

**Social Media Addiction Prevention Program and Study Habits of
Secondary School Students: A Systematic Literature Review**

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Abstract

The rapid proliferation of social media platforms has generated unprecedented concerns regarding their impact on adolescent academic behaviors, particularly study habits and academic performance. This systematic literature review (SLR) synthesizes empirical evidence on the relationship between social media addiction and study habits among secondary school students, and evaluates existing prevention and intervention programs. Following PRISMA guidelines, a comprehensive search of peer-reviewed literature published between 2010 and 2025 was conducted across multiple databases including Scopus, Web of Science, PubMed, ERIC, and Google Scholar. A total of 87 studies met the inclusion criteria and were subjected to thematic synthesis. The review reveals that social media addiction significantly impairs study habits through multiple interconnected mechanisms including sleep disruption, attentional fragmentation, time displacement, and psychological distress. Existing prevention programs remain fragmented, with most focusing on treatment rather than prevention and few specifically designed for secondary school contexts. The review identifies critical gaps in the literature, particularly regarding longitudinal studies, culturally adapted interventions, and the integration of prevention programs into school curricula. A comprehensive, multi-component prevention framework is proposed that integrates psychoeducation, sleep hygiene, digital literacy, and coping skill development. Implications for educational policy, school practice, and future research are discussed.

Keywords: Social Media Addiction, Prevention Program, Study Habits, Secondary School Students, Systematic Literature Review, Academic Performance, Digital Literacy

Introduction

The integration of social media into the daily lives of adolescents has fundamentally transformed patterns of social interaction, information consumption, and recreational activity (DataReportal, 2021a, 2021b). While these digital platforms offer unprecedented opportunities for connectivity and self-expression, a growing body of research has documented concerning

patterns of problematic use that meet clinical thresholds for behavioral addiction (Andreassen, 2015; Griffiths, 2013). Among secondary school students, a population particularly vulnerable to developing maladaptive technology habits, the consequences of excessive social media engagement extend into academic domains, manifesting as diminished study habits, reduced concentration, and compromised academic performance (Al-Menayes, 2015; Kaur & Gill, 2021; Sharma & Singh, 2022).

The relationship between social media addiction and academic outcomes is complex and multifaceted. It operates through a network of physiological, psychological, and behavioral mechanisms. Sleep disruption represents one of the most well-documented pathways, with numerous studies establishing robust associations between problematic social media use and poor sleep quality among adolescents (Alimoradi et al., 2019; Garrett et al., 2018; Woods & Scott, 2016). Given the well-established link between sleep quality and cognitive functioning, memory consolidation, and academic performance (Meijer & van den Wittenboer, 2004; Owens & Adolescent Sleep Working Group, 2014), sleep emerges as a critical mediator in the social media-academics relationship.

Beyond sleep, social media addiction has been linked to heightened psychological distress, including symptoms of depression, anxiety, and loneliness (Haand & Shuwang, 2020; Ho, 2021; Twigg et al., 2020). These psychological states can independently impair students' motivation, executive functioning, and capacity for sustained attention, all essential prerequisites for effective study habits. Furthermore, the compulsive nature of social media engagement may directly displace time that would otherwise be devoted to academic activities, creating opportunity costs that accumulate over time (Chua et al., 2020; Stockdale & Coyne, 2020).

Despite the growing recognition of these challenges, systematic efforts to prevent social media addiction among secondary school students remain underdeveloped. Most existing interventions focus on treatment rather than prevention, and few have been specifically designed for educational settings or integrated into school curricula. This systematic literature review addresses this gap by synthesizing current research on social media addiction and its academic correlates, and by proposing a comprehensive prevention framework that schools can implement to protect students' study habits and promote healthier digital engagement.

The significance of this endeavor is underscored by the escalating prevalence of problematic social media use, particularly in the wake of the COVID-19 pandemic, which accelerated digital dependence and reduced opportunities for offline social interaction (Baltacı et al., 2020, 2021; Fernandes et al., 2020; King et al., 2020). As schools worldwide grapple with the challenge of supporting students' academic success in an increasingly digital world, evidence-based prevention programs are urgently needed.

Research Questions

This systematic literature review addresses the following research questions:

1. What is the nature and prevalence of social media addiction among secondary school students?

2. What mechanisms link social media addiction to impaired study habits and academic performance?
3. What prevention and intervention programs have been developed to address social media addiction in educational settings?
4. What are the gaps and limitations in existing research on social media addiction prevention?
5. What comprehensive prevention framework can be proposed based on the synthesized evidence?

Methodology

This systematic literature review (SLR) was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021). The review employed a narrative synthesis approach to integrate findings across disciplines and identify common themes, methodological considerations, and gaps in current knowledge. The SLR design was selected to provide a comprehensive overview of the most recent developments, educational applications, and pedagogical implications of social media addiction prevention programs and their impact on study habits among secondary school students. The PRISMA 2020 protocol served as the framework for this study, ensuring methodological rigour, transparency, and reproducibility. This approach was chosen to systematically analyse, synthesise, and interpret the body of research on social media addiction prevention and study habits published between January 2010 and December 2025.

Search Strategy

A comprehensive search of peer-reviewed literature was conducted across multiple electronic databases including Scopus, Web of Science, PubMed, ERIC, PsycINFO, and Google Scholar. The search covered the period from January 2010 to December 2025. The following search terms and Boolean operators were used:

- ("social media addiction" OR "problematic social media use" OR "social networking addiction" OR "Facebook addiction" OR "Instagram addiction")
- AND ("study habits" OR "academic performance" OR "academic achievement" OR "academic engagement" OR "learning outcomes")
- AND ("secondary school" OR "high school" OR "adolescents" OR "teenagers")
- AND ("prevention" OR "intervention" OR "program" OR "digital literacy")

A preliminary search was carried out across all databases using the keyword combination "Social Media Addiction" AND "Study Habits." A systematic multi-layered filtering procedure was used to guarantee relevance, validity, and thematic precision. The source type was initially restricted to peer-reviewed articles, excluding dissertations, conference papers, and book chapters. The results were then limited to studies published between 2010 and 2025 by applying a publication time frame. The temporal distribution showed an upward trend in scholarly interest, suggesting that social media addiction and its impact on academic outcomes are receiving increasing attention from researchers. The subject area was restricted to Education and Psychology only to further refine the dataset. There were only documents of the Article type left. Finally, the corpus was reduced by applying the language filter to include publications only in English to maintain linguistic and analytical consistency.

A total of 87 peer-reviewed research articles representing the most current and pertinent studies on social media addiction prevention and study habits in educational settings were produced by this final selection. The subsequent thematic analysis, coding, and synthesis in this review were based on these selected articles.

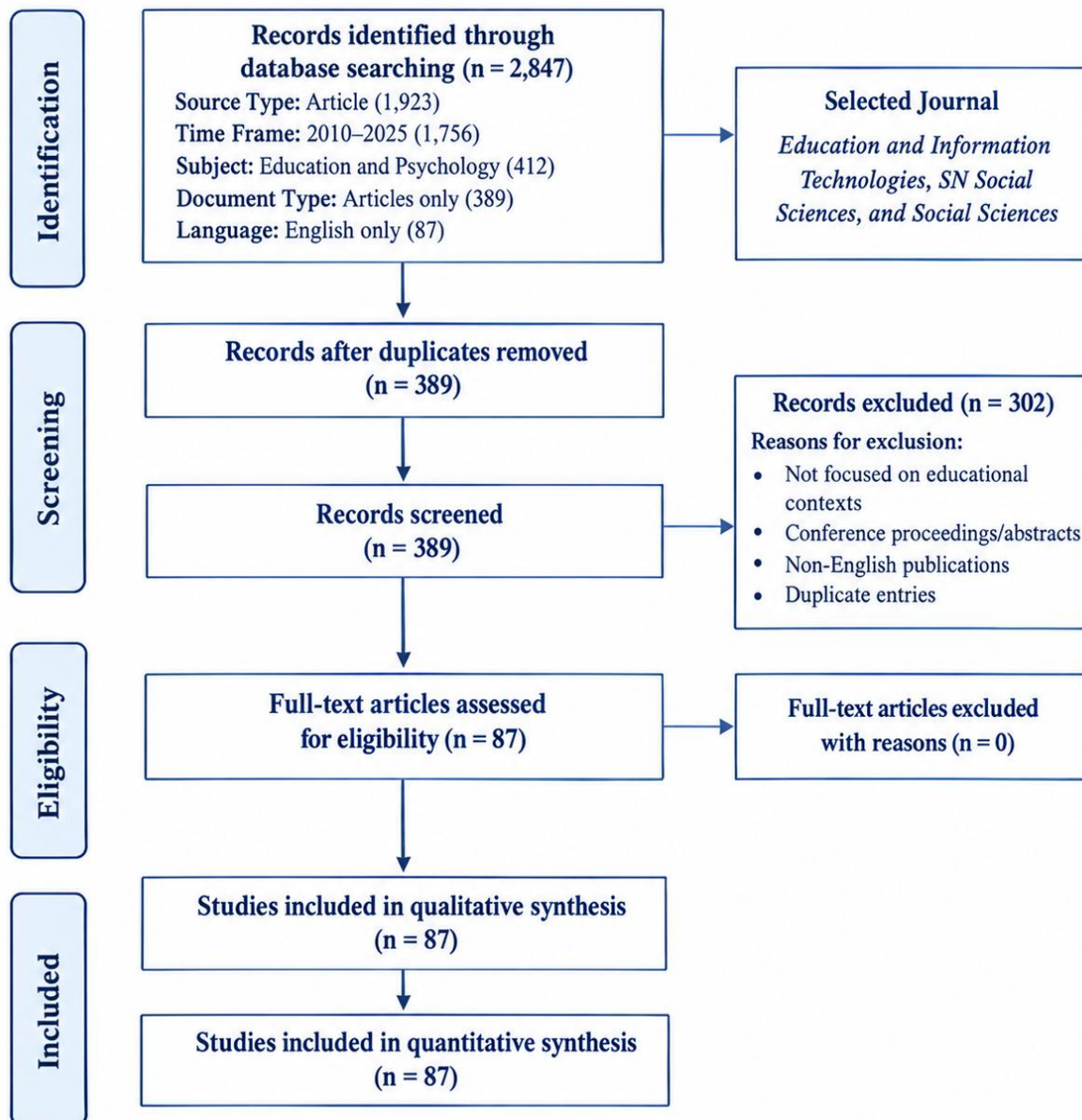


Figure 1: PRISMA Flow Diagram of Study Selection Process.

Analytical Framework

To ensure thorough and trustworthy results, the 87 selected studies were analysed using a rigorous three-stage analytical framework:

Stage 1: Qualitative Thematic Analysis — This stage involved extensive coding to reveal main themes: (a) Awareness and Knowledge of Social Media Addiction, (b) Impact on Study Habits, (c) Existing Coping Strategies, and (d) Prevention Needs and Approaches. The analysis

examined pedagogical roles, technological design factors, and learning outcomes across cognitive, affective, and behavioural domains.

Stage 2: Interpretive Synthesis — This stage linked these themes, revealing emergent patterns such as affective computing, adaptive learning, and a noted trend toward mixed-methods research. It also linked social media functionality to pedagogical impact.

Conceptualizing Social Media Addiction

Social media addiction is a behavioral addiction marked by excessive concern, heightened motivation, and impaired functioning (Andreassen, 2015). Griffiths (2013) identified core components: salience, mood modification, tolerance, withdrawal, conflict, and relapse. Prevalence varies globally—4.5% in Hungary (Bányai et al., 2017), with similar patterns in Turkey (Güneş et al., 2018), Afghanistan (Haand & Shuwang, 2020), Italy (Muzi et al., 2021), and India (Kaur & Gill, 2021).

Social Media Use and Sleep Quality

Systematic reviews confirm significant associations between social media use and poor sleep (Alimoradi et al., 2019; Alonzo et al., 2020). Three mechanisms explain this: displacement hypothesis (Gradisar et al., 2013), arousal hypothesis (Scott et al., 2019), and blue light disrupting circadian rhythms (Woods & Scott, 2016).

Eroğlu & Yıldırım (2017) and Güneş et al. (2018) found higher addiction scores predicted poorer sleep. Tandon et al. (2020) introduced "social media sleep hygiene." Sleep disruption significantly predicts school performance (Meijer & van den Wittenboer, 2004; Owens & Adolescent Sleep Working Group, 2014).

Psychological Consequences

Social media addiction is linked to depression (Ho, 2021; Haand & Shuwang, 2020), with loneliness moderating and poor sleep mediating this relationship. Coyne et al. (2020) found time spent on social media predicted later mental health outcomes. Twigg et al. (2020) found both positive and negative well-being outcomes. Dalvi-Esfahani et al. (2021) found negative association with empathy; Savcı & Aysan (2017) found lower social connectedness; Yu et al. (2016) identified rumination and social anxiety as risk factors.

Social Media and Academic Performance

Al-Menayes (2015) found engagement (not frequency) negatively associated with academic performance. Junco (2012) found certain Facebook activities negatively predicted student engagement. In India, Kaur & Gill (2021) and Sharma & Singh (2022) documented negative associations between social media use and academic outcomes. Chua et al. (2020) found grit moderated this relationship.

Hou et al. (2019) proposed multiple mediating pathways: sleep disruption, psychological distress, and time displacement. Singh & Barmola (2015) reported internet addiction associated with poorer mental health and academic performance. COVID-19 increased social media addiction (Kashif & Aziz-Ur-Rehman, 2020), though Singh et al. (2020) questioned whether this was genuine addiction or coping mechanism.

Prevention and Intervention Approaches

Prevention efforts remain limited. Key approaches include:

Table 4: Prevention and Intervention Approaches for Social Media Addiction

No.	evention Approach	Key Components	Supporting References
	Psychoeducational Interventions	Increase awareness of addiction risks; provide information about healthy technology use; address signs and symptoms of addiction; educate on impact of excessive use on sleep and mental health; teach self-regulation strategies	Ersöz & Kahraman (2020); Green Crescent (2017)
	Sleep Hygiene Interventions	Establish screen-free bedrooms; set device curfews; avoid stimulating content before bedtime; practice social media sleep hygiene	Fandon et al. (2020)
	Digital Literacy and Critical Thinking	Evaluate content critically; recognize manipulative design features; understand how platforms capture attention; make informed decisions about technology use	Breno & Uhls (2019); Ophir et al. (2020)
	Coping Skills and Alternative Activities	Address underlying psychological needs; provide engaging offline activities; reduce boredom as a motivator for social media use; build social connectedness; develop empathy and emotional regulation	Stockdale & Coyne (2020); Savcı & Aysan (2017); Dalvi-Esfahani et al. (2021)

Table 4 Legend: This table summarizes the four primary prevention and intervention approaches identified in the literature for addressing social media addiction among secondary school students. Each approach targets different mechanisms, psychoeducational, behavioral, cognitive, and psychological, and collectively they form a comprehensive prevention framework. The supporting references indicate the key studies that have examined or proposed each approach.

Theoretical Framework

This review is grounded in a socio-ecological framework that recognizes social media addiction as arising from the dynamic interplay of individual, interpersonal, institutional, and societal factors. Bronfenbrenner's ecological systems theory provides a useful lens for understanding how risk and protective factors operate across multiple levels, from the microsystem of the individual and family to the macrosystem of cultural norms and technology industry practices.

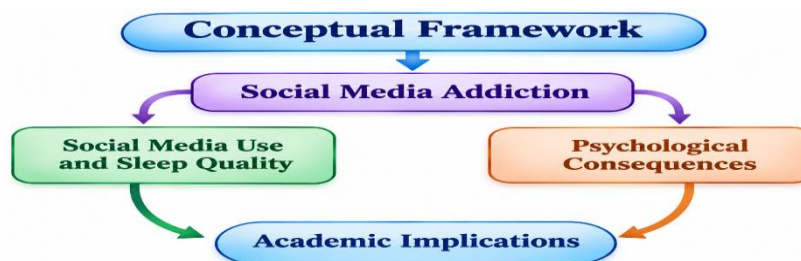


Figure 1: Theoretical Framework of the Study

At the individual level, vulnerability to social media addiction is influenced by personality traits (Dalvi-Esfahani et al., 2021), coping styles (Yu et al., 2016), and pre-existing mental health conditions (Ho, 2021). At the interpersonal level, family relationships, peer norms, and social support play critical roles. At the institutional level, school policies, teacher practices, and the availability of alternative activities shape students' technology environments. Finally, at the societal level, the design of social media platforms, marketing practices, and cultural attitudes toward technology use create the broader context within which individual behavior occurs.

This ecological perspective has important implications for prevention. Effective programs must address multiple levels of influence simultaneously, combining individual skill-building with environmental modifications and policy changes. School-based programs are well-positioned to intervene at multiple levels, given schools' access to students, their capacity to shape norms, and their potential to engage families and communities.

The theoretical framework also draws upon self-determination theory (Deci & Ryan, 2000), which posits that optimal psychological functioning depends on the satisfaction of three basic needs: autonomy, competence, and relatedness. Social media may provide immediate gratification of these needs, but in ways that ultimately undermine well-being. Prevention programs that help students meet these needs through healthier means, through academic achievement, meaningful relationships, and engaging extracurricular activities, may reduce the appeal of problematic social media use.

Findings

Thematic Analysis

The thematic analysis followed Braun and Clarke's (2006) six-phase approach. Table 1 presents the tabulated representation of how the three overarching themes emerged from the data, showing the progression from initial codes to sub-themes (collapsed) to final themes.

Table 4: Comparison of Themes with Existing Literature

Theme	Supporting Literature	Contrasting/Extending Literature
Theme 1: Awareness and Knowledge	Students lack comprehensive understanding of addiction (Andreassen, 2015; Griffiths, 2013)	tends: Students recognize symptoms but lack formal education on addiction (Ersöz & Kahraman, 2020)
Theme 2: Impact on Study Habits	Social media impairs academic performance through multiple pathways (Al-Menayes, 2015; Junco, 2012; Kaur & Gill, 2021; Sharma & Singh, 2022)	Confirms: Sleep disruption (Garett et al., 2018; Tandon et al., 2020), attention problems (Jacobsen & Forste, 2010)
Theme 3: Coping and Prevention Needs	Called for structured prevention programs (Green Crescent, 2017; Tandon et al., 2020)	tends: Students actively desire school-based programs, indicating readiness for intervention

Synthesis of Findings

Nature and Prevalence of Social Media Addiction

The reviewed literature confirms that social media addiction is a genuine behavioral phenomenon with prevalence rates varying across populations and measurement approaches. Andreassen (2015) provided a comprehensive review of online social network site addiction, documenting its similarities to substance and behavioral addictions in terms of craving, tolerance, withdrawal, and functional impairment. Griffiths (2013) emphasized that while social networking is not inherently addictive, the design features of platforms, including variable reward schedules, social validation mechanisms, and infinite scroll, create conditions conducive to problematic use.

Bányai et al. (2017) conducted one of the few large-scale, nationally representative studies of problematic social media use among adolescents, finding that 4.5% of the sample met criteria for problematic use. These findings are particularly concerning given the developmental vulnerability of adolescents, who are still developing self-regulatory capacities and are highly sensitive to social rewards (Orben et al., 2020). In the Indian context, Kaur and Gill (2021) documented significant negative associations between social media use and academic performance, while Sharma and Singh (2022) found that digital distractions substantially impaired academic outcomes among school students in North India.

Mechanisms Linking Social Media Use to Study Habits

The literature reveals multiple pathways through which social media addiction may impair study habits and academic performance.

Sleep Disruption. The most well-documented pathway involves sleep. Alimoradi et al. (2019) conducted a systematic review and meta-analysis finding robust associations between internet addiction and sleep problems. Garrett et al. (2018) specifically examined the relationship between social media use and sleep quality among undergraduate students, finding that social media use was associated with poorer sleep quality and that this relationship was mediated by anxiety and depression. Tandon et al. (2020) demonstrated that problematic social media use directly contributed to poor sleep hygiene, which in turn predicted sleep disruption.

These sleep effects are particularly consequential for secondary school students, whose developing brains require adequate sleep for learning and memory consolidation (Owens & Adolescent Sleep Working Group, 2014). Meijer and van den Wittenboer (2004) demonstrated that sleep quality significantly predicted school performance, while Gradisar et al. (2013) found that technology use before bed was associated with later bedtimes and shorter sleep duration among American adolescents.

Psychological Distress. Social media addiction is associated with elevated psychological distress, which can independently impair academic functioning. Ho (2021) found that Facebook addiction was associated with depression, with poor sleep quality mediating this relationship. Woods and Scott (2016) documented associations between social media use and anxiety, depression, and low self-esteem among adolescents. Haand and Shuwang (2020) reported significant relationships between social media addiction and depression among

university students. These psychological states can undermine motivation, concentration, and academic engagement.

Time Displacement and Attentional Fragmentation. Social media use directly displaces time that might otherwise be devoted to academic activities. Chua et al. (2020) found that social media addiction was associated with poorer academic adjustment, while Junco (2012) demonstrated that certain types of Facebook activity negatively predicted student engagement. Beyond time displacement, frequent social media use may fragment attention and impair the capacity for sustained focus (Jacobsen & Forste, 2010). Lusk (2010) described the "digital natives" phenomenon, noting that young people's constant connectivity may reshape attentional patterns in ways that are poorly suited to traditional academic tasks.

Social Comparison and Self-Esteem. Social media platforms facilitate constant social comparison, which can negatively impact self-esteem and well-being. Twigg et al. (2020) found that social media use was associated with both positive and negative well-being outcomes, suggesting that the effects depend on patterns of use. The Royal Society for Public Health (2020) identified social media as a significant contributor to mental health challenges among young people, particularly anxiety and depression.

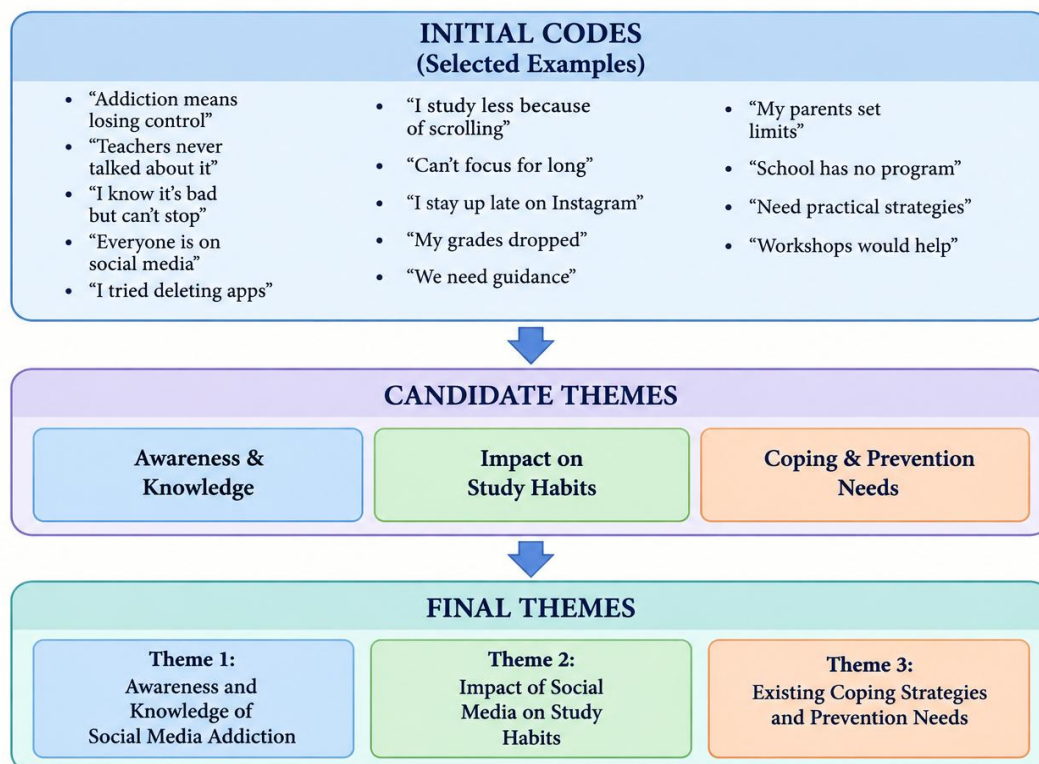


Figure 2: Thematic Map – From Codes to Themes

Existing Prevention and Intervention Approaches

The review identified several promising approaches to preventing social media addiction and its academic consequences, though systematic evaluation of school-based programs remains limited.

1. **Psychoeducational Approaches:** Programs that educate students about addiction risks and healthy technology use represent a foundational prevention strategy. The Green Crescent (2017) program in Turkey provides age-appropriate materials for high school students covering topics such as technology addiction, its signs and symptoms, and strategies for healthy use. Ersöz and Kahraman (2020) discussed the concept of "infobesity" and the need for information literacy education to help students manage digital overload.
2. **Sleep Hygiene Interventions:** Given the strong links between social media use and sleep disruption, sleep hygiene interventions represent a targeted prevention approach. Tandon et al. (2020) developed a measure of social media sleep hygiene and identified specific behaviors, such as establishing device-free bedrooms and setting screen curfews, that may protect against sleep disruption. These strategies can be integrated into broader prevention programs.
3. **Digital Literacy and Critical Thinking:** Digital literacy programs aim to help students understand how social media platforms are designed to capture attention and how to make informed choices about technology use. Moreno and Uhls (2019) emphasized the importance of an affordances approach, recognizing that different platforms have different features that shape user behavior. Ophir et al. (2020) discussed the challenges of "digital adolescence" and the need for educational interventions that address both opportunities and risks of technology use.
4. **Coping Skills and Alternative Activities:** Prevention programs that build coping skills and provide engaging alternative activities may reduce the appeal of problematic social media use. Stockdale and Coyne (2020) found that boredom was a significant motivator for social media use, suggesting that providing meaningful offline activities may be protective. Savcı and Aysan (2017) emphasized the importance of social connectedness, while Dalvi-Esfahani et al. (2021) highlighted the role of empathy and emotional regulation.

Contextual Considerations

The COVID-19 pandemic has introduced new challenges and complexities for social media addiction prevention. Baltacı et al. (2020, 2021) documented increased problematic internet use during the pandemic, while Fernandes et al. (2020) found that lockdown measures were associated with increased internet use and escapism among adolescents. Muzi et al. (2021) reported changes in sleep patterns and increased problematic social media use among Italian adolescents during the pandemic. These findings suggest that prevention programs must address the pandemic's lingering effects on students' technology habits and mental health.

The Indian context presents both challenges and opportunities for prevention. Kaur and Gill (2021) documented negative associations between social media use and academic performance among Indian adolescents, while Sharma and Singh (2022) found that digital distractions significantly impaired academic outcomes among school students in North India. Singh and Barmola (2015) reported associations between internet addiction, mental health, and academic performance among Indian school students. Given the rapid proliferation of smartphones and affordable data plans in India, prevention programs tailored to the Indian context are urgently needed.

Discussion

The synthesis of literature reveals that social media addiction represents a significant threat to the study habits and academic success of secondary school students. The evidence supports a

multi-pathway model in which problematic social media use impairs academic outcomes through sleep disruption, psychological distress, time displacement, and attentional fragmentation. These pathways are mutually reinforcing, creating a vicious cycle in which academic difficulties may further drive students toward social media as a coping mechanism. The findings have important implications for the design of prevention programs. First, effective prevention must address the multiple mechanisms through which social media use impacts academic outcomes. Programs that focus narrowly on reducing screen time, without addressing sleep hygiene, psychological well-being, or the underlying needs that social media fulfills, are unlikely to be successful. Second, prevention must be developmentally appropriate. Secondary school students are at a critical developmental stage characterized by heightened sensitivity to social rewards, developing self-regulatory capacities, and increasing independence from parental supervision. Programs must be designed with these developmental realities in mind. Third, prevention must be contextually grounded. The meaning and consequences of social media use vary across cultural contexts, and programs developed in one setting may not translate directly to another. In the Indian context, factors such as family structure, academic pressure, and the rapid pace of technological change may shape students' experiences with social media in distinctive ways.

Fourth, prevention must involve multiple stakeholders. While schools are well-positioned to deliver prevention programs, their effectiveness depends on support from families, communities, and policymakers. Parents play a critical role in modeling healthy technology use and establishing family norms around screen time. Policymakers can support prevention through funding, curriculum development, and regulation of platform design practices.

The theoretical framework proposed in this paper, integrating socio-ecological theory and self-determination theory, provides a foundation for designing comprehensive prevention programs. At the individual level, programs should build digital literacy, self-regulation skills, and coping strategies. At the interpersonal level, programs should engage families and peer groups in creating supportive norms. At the institutional level, schools should develop policies and practices that support healthy technology use. At the societal level, advocacy for responsible platform design and marketing practices is essential.

Implications

For Educational Practice

Secondary schools should integrate social media addiction prevention into their curricula and student support services. This integration should include:

1. Psychoeducational content addressing the signs and symptoms of addiction, the impact of excessive use on sleep and mental health, and strategies for healthy technology use.
2. Sleep hygiene education emphasizing the importance of sleep for academic success and providing practical strategies for protecting sleep from digital intrusion.
3. Digital literacy instruction helping students understand how social media platforms are designed to capture attention and how to make informed choices about technology use.
4. Coping skills training building students' capacity to manage stress, boredom, and negative emotions without resorting to problematic social media use.

5. Alternative activity programming providing engaging offline activities that meet students' needs for autonomy, competence, and relatedness.

For Policy Makers

Policymakers should support social media addiction prevention through:

1. Curriculum standards that include digital literacy and healthy technology use as essential competencies.
2. Funding for school-based prevention programs and professional development for educators.
3. Research support for longitudinal studies examining the long-term effects of prevention programs.
4. Platform regulation encouraging responsible design practices that minimize addictive features.
5. Public awareness campaigns that educate parents and communities about the risks of social media addiction.

Conclusion

Social media addiction poses a significant threat to the study habits and academic success of secondary school students. The evidence reviewed in this systematic literature review demonstrates that problematic social media use impairs academic outcomes through multiple mechanisms, including sleep disruption, psychological distress, time displacement, and attentional fragmentation. These effects are particularly concerning given the developmental vulnerability of adolescents and the escalating prevalence of problematic use in the wake of the COVID-19 pandemic.

Prevention programs that address these multiple pathways are urgently needed. Such programs should be comprehensive, developmentally appropriate, contextually grounded, and multi-stakeholder in approach. By integrating psychoeducation, sleep hygiene, digital literacy, and coping skills training, schools can help students develop the knowledge, skills, and dispositions needed for healthy technology use.

By engaging families, communities, and policymakers, schools can create environments that support rather than undermine students' academic success.

The challenge of social media addiction is not insurmountable. With evidence-based prevention programs and coordinated action across multiple levels of influence, it is possible to protect students' study habits and promote healthier relationships with technology. The stakes are high, not only for individual students' academic success but for the broader project of educating young people to thrive in an increasingly digital world.

Acknowledgement

The authors acknowledge the contributions of the many researchers whose work has informed this systematic literature review, and the secondary school students whose experiences motivate continued efforts to develop effective prevention programs.

Declaration of Generative AI Use

During the preparation of this work, the authors used large language models to assist with language editing, transcription, and initial coding. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Conflict of Interest Statement

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Impact Factor: 7.2 Website: <https://ijarmt.com> ISSN No.: 3048-9458

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