to various aspects of mental health and psychological functioning. Three major themes emerged from the synthesis. The first theme, Digital Addiction and Psychological Distress, demonstrated that excessive engagement with smartphones, social media platforms, internet activities, and digital technologies is consistently associated with anxiety, depression, loneliness, psychological distress, reduced life satisfaction, and poorer mental well-being. The second theme, Psychosocial, Family, and Interpersonal Determinants, highlighted the important influence of family cohesion, parental control, social comparison, fear of missing out, social support, perfectionism, and interpersonal relationships in shaping vulnerability to digital addiction. The third theme, Academic, Behavioural, and Protective Mechanisms, emphasized the role of academic anxiety, academic stress, procrastination, self-regulatory difficulties, and behavioural exhaustion as risk factors, while physical activity, mindfulness, resilience, and supportive social environments functioned as protective mechanisms that may reduce problematic digital engagement.

This review contributes to the existing body of knowledge by integrating fragmented findings into a coherent thematic framework that explains digital addiction through psychological, social, familial, academic, and behavioural pathways. The thematic categorization developed in this review provides a clearer understanding of how multiple risk and protective factors interact to influence both digital addiction and mental health outcomes among Generation Z. By consolidating evidence from recent studies, the review extends current understanding beyond simple associations and highlights the complexity of the mechanisms underlying problematic digital behaviour.

The findings also carry important practical implications. Educational institutions may benefit from implementing digital well-being programmes, mental health support services, and self-regulation training to reduce problematic digital use among students. Family-based interventions that strengthen communication, emotional support, and healthy parenting practices may help reduce vulnerability to digital addiction. In addition, policymakers, healthcare professionals, and technology developers may utilise the findings to design evidence-based strategies that promote healthier digital environments and support psychological well-being among young people. The identification of resilience, mindfulness, social support, and physical activity as protective factors further suggests that prevention programmes should adopt a holistic and multidimensional approach rather than focusing solely on reducing screen time.

Several limitations should be acknowledged. The review was restricted to articles indexed in Scopus and Web of Science, which may have excluded relevant studies published in other databases. Only English-language journal articles published in 2025 were included, potentially limiting the breadth of evidence considered. Furthermore, the review focused on psychological-related literature and therefore may not fully capture perspectives from other disciplines. Future research should consider broader database coverage, multiple publication years, and interdisciplinary approaches. Longitudinal studies, cross-cultural investigations, and intervention-based research are also needed to establish causal relationships and evaluate the effectiveness of prevention and treatment strategies targeting digital addiction among Generation Z.

In conclusion, the evidence synthesized in this review demonstrates that digital addiction and mental health are interconnected through complex psychological, social, familial, academic, and behavioural processes. Understanding these relationships is essential for developing effective interventions and promoting digital well-being among Generation Z. Systematic literature reviews play a vital role in consolidating emerging evidence, identifying research gaps, and providing a comprehensive foundation for future theoretical and

empirical developments. As digital technologies continue to evolve and become increasingly embedded in everyday life, evidence-based synthesis remains crucial for informing research, policy, and practice aimed at supporting the mental health and well-being of future generations.

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