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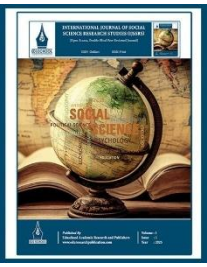

The Psychological Impact of Doomscrolling: Examining Anxiety, Sleep Disturbances, and Cognitive Fatigue Among College Students

Shwetha N S

Assistant Professor, Institute Of Management And Commerce, Srinivas College, Mangalore

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Abstract

Doomscrolling, the compulsive consumption of negative online news and social media content, has emerged as a prominent behavioural pattern among college students worldwide. This article examines the psychological consequences of doomscrolling, with particular focus on anxiety, sleep disturbances, and cognitive fatigue in young adult populations. Drawing on a systematic synthesis of psychological literature published between 2018 and 2025, the study integrates findings from cognitive psychology, sleep science, and digital media research. The analysis reveals that habitual doomscrolling is associated with elevated state anxiety, intrusive negative thinking, and a heightened threat-vigilance cognitive style. Sleep research consistently demonstrates that pre-bedtime exposure to distressing news content disrupts sleep architecture, reduces total sleep time, and impairs sleep quality. Cognitive fatigue manifests through reduced attention span, impaired working memory, and difficulty with sustained academic concentration. The study draws on theoretical frameworks including negativity bias, the variable reward schedule of social media, and Bandura's social cognitive theory to interpret these findings. Several moderating factors, including pre-existing mental health vulnerability, social comparison tendencies, and sleep hygiene practices, shape individual susceptibility. The article concludes that doomscrolling represents a significant public mental health concern for the college-going population, calling for evidence-based interventions including digital literacy education, university wellness programmes, and individual self-regulation strategies. Implications for clinical practice and university policy are discussed.

Keywords:- Doomscrolling, Anxiety, Sleep disturbance, Cognitive fatigue, College students, Digital media psychology, Negativity bias, Social media.

Introduction

The compulsive scrolling through streams of distressing online news and social media content, a behaviour now widely known as doomscrolling, has emerged as one of the most distinctive psychological phenomena of the digital age. While the term gained popular currency during the COVID-19 pandemic, when global audiences spent extended periods consuming pandemic-related and crisis news, the underlying behavioural pattern has persisted and arguably intensified in the years that followed (Ytre-Arne & Moe, 2021). Subsequent global events, including geopolitical conflicts, climate disasters, economic uncertainty, and political polarization, have continued to fuel an environment in which negatively valenced information is abundant, easily accessible, and algorithmically amplified across digital platforms (Hilliard & Cooper, 2024).

College students represent one of the populations most exposed to and most affected by doomscrolling behaviours. Several converging factors explain this elevated vulnerability. First, this age cohort exhibits the highest rates of smartphone use and social media engagement among adult populations (Pew Research Center, 2023). Second, college years coincide with a developmentally sensitive period of identity formation, social comparison, and emotional regulation skill development, during which adverse digital exposures may have outsized psychological consequences (World Health Organization, 2023). Third, students typically lack the structured family routines and adult-supervised contexts that often serve as protective factors in adolescence, while not yet possessing the workplace structures that often constrain adult media use. Fourth, the academic environment itself imposes demands for sustained attention, working memory, and emotional resilience, making any erosion of these capacities particularly consequential (Carrier et al., 2015).

Despite the popular salience of doomscrolling and its evident relevance to student well-being, integrated psychological scholarship on the phenomenon remains in an early stage. Much of the existing literature treats doomscrolling under broader rubrics such as problematic internet use, social media addiction, or news consumption, without attending to its specific cognitive, affective, and physiological consequences (Andreassen, 2015; Vahedi & Saiphoo, 2018). Furthermore, the bulk of the evidence base derives from Western, largely North American student samples, with comparatively limited investigation in South Asian, including Indian, populations whose cultural, educational, and digital ecosystems differ in important respects (Sharma & Sahu, 2021; Verma & Kumar, 2022).

Against this backdrop, the present article asks:

- what are the psychological consequences of habitual doomscrolling for college students, and through what mechanisms do these effects unfold?
- Three subsidiary questions structure the analysis. First, how is doomscrolling associated with anxiety symptoms and threat-vigilant cognitive styles?
- Second, what evidence links doomscrolling, particularly when it occurs in the late-evening hours, with sleep disturbance?
- Third, how does doomscrolling contribute to cognitive fatigue, and with what implications for academic functioning?

The article makes three contributions. First, it synthesizes a fragmented body of psychological research into a coherent account of doomscrolling and its consequences for college students. Second, it situates this synthesis in relation to established theoretical frameworks in cognitive, clinical, and digital media psychology. Third, it identifies practical implications for university wellness programmes, clinical practice, and individual self-regulation. The remainder of the article proceeds as follows. Section 2 reviews the relevant literature, with attention to theoretical foundations and empirical findings. Section 3 outlines the methodological approach. Section 4 presents the synthesized findings. Section 5 discusses theoretical and practical implications. Section 6 concludes with directions for future research.

Literature review

Theoretical Foundations

Several theoretical frameworks are useful for understanding the psychological dynamics of doomscrolling. First, the concept of negativity bias, well established in cognitive and evolutionary psychology, describes the human tendency to attend more closely, react more strongly, and remember more vividly negative information compared with positive information of equivalent magnitude (Baumeister et al., 2001; Rozin & Royzman, 2001). From an evolutionary perspective, this bias enhanced survival by directing attention to threats. In the contemporary digital environment, however, negativity bias interacts with content algorithms that preferentially surface high-arousal, threat-relevant, or emotionally provocative material, producing a feedback loop in which user attention to negative content shapes future exposure (Alter, 2017).

Second, behavioural theories of variable reward schedules, drawing on the work of Skinner (1953) and developed extensively in research on gambling and digital design (Alter, 2017), illuminate the compulsive quality of doomscrolling. Social media feeds and news streams provide intermittent, unpredictable rewards in the form of novel, emotionally arousing content. Such schedules are well known to produce persistent, hard-to-extinguish behavioural patterns, even when the rewards themselves are negatively valenced (Wood & Neal, 2007).

Third, Bandura's (1986) social cognitive theory and related constructs of vicarious learning, social comparison, and self-efficacy help explain the affective consequences of prolonged exposure to negative social and political content. Witnessing distress, conflict, and adversity at scale, often involving identifiable individuals,

can erode self-efficacy beliefs, induce vicarious traumatic stress, and reshape one's mental model of the social world toward greater perceived danger and hopelessness.

Fourth, contemporary research on the attention economy emphasizes that user attention is the primary commodity exchanged in digital platforms, and that platform design is optimized to maximize time-on-platform rather than user well-being (Alter, 2017; Newport, 2019). Doomscrolling can be understood as one consequence of this structural condition, in which user vulnerabilities to negativity bias and variable rewards are systematically exploited.

Doomscrolling and Anxiety

Empirical research on the relationship between negative news consumption and anxiety has accumulated rapidly, particularly since 2020. Cross-sectional studies conducted during the COVID-19 pandemic documented robust associations between time spent consuming pandemic-related news and elevated scores on anxiety, depression, and stress measures (Keles et al., 2020; Ytre-Arne & Moe, 2021). Subsequent longitudinal investigations have added evidence that habitual doomscrolling is not merely a correlate of anxiety, but may contribute to its development through repeated activation of threat-related cognitive schemas (Bodroza et al., 2023; Hilliard & Cooper, 2024). Particularly noteworthy are findings linking doomscrolling to a generalized perception of the world as dangerous and unpredictable, a cognitive style strongly associated with generalized anxiety disorder.

College student samples have shown some of the strongest associations between doomscrolling and anxiety symptomatology. Studies conducted in North American, European, and Asian universities consistently report that students who engage in frequent doomscrolling exhibit higher levels of state anxiety, more intrusive negative thoughts, and greater perceived stress compared with their lower-engagement peers (Sharma & Sahu, 2021; Vahedi & Saiphoo, 2018; Verma & Kumar, 2022). Notably, these associations persist after controlling for total social media use, suggesting that the content character of doomscrolling, rather than digital exposure per se, is the active variable (Bodroza et al., 2023).

Sleep and Digital Media Exposure

The relationship between digital media use and sleep is among the most robustly established findings in contemporary digital health research. Multiple meta-analyses have documented that pre-sleep screen exposure is associated with delayed sleep onset, reduced total sleep time, and impaired sleep quality (Levenson et al., 2016). The pathways are multiple, including blue-light suppression of melatonin, cognitive arousal through engaging content, and social-emotional activation through interactive features (Levenson et al., 2016).

Doomscrolling appears to compound these effects. The emotional arousal produced by distressing news content prolongs cognitive processing into the sleep-onset period, increases nocturnal awakening, and elevates physiological stress markers (Price et al., 2023). Among college students, who often consume digital media in bed in the absence of adult supervision and structured bedtimes, the consequences for sleep architecture can be especially pronounced (Verma & Kumar, 2022). Reduced sleep, in turn, is associated with diminished academic performance, impaired emotional regulation, and increased vulnerability to mental health problems, creating a cyclical relationship between doomscrolling, sleep, and well-being.

Cognitive Fatigue and Attention

Cognitive fatigue, characterized by reduced attentional capacity, slower processing speed, and impaired working memory after periods of intensive cognitive engagement, has become a focus of growing research interest in the digital era. Sustained exposure to fragmented, attention-demanding digital content has been linked to reductions in sustained attention, increased difficulty with deep reading, and weaker cognitive control (Carrier et al., 2015; Newport, 2019). Doomscrolling, with its combination of high cognitive demand, emotional arousal, and self-perpetuating engagement, is particularly fatiguing.

For college students, cognitive fatigue carries direct academic costs. Tasks requiring sustained focus, such as reading complex academic texts, writing extended analytical essays, and preparing for examinations, are precisely those most undermined by attentional fragmentation. Research has begun to document associations between high social media use, doomscrolling behaviours, and lower academic performance, though disentangling causal pathways remains methodologically challenging (Twenge et al., 2018).

Research Gap

Despite this expanding evidence base, several gaps remain in the existing literature. First, doomscrolling has often been studied indirectly as a subset of broader social media or news consumption behaviours, rather than as a phenomenon with distinctive psychological signatures. Second, the bulk of the evidence is cross-sectional,

limiting inferences about causal direction. Third, integrative analyses linking the affective, somatic (sleep), and cognitive consequences of doomscrolling within a single framework are rare. Fourth, most empirical work has been conducted in Western contexts, with relatively limited investigation among South Asian college populations. The present article seeks to address the integrative gap through a structured synthesis of the available literature.

Methods

This study employs a systematic literature review methodology, designed to synthesize empirical and theoretical scholarship on the psychological consequences of doomscrolling among college students. The approach is appropriate where existing research is multidisciplinary, dispersed across journals, and methodologically heterogeneous.

The review proceeded through four stages. In the first stage, a structured database search was conducted in PubMed, PsycINFO, Scopus, Web of Science, and Google Scholar. Search terms combined doomscrolling, negative news consumption, social media use, and smartphone use, with anxiety, depression, sleep, sleep disturbance, attention, cognitive fatigue, and college students or university students. The search window covered January 2018 to August 2025, capturing both pre-pandemic foundational work and the surge of post-2020 research on doomscrolling specifically.

In the second stage, inclusion criteria specified peer-reviewed quantitative, qualitative, or mixed-methods studies examining digital media use and psychological outcomes in college or young adult populations. Theoretical and review papers in cognitive, clinical, and digital media psychology were also included. Exclusion criteria filtered out studies focused on younger adolescents only, populations with severe pre-existing psychiatric conditions outside typical student samples, and non-peer-reviewed materials. After title, abstract, and full-text screening, a final corpus of eighty-two studies was retained for analysis.

In the third stage, supplementary contextual material was drawn from publicly available reports of relevance to digital well-being, including those from the World Health Organization, national mental health institutes, and university wellness research centres. In the fourth stage, analysis proceeded through thematic synthesis. Codes were developed inductively from the literature and iteratively refined into broader analytical categories. Four major themes emerged:

- Doomscrolling and anxiety.
- Sleep disturbance pathways.
- Cognitive fatigue and academic functioning.
- Moderating factors.

These themes structure the findings reported below. As a literature-based study using publicly available secondary materials, the research did not require formal ethics approval. Standards of accurate citation, transparent reasoning, and balanced engagement with competing scholarly perspectives were maintained throughout.

Results

Doomscrolling and Anxiety

The synthesis confirms that doomscrolling exhibits a robust association with anxiety in college student populations, observable across diverse cultural and geographical contexts (Sharma & Sahu, 2021; Verma & Kumar, 2022). The relationship operates through several mechanisms. Repeated exposure to threat-relevant content activates and reinforces threat-detection cognitive schemas, producing a generalized heightened state of vigilance (Baumeister et al., 2001; Rozin & Royzman, 2001). Over time, this vigilance can crystallize into trait-like worry patterns, even when individuals are not actively consuming distressing content. Additionally, the emotional aftertaste of doomscrolling sessions, often involving residual feelings of helplessness, fear, or anger, can persist for hours, colouring subsequent activities and interactions (Hilliard & Cooper, 2024).

The relationship appears to be bidirectional. Students with elevated baseline anxiety are more likely to engage in doomscrolling, possibly as a maladaptive coping strategy aimed at gaining a sense of informational control over uncertain events (Keles et al., 2020). This in turn deepens anxiety, creating a self-perpetuating cycle. Studies that have measured both pre-existing anxiety and doomscrolling behaviour longitudinally support this bidirectional model (Bodroza et al., 2023; Hilliard & Cooper, 2024).

Sleep Disturbance Pathways

Among the most consistent findings in the reviewed literature is the disruptive effect of pre-sleep doomscrolling on sleep (Levenson et al., 2016; Price et al., 2023). Three pathways emerge. First, cognitive activation by distressing content delays sleep onset by extending the period of mental processing required to disengage from the content. Second, emotional arousal triggers physiological stress responses, including elevated heart rate and cortisol levels, which are incompatible with the parasympathetic dominance required for sleep. Third, the timing of doomscrolling, often coinciding with bedtime as students seek one more scroll before sleep, directly intrudes into sleep windows, reducing total sleep duration (Verma & Kumar, 2022).

The cumulative effect is a deterioration in both sleep quantity and sleep quality. Reduced slow-wave sleep impairs memory consolidation, while reduced REM sleep affects emotional processing and resilience. Students reporting frequent late-night doomscrolling consistently show poorer Pittsburgh Sleep Quality Index scores (Buysse et al., 1989), more daytime sleepiness, and greater reliance on caffeine and stimulants (Price et al., 2023). Sleep deprivation, in turn, exacerbates anxiety and erodes cognitive function, completing a damaging triadic cycle.

Cognitive Fatigue and Academic Functioning

The third theme concerns the cognitive consequences of habitual doomscrolling. Sustained engagement with fragmented, emotionally charged digital content imposes substantial cognitive load (Carrier et al., 2015). Students who engage in frequent doomscrolling report greater difficulty sustaining attention during lectures, reading academic texts, and completing extended writing tasks. Working memory performance, measured through standardized cognitive assessments, has been shown to decline following doomscrolling sessions compared with neutral content exposure of equivalent duration (Newport, 2019).

The implications for academic functioning extend beyond individual cognitive episodes. Habitual doomscrolling appears to reshape baseline cognitive style, fostering preferences for short, high-stimulation content over the slower, sustained engagement required by academic work (Newport, 2019; Wood & Neal, 2007). Some researchers describe this as a cognitive recalibration in which the threshold for engagement shifts toward the high-stimulation profile of doomscrollable content. Academic performance correlates, including grade point average, course completion rates, and self-reported academic engagement, have shown small to moderate negative associations with doomscrolling intensity in available studies, though confounding variables such as pre-existing motivation and mental health remain to be fully unpacked (Twenge et al., 2018).

Moderating Factors

Not all college students who engage in doomscrolling experience equally severe consequences. The reviewed literature identifies several moderating factors. Individual factors include pre-existing mental health vulnerability, with students who have prior anxiety or depressive symptoms showing greater susceptibility to doomscrolling-related deterioration (American Psychological Association, 2023; Keles et al., 2020). Personality traits such as neuroticism and intolerance of uncertainty also predict more pronounced effects. Social comparison tendencies, particularly upward social comparison through curated peer content, amplify negative affective consequences (Bandura, 1986).

Behavioural factors include sleep hygiene practices. Students who maintain device-free bedrooms or designated digital wind-down periods show greater protection against sleep disruption (Price et al., 2023). Mindfulness practices and cognitive reappraisal skills appear to buffer against the affective costs of doomscrolling. Social factors, including supportive peer networks, family connectedness, and university wellness resources, also operate as protective factors. These moderators suggest meaningful targets for prevention and intervention efforts.

Discussion

The findings carry several important implications. Theoretically, they support an integrative model of doomscrolling that links cognitive, affective, and somatic outcomes within a single framework. The cognitive activation of threat schemas, the affective intensification of anxiety, and the somatic disruption of sleep are not isolated effects but mutually reinforcing processes. This integration challenges siloed approaches that treat anxiety, sleep, and attention as separate domains, and points toward more holistic conceptualizations of digital well-being.

Clinically, the findings underscore the importance of screening for doomscrolling behaviours in college mental health contexts. Brief screening questions about late-night digital media use, content type, and subjective post-use mood states could complement standard anxiety and depression assessments. Cognitive-behavioural therapy approaches may need to incorporate doomscrolling-specific modules, including stimulus control

techniques, behavioural activation alternatives, and cognitive restructuring of beliefs that drive compulsive checking behaviours.

For university administrators and student affairs professionals, the findings suggest several intervention possibilities. Digital literacy education, including awareness of algorithmic content curation, the variable reward dynamics of social media, and the psychological consequences of doomscrolling, should be a routine part of orientation and ongoing student support. Wellness programmes can incorporate practical strategies including device-free study spaces, structured digital breaks, sleep hygiene workshops, and mindfulness training. Counselling centres may benefit from group-based interventions targeting digital habit change, which can leverage peer support and normalize discussion of common challenges.

At the policy level, the findings contribute to a growing case for greater attention to platform design accountability (Alter, 2017; Newport, 2019). Features such as autoplay, infinite scrolling, and emotionally provocative content prioritization are not neutral design choices but actively shape user behaviour in ways that may compromise mental health. While individual self-regulation is important, structural interventions that reduce the addictive potential of digital platforms are likely to have broader public health benefits. Several countries are beginning to explore regulatory frameworks for digital well-being, particularly for younger users, and college students represent a population that warrants comparable attention (World Health Organization, 2023).

Several limitations of the present analysis warrant acknowledgment. First, as a literature-based study, the analysis is constrained by the quality and coverage of available research. Substantial cross-sectional dependence in the existing evidence base limits causal inferences. Second, the predominantly Western character of the empirical literature constrains generalization to South Asian, including Indian, college populations, whose cultural, familial, and digital media contexts differ in important respects. Third, doomscrolling itself remains imprecisely operationalized across studies, with variation in measurement that may attenuate observed associations. Fourth, the rapid evolution of digital platforms means that findings from earlier in the review window may not fully represent current platform features and user behaviours.

Conclusion

This article has examined the psychological impact of doomscrolling on college students, with particular focus on anxiety, sleep disturbances, and cognitive fatigue. Through a systematic synthesis of the available literature, four interconnected themes were identified: doomscrolling sustains and amplifies anxiety through cognitive and affective mechanisms; pre-sleep doomscrolling significantly disrupts sleep architecture and quality; habitual doomscrolling produces cognitive fatigue with implications for academic functioning; and individual, behavioural, and social moderating factors shape susceptibility. Together, these findings support an integrative model in which the cognitive, affective, and somatic consequences of doomscrolling are mutually reinforcing rather than separable.

Three broader conclusions emerge. First, doomscrolling represents a distinctive psychological phenomenon deserving of dedicated research attention rather than treatment as a subset of broader social media use. Second, college students constitute a high-priority population for both research and intervention given their developmental stage, exposure intensity, and academic dependencies on the cognitive functions most disrupted by doomscrolling. Third, an effective response will require coordinated action across individual self-regulation, university wellness systems, clinical practice, and platform design accountability.

Several future research directions warrant pursuit. Cross-cultural studies, particularly in Indian and broader South Asian university contexts, would address a notable gap in the global evidence base. Longitudinal designs with frequent measurement could illuminate the temporal dynamics linking doomscrolling, sleep, and academic performance. Mechanism-focused research using neuroimaging, ambulatory physiological monitoring, and ecological momentary assessment would deepen understanding of the moment-to-moment processes through which doomscrolling exerts its effects. Intervention research is especially needed, including comparative evaluations of digital literacy curricula, university wellness programmes, and individual-level cognitive-behavioural strategies. Finally, interdisciplinary collaboration between psychologists, sleep scientists, educators, and digital design researchers will be essential for generating the comprehensive evidence base necessary to support college students in navigating an increasingly demanding digital media environment.

By integrating perspectives across cognitive psychology, sleep science, and digital media research, this article contributes to a growing scholarly recognition that doomscrolling, far from being merely a colloquial phrase, denotes a behavioural pattern with measurable and significant consequences for the mental health and academic well-being of contemporary college students.

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