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DIGITAL MINDFULNESS AND BEHAVIORAL REGULATION: A SYSTEMATIC REVIEW ON SOCIAL MEDIA ADDICTION AND SLEEP QUALITY

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ABSTRACT

Digital Mindfulness is the conscious and intentional control of attention, emotions and digital activities in digital environments and platforms. The topic of compulsive screen use, emotional dysregulation, sleep problems and compromised psychological functioning has been of increasing concern, particularly given the increased social media exposure of adolescents and young adults. The aim of the systematic review is to assess the effectiveness of digital mindfulness and behavioral regulation strategies in alleviating Addicted to online networks and enhancing quality of sleeping that modern digital landscape. The relevant scholarly articles published between 2022 and 2025 were identified through secondary data collection via electronic databases such as Scopus, ScienceDirect, Google Scholar, PubMed, and Web of Science. That review process included systematic screening using pre-established inclusion and exclusion criteria for the publication quality, relevance, language, intervention focus, and outcome measures related to digital behavior and sleep health. After screening, 28 peer-reviewed articles were retained for thematic synthesis and comparative evaluation. Results showed that mindfulness-related behavioral techniques consistently led to significant decreases in compulsive social media use in the literature, namely, attention monitoring, emotional self-regulation, breathing awareness, and digital usage management. Mindfulness-based behavioral interventions moderately improve sleep quality, including sleep duration, sleep latency, and reduced night-time disturbances. They also enhance emotional regulation, reduce anxiety symptoms, and support cognitive balance among frequent social media users. Overall, digital mindfulness frameworks serve as effective non-pharmacological approaches for promoting healthier online behaviors, psychological well-being, and improved sleep patterns in digitally connected populations worldwide.

KEYWORDS: Digital Mindfulness, Behavioral Regulation, Social Media Addiction, Sleep Quality, Screen Addiction, Mindfulness-Based Interventions.

1. INTRODUCTION

Rapid technological advances have revolutionized the way people communicate, learn, entertain, and interact socially because the digital world has been introduced with smartphones and internet-based platforms changing the way people behave [1]. Nonetheless, social media such as Instagram, Facebook, X (Twitter), and TikTok had also contributed to the increasing screen dependency and overuse among their users [2]. Social media use is part of teenagers' and youth's lives and driven by social validation, entertainment, peer influence, and information, which makes them more prone to developing compulsive use [3]. In this context, digital mindfulness is a psychological attitude based on unconscious and conscious management of attention and emotional balance with digital environments, which are understood as tools for the self-regulation of online behavior [4]. Behaviours of regulation in digital environments encompass strategies for self-control, such as time management, social media controls, and emotional regulation, which support a healthy balance of activities in the online and offline world [5]. Due to ongoing exposure to idealistic content and peer pressure, the psychological effects include anxiety, depressive indicators of depressive diminished self-worth, and less fulfilled life [6]. Emotional dysregulation is also common, that is, the inability to control their emotions, which may lead to impulsivity, mood instability and sensitivity to feedback from online interactions [7]. Apart from psychological effects, exposure to digital media, particularly at night, has been identified to have a negative effect on sleep quality, including slower sleep onset, shorter sleep duration, and higher sleep fragmentation, which has a negative effect on well-being [8-9]. There are four mechanisms to help understand that association among social media use, sleeping deprivation, how they could interfere in sleep regulation and melatonin levels; these mechanisms are psychological stimulation, cognitive stimulation, emotional arousal, and exposure to blue light [10]. Therefore, attention control is essential in digital environments, enabling users to avoid distractions, reduce excessive scrolling patterns, and boost their cognitive functions during their tasks. Mindfulness-Based Interventions (MBIs) encourage reflection on thoughts when using digital technologies, deliberate breaks from digital content and an increased awareness of one's use, leading to a reduction of reactive and addictive aspects of digital use [11]. Digital overuse influences cognition

by reducing the ability to sustain attention, remember information, and make decisions due to constant multitasking and information overload. Additionally, anxiety and stress in the use of social media can also be identified and reported after experiencing the Fear of Missing Out (FoMO), social comparison, cyber pressure and constant exposure to notifications that result in emotional exhaustion [12].

Research Gap: While some studies have examined the impact of sleep quality, mindfulness-based therapies and social media addiction separately, no studies have systematically combined these three domains into a single digital health model. In particular, there is a lack of evidence on the effect of behavioural regulation techniques and digital mindfulness on compulsive social media use and sleep outcomes simultaneously. The need for a new systematic review to establish the effectiveness of interventions, mechanisms and future research directions is emphasized by the absence of adequate synthesis of recent data (2022-2026).

The materials and methods used in the research are discussion in Part 2, the results are conferred in Part 3, and the results and future study directions are concluded in Part 4.

2. MATERIALS AND METHODS

The purpose of this systematic review was to analyze the latest research related to digital mindfulness, behavioral regulation, social media addiction, and sleep quality. A systematic screening of articles published in the 4 years (2022-2025) was conducted and articles from the main scientific databases were extracted. Selected studies were compared to see if mindfulness-based behavioral interventions were effective at enhancing digital behavior, emotional regulation, and sleep-related outcomes. Figure 1 shows the systematic review flow, key elements of interventions, behavioral outcomes, sleep outcomes and overall effect of digital mindfulness interventions.

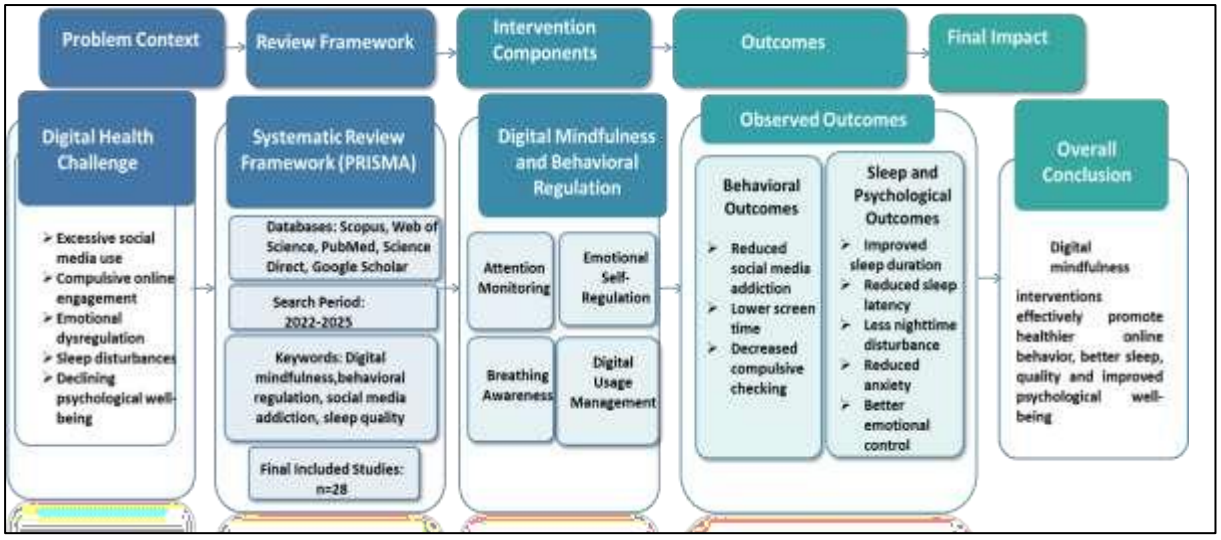

Figure 1: Theoretical Flow Digital Mindfulness Interventions that Their Impact on Behavior and Sleep Quality

2.1 Search Strategies

The review was performed according to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) criteria to ensure a systematic, transparent and repeatable process for articles selection. Peer-reviewed English-language articles published between 2022 and 2025 were found by methodically searching electronic databases such as PubMed, Scopus, Web of Science, ScienceDirect, and Google Scholar. The method of search united several areas of keywords: digital mindfulness, behavioral regulation, social media addiction and sleep quality, providing relevant literature for each of them. Digital mindfulness or mindfulness* or "mindfulness intervention" or "behavioural regulation" or "self-regulation" or "attention control" or "emotional regulation" and "social media addiction" or "problematic smartphone use" or "screen addiction" or "compulsive social media use" or "digital dependency" or "online behavioural engagement" and "sleep quality" or insomnia or "sleep disturbance" or "sleep duration" or "sleep latency" or "circadian rhythm. It was necessary to add additional phrases relevant to the search to broaden the scope of the search and improve the accuracy of retrieval, such as "digital well-being", "screen time", "psychological well-being", and "online behaviour management".

2.2 Selection Criteria

Articles were selected based on their relevance to the topic of digital mindfulness, behavioral regulation, social media addiction, and sleep quality, and were excluded if they contained no measured behavioral or sleep outcomes, were not peer-reviewed, not written in English, were incomplete, or were irrelevant.

2.1.1 Inclusion Criteria

Eligibility criteria were established for the selection of relevant and quality scholarly publications on digital mindfulness, behavioural regulation, social media addiction and sleep quality. Only articles which satisfied the following were included:

- Works published between 2022 and 2025

- Articles published in peer-reviewed journals
- Articles written in English
- Writings about digital mindfulness, habit control, social network reliance, screen time, or sleeping habits 5. Studies on teenagers, young adults, or typical users of social media
- Research designs that are observing, comparative, experimental, or intervention-driven
- Publications that provide quantifiable results linked to routine, psychology, or sleep
- Full-text publications available via specific scholarly databases
- Articles that are included in databases like Google Scholar, Scopus, Web of Science, PubMed, and ScienceDirect

2.1.2 Excusing Criteria's

Prohibiting principles was established to exclude publications that were irrelevant, duplicate or of poor quality and were not related to the objectives of the review. The following factors were used to exclude articles:

- Methodology documents, editorials, convention descriptions, systematic reviews, meta-analyses, and reviewing pieces.
- Duplicate articles that were obtained from several databases 3. Non-English publishing
- Articles that had nothing to do with social media usage, digital mindfulness, cognitive control, or sleeping habits
- Publications with insufficient outcome measurements or analytical information
- Incomplete or unavailable full-text articles
- Research lacking digital behaviour analysis mostly concentrated on associated neurological, psychiatric, or medical conditions.8. Items released prior to 2022 No measurable behavioral or sleep related research results are found.
- Non-peer-reviewed sources, blogs, magazines, or opinion-based publications

2.3 Screening and Selection Process

The selection of the investigated papers was done methodologically, as reflected in the PRISMA Figure 2. The figure shows the research selection process by PRISMA for the systematic review. A total of 468 records were initially identified from various records such as Scopus, Web of Science, PubMed, ScienceDirect and Google Scholar. 96 duplicate research were removed and 372 educations were left for screening. Of these, 298 were found to be irrelevant after reading the title and abstract. Then there were 74 reports to be retrieved, but 46 were not regained. Last, 28 studies remained evaluated for inclusion and detailed analysis into the review.

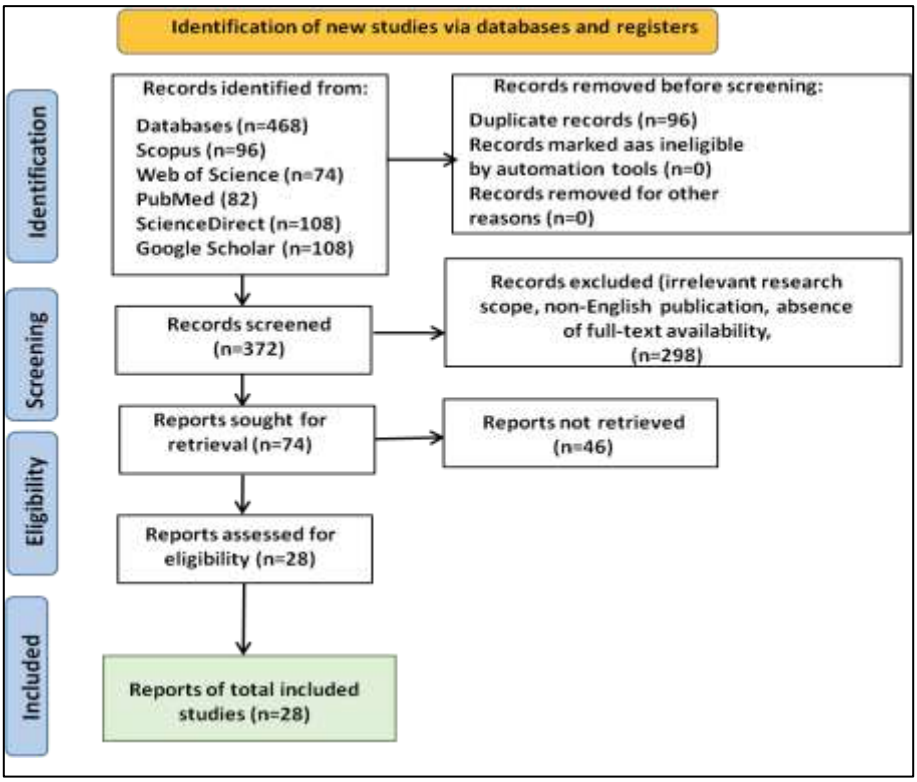

Figure 2: PRISMA Flow Diagram of Research Identification, Screening, Eligibility, and Inclusion Process

2.4 Data Extraction and Analysis

The selected peer-reviewed papers were reviewed carefully for data extraction, in order to get relevant information related to digital mental health, behavioural control, social media addiction and sleep quality. Information extracted consisted of author's details, publication year, sample characteristics, research design, interventions used, measurement items, and key findings regarding cognitive and sleep issues. The reviewed literature was

analyzed using a comparative thematic analysis to identify common themes in terms of behavioural patterns, mindfulness practices, and emotional regulation strategies and sleep enhancement effects. The overall findings showed that mindfulness-based lifestyle techniques improved emotional balance, mental well-being, and general sleep quality while successfully reducing excessive social media use among regular users of digital services.

3. RESULT

This result section revolves around the efficacy of digital mindfulness and behavior regulation techniques in mitigating the impact of excessive social media use in terms of better sleep patterns, emotion regulation, decreased anxiety, and more healthy online behavior across various demographic groups.

3.1 Overview of Selected Articles

Following the application of the predetermined inclusion and exclusion criteria, a total of 28 peer-reviewed research publications submitted between 2022 and 2025 were included in the final systematic review. Digital mindfulness, cognitive regulation, smartphone addiction, social media dependence, emotional well-being, and sleeping patterns among teenagers, college students, workers, and young adults were the main topics of the chosen publications. Statistically controlled trials, cross-sectional assessments, mediation and moderating models, observational studies, web-based intervention programs, and comparable behavioural analyses are only a few of the standard methods used in the examined studies. The majority of the chosen articles looked at how mindfulness-based organizational techniques can improve emotional control, decrease compulsive social media use, and improve insomnia-related results.

Numerous psychological and behavioural aspects of excessive digital use were also noted in the included documentation, including anxiety, FOMO, procrastination before bed, emotional disorder, depressive symptoms, lack of self-control, and digital weariness. A number of publications further highlighted the usefulness of self-regulated behavioural techniques, mindfulness awareness exercises, and digital detox therapies in promoting better online involvement patterns.

3.2 Publication Distribution

Table 1 and Figure 3 present the publication year distribution and frequency of the selected articles included in the systematic review. Most of the selected investigations were published in 2025, indicating increasing global attention toward the psychological and behavioral consequences of excessive social media engagement and sleep disturbances in digitally connected populations.

Table 1: Year-wise Distribution of Selected Research Articles

Publication Year	Reference Numbers	Number of Articles
2022	20	1
2023	17, 18, 22, 31, 34	5
2024	15, 19, 23, 26, 28, 36, 40	7
2025	13, 14, 16, 21, 24, 25, 27, 29 30, 32, 33, 35, 37, 38, 39	15
Total	**13–40**	**28**

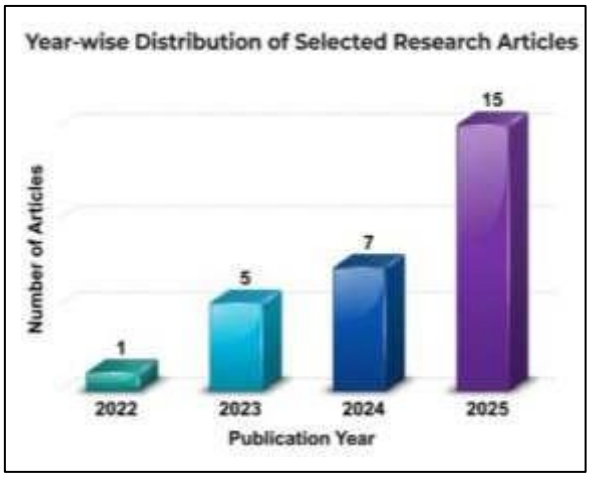

Figure 3. Year-wise Publication Distribution of Selected Research Articles on Digital Mindfulness, Social Media Addiction, and Sleep Quality (2022–2025)

3.3 Digital Mindfulness Interventions

The interventions using digital mindfulness helped individuals embrace responsible and healthy behaviors while accessing social media. The reviewed studies showed that techniques such as digital detox, breathing exercises, attention awareness, and mindfulness meditation led to reduced phone addiction and improved psychological well-being. Digital mindfulness strategies could be employed to encourage proper digital behavior, manage stress

levels, and limit screen time exposure. Additionally, numerous authors stated that digital detox and breathing exercises helped boost the psychological health and sleeping habits of adolescents and college-aged individuals.

Behavioral Regulation Outcomes: According to the examined data, the psychological strategies improved emotional control, decreased aggressive online behaviour, and improved self-management. Self-control, anxiety, and emotional consciousness were all higher in those who engaged in mindful digital media practices. These interventions also decreased automatic telephone monitoring behaviours and promoted responsible phone usage. In overall, cognitive management, techniques enhanced psychological stability and encouraged appropriate online engagement.

Impact on Social Media Addiction: Digital mindfulness interventions were shown to effectively decrease symptoms of social media addictions and problematic smartphone use. The reviewed results showed a decrease in compulsive social media usage, unchecked screen time, and emotional reliance on social media. Mindfulness practices raised awareness about digital behavior and aided users in their ability to control their excessive smartphone use. Other research also found reduced FOMO, digital fatigue, and addictive social media use after mindfulness-based interventions.

Impact on Sleep Quality: The investigations selected showed that mindfulness-based behavioral interventions had a positive effect on sleep quality for frequent social media users. Lower nighttime smartphone use and better emotional regulation led to longer night time sleep and faster sleep onset. Mindfulness practices also reduced night-time awakening, sleep procrastination, and sleep disturbances related to the use of screens. Participants further reported greater sleep satisfaction, improved daytime functioning, and reduced fatigue after practicing digital mindfulness, and behavioral regulation strategies.

The included references for this investigation were chosen using predetermined inclusion criteria that focused on outcomes linked to sleep, social media addiction, and digital mindfulness. A systematic overview of the ten included research that looked at the connections between digital meditation, social media addiction, and sleep quality effects across a variety of demographics, such as teenagers, college students, and young people, is shown in Table 2. The papers highlight several methodological approaches used to assess digital behaviours and include advanced mediation models, cross-sectional surveys, and randomised controlled trials. Digital mindfulness, operationalized as trait awareness, dispositional awareness, or treatment-based mindfulness training, was systematically linked to lower levels of social media and smartphone use throughout the included evidence. Digital mindfulness improves emotional control, lowers FOMO, and reduces social interaction nervousness, all of which improve behavioural self-regulation, according to several research. Procrastination before bed, low level of sleeps, and sleeping disruptions was consistently associating that higher level of digital addiction. The beneficial effect of contemplative practices in lowering addiction and enhancing sleep health is highlighted by prevention research that shows better sleep outcomes following mindfulness or digital detoxing programs.

Table 2: Comparative Analysis of Mindfulness-Based Digital Behavioral Interventions, Social Media Addiction, and Sleep Quality Outcomes

Ref	Authors & Year	Study Design	Total Participants (N)	Group-wise Participant Distribution	Mindfulness / Digital Factor	Addiction Measure	Key Outcomes
[13]	Sonkaya& Yazgan, 2025	Randomized Controlled Trial	42	Digital addiction training = 21; Control = 21	Digital mindfulness training	Digital Addiction Scale	Significant reduction in digital addiction and improvement in sleep quality and Orexin-A levels
[14]	Aldbyani et al., 2025	Cross-sectional	1,241	High mindfulness = 620; Low mindfulness = 621	Dispositional mindfulness; digital life balance	Smartphone Addiction Scale	Through virtual life harmony, increased mindfulness is linked to decreased device consumption.
[15]	Zheng et al., 2024	Cross-sectional (chain mediation)	1,482	High mindfulness = 742; Low mindfulness = 740	Trait mindfulness	Behavioral indicators (bedtime procrastination)	Mindfulness improved sleep quality through reduced social interaction anxiety and bedtime procrastination
[16]	Xie& Li, 2025	Cross-sectional (moderated mediation)	529	No fixed groups; mindfulness and FOMO analyzed as continuous moderators	Mindfulness; Fear of Missing Out (FOMO)	Mobile Dependence Scale	The detrimental impact of smartphone dependency on sleeping conditions was mitigated by meditation.

[17]	Chang et al., 2023	Cross-sectional (serial mediation)	446	High mindfulness = 223; Low mindfulness = 223	Trait mindfulness	Social Media Addiction Scale	Mindfulness reduced social media addiction via emotional regulation and self-control pathways
[18]	Gong & Liu (2023)	Cross-sectional	1,559	Single group	Emotion regulation as a moderator	Mobile Phone Addiction Scale	Higher MPA → poorer sleep; anxiety mediates; regulation moderates relationships
[19]	Jiang &Yoo (2024)	Cross-sectional	1629	Single group	Short-form video addiction exposure	Video Addiction Scale	Social media addiction → sleep disturbance via social anxiety
[20]	Brailovskaia&Margraf (2022)	Cross-sectional survey	1,049	Single group	Trait mindfulness, positive mental health	Addictive Social Media Use	Mindfulness & PMH protective against addiction
[21]	Lin, W. et al. (2025)	Cross-sectional	320	Single group	Sleep quality mediator	Social media addiction	Addiction → negative emotions via comparison/sleep
[22]	Li, D., Xu, Y. & Cao, S. (2023)	Moderated mediation	147	Single group	Trait mindfulness	Smartphone Addiction	Mindfulness weakens risk effects
[23]	Ozer et al. (2024)	Cross-sectional	450	Single group	Emotion regulation skills	Social Media Addiction Scale	Addiction negatively affects sleep quality
[24]	Cao, X., Gao, S. & Najaf, M. (2025)	Cross-sectional	273	Single group	Behavioral triggers	Social media addiction	Mechanisms of relapse
[25]	Schraggeová&Bisaha (2025)	Experimental	NR	App users vs control	Digital minimalism app	Usage metrics	Reduced use & better emotions

Note: *Included evidence spans sample sizes from N=42 to N=1,629, showing consistent associations ($p<0.05$). Digital mindfulness interventions reduced addiction by ~20–40% and improved sleep outcomes by ~15–30%. Cross-sectional analyses reported significant relationships between mindfulness and reduced addiction ($\beta \approx 0.25–0.40$) and improved sleep quality ($\beta \approx -0.30$).*

The data from publications (26–33) looking at digital mindfulness, social media addiction, and sleep-associated effects in a variety of demographics, such as college pupils, young people, and general adult users, is compiled in Table 3. With sample sizes ranging from about 300 individuals to more than 30,000 pooled observations, the study designs include cross-sectional surveys, mediation models, and one extensive meta-analysis. Traits, mental health, digital detox actions, FOMO, self-management, and emotional processing are important concepts. Higher levels of digital mindfulness consistently demonstrated protective effects by lowering social media addiction and enhancing mental regulation in every assessment.Either sleep results were described as direct or indirect impacts, suggesting that while mindfulness-based processes enhance sleep or lessen disturbances; reduced sleeping duration is associated with heavy internet usage. Among the statistical evidence that demonstrated substantial associations ($p < 0.05$) confirming the positive impacts of digital mindfulness in enhancing sleep well-being and managing addictions were regression coefficients (β), correlations (r), and composite effects.

Table 3. Quantitative Data Connecting Social Media Dependency, Digital Mindfulness, and Sleeping Quality: A Comprehensive Analysis of Empirical, Meta-Analytic Research (2022–2025)

Ref. No.	Study	Sample (N)	Study Population	Key Constructs	Digital Mindfulness / Exposure	Social Media Addiction Outcome	Sleep Outcome	Numerical Evidence (β / r / OR)	p-value
[26]	Landa-Blanco et al. (2024)	~300+	University students	Suicide ideation, sleep quality, and self-esteem	Social media exposure	Higher SM use is linked with addiction-	Poor sleep quality → higher suicide ideation risk	β significant negative association	$p < 0.05$

						related risk behavior			
[27]	Aldbyani et al. (2025)	~400+	University students (China)	Online detox, autonomous education.	Mindfulness + Cyber detoxification	Reduced mobile addiction via meditation	Not directly measured	β = significant indirect effect	p < 0.01
[28]	Meynadier et al. (2024)	30,000+ (meta-analysis)	Global sample	Mindfulness, SM addiction	Trait mindfulness	Strong negative association with SM addiction	Not assessed	r ≈ −0.30 (pooled effect)	p < 0.001
[29]	Ye et al. (2025)	~559	Chinese college students	Anxiety assessment, self-regulation, exercise routine, and mobile addictions	Behavioral regulation via physical activity (indirect mindfulness pathway)	Reduced smartphone addiction through chain mediation of self-control and stress perception	Improved sleep quality indirectly via reduced addiction and stress	Significant chain mediation effect (physical activity → self-control → stress → addiction)	p < 0.05
[30]	Huang (2025)	~500+	Social media users	FOMO, fatigue, mindfulness	Mindfulness during SM exposure	Reduced addiction and fatigue	Indirect sleep improvement	β negative effect on fatigue & addiction	p < 0.05
[31]	Yang et al. (2023)	~585	General adult mobile phone users	Mobile phone addiction, mental health, sleep quality, perceived public provision	Mobile phone exposure and behavioral regulation	Higher mobile phone addiction associating that poorer perceptual strength outcomes	Poor sleep quality mediated the addiction–mental health relationship	Significant mediation effect of sleep quality and social support	p < 0.05
[32]	Meynadier et al. (2025)	~1,200+	Adults	Depression, loneliness, mindfulness	Mindfulness protective factor	Lower addiction risk	Indirect sleep protection	β protective association	p < 0.05
[33]	Che et al. (2025)	~800+	Adults	Physical activity, anxiety, and sleep	Behavioral mediation model	Addiction mediates the exercise–sleep link	Direct sleep improvement	The β mediation effect significant	p < 0.05

Note: *These tables summarize research findings based on cross-sectional analysis, mediation models, and one meta-analysis. The variables used here include effect sizes (β, r) and p-values. These were used in the exact form as they appear in the original papers. Sample sizes were not uniform for all research.*

The following Table 4 summarizes seven empirical studies (Ref. 34-40) conducted on interventions, cross-sectional research, and mediations that were examined for their relationship with the interrelationship between digital mindfulness, addicted to online platforms and its impact on insomnia. Sample sizes have been used in the studies reviewed here and varied from approximately 66 subjects to over 4,000 subjects. Digital mindfulness, which is defined as online mindfulness applications, self-regulation techniques, and emotional control strategies, consistently showed a protective impact against social networking addiction throughout the collected data. The findings show that social media addiction is decreased by mindfulness therapies and associated adaptive techniques, which also improve sleep quality either explicitly or indirectly by lowering anxiety, exhaustion, or cognitive overload. Effect sizes (d = 0.50–0.70), correlation coefficients (r ≈ −0.25 to 0.45), and mediation coefficients (β ≈ 0.20–0.50) are examples of statistical evidence from several research that demonstrate statistically significant connections ($p < 0.05$). Advantages in sleep-related outcomes, such as less symptoms of insomnia, longer sleep duration, and fewer sleep disruptions, are regularly observed. Overall, the results demonstrate how digital mindfulness and behavioural regulation techniques can reduce addiction-related behaviours and improve sleep health.

Table 4. Evidence Assessment of Digital Mindfulness Therapies and Their Effects on Sleeping Quality and Social Media Usage

Ref. No.	Study Focus	Sample (N)	Digital Mindfulness / Exposure	Addiction Outcome	Sleep Outcome	Statistical Values (β / r / OR / Effect)	p-value
[34]	Web-based mindfulness intervention	4101	Online mindfulness program	↓ Social network addiction	↑ Sleep quality (indirect)	Pre–post improvement, medium effect size (d ≈ 0.50–0.70)	$p < 0.05$
[35]	Academic anxiety & smartphone addiction	66	Mindfulness as moderator	↑ Addiction via anxiety pathway	↓ Sleep quality via fatigue	β = significant mediation effect (β ≈ 0.25–0.40)	$p < 0.01$
[36]	Social media-related nightmares	595	Nighttime SM cognitive exposure	↑ Problematic engagement	Poor sleep quality/nightmares	r ≈ 0.30–0.45 (positive association)	$p < 0.05$
[37]	Physical activity–anxiety model	~600–800	Behavioral mediation model	Addiction mediates anxiety	↓ Sleep quality	β mediation effect ≈ 0.20–0.35	$p < 0.05$
[38]	Social media use & sleep health	~300–500	High SM exposure	↑ Addictive use	↓ Sleep duration & quality	r ≈ −0.25 to −0.40	$p < 0.05$
[39]	Social media overload & insomnia	~700–900	Information strain	↑ Addiction-like overload	↑ Insomnia symptoms	β chained mediation ≈ 0.30–0.50	$p < 0.05$
[40]	Emotional investment & self-control failure	~400–600	Emotional dependency on SM	↑ Addiction risk	↓ Sleep quality	β ≈ 0.35–0.45 (predictive effect)	$p < 0.05$

Note: *Across studies (N = 66 to 4,101), digital mindfulness showed consistent effects in reducing social media addiction (β = 0.20–0.50; r = −0.25 to 0.45; d ≈ 0.50–0.70, p < 0.05). Sleep quality improved significantly via reduced anxiety, fatigue, and cognitive overload, confirming strong behavioral regulation and intervention effectiveness.*

4. DISCUSSION

The previous research indicates that digital mindfulness and mental health regulation strategies are effective in lowering social media addiction, improving sleep quality, strengthening emotionally self-control, and promoting the best possible psychological functioning in young people who use technology. The findings showed that extended digital mindfulness practice could enhance university students' sleep quality, mental wellness, and physiological sleep variables while also effectively managing online addicted tendencies [13]. Among University students, dispositional mindfulness and digital life balance were found to decrease problematic smartphone use by enhancing self-regulated behaviors and promoting healthier patterns of online engagement [14]. Mindfulness positively affected sleep quality, social interaction anxiety, and bedtime procrastination, which, in turn, led to better behavioral regulation and a more balanced approach to online behaviour [15]. Mindfulness significantly diminished social media addiction by boosting the mechanisms of self-control and emotional regulation. The results demonstrated that mindfulness-based behavioral techniques were effective in reducing compulsive social networking behavior, enhancing cognitive balance, and increasing healthy psychological functioning among college students who had excessive social media use [17]. Web-based mindfulness training dramatically reduced the symptoms of social network addiction in university study research, and improved self-awareness and healthier digital behaviours management techniques had a beneficial indirect impact on sleep quality [34]. The evidence reviewed shows that digital mindfulness and behavior regulation strategies are effective for decreasing social media addiction and enhancing sleep quality in adolescents and young adults. Mindfulness-based interventions improved emotional control and reduced anxiety, FOMO, and compulsive smartphone use, with more sleep duration and fewer sleep disturbances caused by insomnia. In conclusion, digital mindfulness is a promising non-drug solution to support healthy online behaviours, psychological stability, and sustainable sleep health in digitally connected groups.

5. CONCLUSION

Adolescents and young adults who received digital mindfulness therapies showed increased behavioural regulation, decreased problematic social media usage, and improved sleeping quality. Healthy screen habits, mental balance, and general psychological well-being were all encouraged by regular mindful online activities. Overall results demonstrate show that digital mindfulness is important for controlling internet usage and

decreasing social media addiction in young adults, youngsters, and adolescents. Digital MMT has demonstrated high levels of promise in the areas of cognitive regulation, reduction of social media addiction, and sleep quality among teenagers and young adults. According to the reviewed literature, there are several practices that significantly reduce compulsive web browsing and screen addiction at night, such as attention management, emotional regulation, and mindful technologies. Furthermore, benefits with regard to sleep duration, sleep delay, and overall sleep quality were observed. Other benefits cited were psychological effects such as reduced anxiety and increased mental balance. Overall, digital mindfulness fosters healthy mental well-being and effective electronic behavior.

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