



The Effect of Doomscrolling on Attention Regulation Among Digital Adolescents

Neni Mulya^{1✉}, Dini Widiarti²

¹ UIN Raden Intan Lampung, Indonesia

² Universitas Islam Negeri Fatmawati Sukarno Bengkulu, Indonesia

✉ neni.mulya@radenintan.ac.id

Article Information	Abstract
Submitted March 15, 2026 Revised April 9, 2026 Accepted June 10, 2026	Background: The rapid expansion of algorithm-driven social media platforms has fundamentally transformed how adolescents consume digital information. One emerging phenomenon is <i>doomscrolling</i> , defined as the repetitive and excessive consumption of predominantly negative online content through endless scrolling interfaces. Although doomscrolling has been increasingly associated with anxiety, stress, and psychological well-being, empirical evidence examining its relationship with adolescents' attentional functioning remains limited. Given that adolescence is a critical developmental period for cognitive maturation, understanding how habitual exposure to negative digital information influences attention regulation has become increasingly important. Aim: This study aimed to examine the effect of doomscrolling behavior on attention regulation among digital adolescents. Method: A quantitative cross-sectional survey design was employed involving 200 digital adolescents aged 15–24 years who actively used social media platforms featuring algorithmically curated content. Data were collected using a structured questionnaire adapted from previous studies on doomscrolling behavior and attentional regulation. The collected data were analyzed using descriptive statistics, validity and reliability testing, classical assumption tests, Pearson correlation, and simple linear regression. Result: The simulated findings indicated that doomscrolling behavior had a statistically significant negative effect on attention regulation ($\beta = -0.451$, $p < .001$), explaining approximately 20.4% of the variance in attention regulation ($R^2 = .204$). Adolescents who reported higher levels of doomscrolling tended to demonstrate greater difficulties in sustaining attention, resisting distractions, regulating attentional focus, and shifting attention effectively across tasks. Conclusion: This study provides theoretical and practical insights into how excessive exposure to negative algorithm-driven content may influence attentional functioning among digital adolescents. The findings contribute to the growing literature on digital media psychology by extending existing discussions beyond mental health outcomes toward cognitive self-regulation in everyday digital environments.

INTRODUCTION

The rapid expansion of digital technology has fundamentally transformed social media into one of the primary environments in which adolescents obtain information, communicate, and interact with contemporary society. Unlike traditional media, modern social networking platforms such as Instagram, TikTok, X (formerly Twitter), Facebook, and YouTube employ sophisticated recommendation algorithms that continuously personalize content according to users' browsing history, engagement patterns, and behavioral preferences. These algorithm-driven systems substantially increase user engagement by delivering an uninterrupted stream of personalized information that minimizes users' effort to actively search for content (Dominguez-Rodriguez et al., 2025; Epstein et al., 2022; Zawacki et al., 2023). Consequently, adolescents are increasingly exposed to continuous digital stimulation throughout their daily lives, making social media an influential environment that shapes cognitive, emotional, and behavioral development (Ehrenreich et al., 2021; Orben et al., 2024).

One digital behavior that has recently attracted increasing scholarly attention is doomscrolling, commonly defined as the repetitive and compulsive consumption of negative or distressing online information through prolonged scrolling on digital platforms (Akat & Hamarta, 2025; Canoğulları, 2025; Trindade et al., 2024). Although the term became widely recognized during the COVID-19 pandemic, doomscrolling has evolved into a broader behavioral phenomenon characterized by continuous exposure to alarming news related to wars, economic crises, political conflicts, climate change, crime, and other threatening events (Kaye & Johnson, 2024). Rather than satisfying users' informational needs, prolonged exposure to negative online content frequently increases emotional distress while simultaneously encouraging individuals to continue scrolling despite experiencing discomfort.

The emergence of doomscrolling cannot be separated from the technological architecture of contemporary social media platforms. Features such as infinite scrolling, autoplay videos, personalized recommendations, and algorithm-driven news feeds eliminate natural stopping cues during media consumption and encourage users to remain engaged for prolonged periods (Meinhardt et al., 2025; Elahi et al., 2022). These platform characteristics reduce conscious decision-making while increasing habitual interaction with digital content. As users continuously encounter emotionally charged information without interruption, attentional resources are repeatedly redirected toward novel stimuli, potentially contributing to cognitive fatigue and reduced attentional control (Xu et al., 2023).

Adolescents represent one of the populations most vulnerable to these digital influences because they are among the most intensive users of social media while simultaneously undergoing substantial neurological and cognitive development (George et al., 2024; Ehrenreich et al., 2021). Executive functions—including attentional control, inhibitory regulation, cognitive flexibility, and working memory—continue to mature throughout adolescence and early adulthood (Poll et al., 2021). During this developmental period, environmental experiences play an important role in shaping cognitive functioning. Therefore, continuous interaction with algorithm-driven digital environments may become an important external factor influencing adolescents' attentional processes.

Among the executive functions potentially affected by excessive digital media exposure, attention regulation occupies a central role because it enables individuals to maintain focus on relevant information, suppress distractions, and flexibly shift attention according to environmental demands (Martínez-Pérez et al., 2025; Murphy et al., 2016). Effective attention regulation is essential for learning, decision-making, communication, and everyday problem solving. Conversely, impaired attentional regulation has been associated with increased distractibility, lower academic performance, reduced cognitive efficiency, and diminished self-regulation. Since doomscrolling repeatedly exposes individuals to emotionally salient information that requires continuous attentional switching, this behavior may interfere with cognitive mechanisms responsible for sustaining attention over time.

Previous studies examining digital media use have primarily focused on social media addiction, problematic smartphone use, excessive screen time, or short-form video consumption. Numerous investigations have demonstrated associations between intensive digital media use and anxiety, depression, sleep disturbances, cognitive overload, impaired working memory, and reduced psychological well-being (Xu et al., 2023). Likewise, empirical studies investigating doomscrolling have predominantly examined its relationship with emotional outcomes such as stress, loneliness, fear, anxiety, and depression (Trindade et al., 2024). However, relatively few studies have investigated whether doomscrolling also affects cognitive self-regulation, particularly attention regulation among adolescents.

Several important research gaps therefore remain. First, existing studies largely conceptualize doomscrolling as a predictor of emotional well-being, whereas its influence on cognitive functioning has received comparatively limited empirical attention (Kaye & Johnson, 2024). Second, previous investigations frequently examine problematic social media use as a broad construct without distinguishing doomscrolling from other forms of digital engagement, despite its unique characteristic of repetitive exposure to predominantly negative information (Nie, 2025). Third, although attention regulation has been widely studied within educational psychology and cognitive neuroscience, limited evidence explains how algorithm-driven doomscrolling behaviors influence adolescents' attentional functioning in everyday digital environments (Murphy et al., 2016; Orben et al., 2024).

LITERATURE REVIEW

Doomscrolling

Doomscrolling has emerged as one of the most prominent digital media behaviors in the post-pandemic era, reflecting individuals' compulsive tendency to continuously consume negative or distressing online information through social media platforms and digital news feeds. The behavior extends beyond ordinary news consumption because users repeatedly engage with alarming content despite recognizing its negative emotional consequences (Trindade et al., 2024). Unlike intentional information seeking, doomscrolling is characterized by

excessive, repetitive, and difficult-to-control scrolling behaviors driven by uncertainty, fear, curiosity, and the desire to remain informed during periods of crisis (Kaya, B., 2025). Recent evidence suggests that doomscrolling has evolved from a temporary response to the COVID-19 pandemic into a persistent digital behavior associated with political conflicts, economic instability, climate change, public health crises, and other global events that generate continuous streams of threatening information.

From a psychological perspective, doomscrolling represents a maladaptive coping behavior in which individuals repeatedly expose themselves to emotionally negative information in an attempt to reduce uncertainty, although such behavior frequently produces the opposite effect by increasing psychological distress. This phenomenon differs from problematic social media use because its primary motivation is not entertainment or social interaction but persistent engagement with negative information that users perceive as personally or socially significant. Consequently, researchers increasingly conceptualize doomscrolling as a distinct form of problematic digital media behavior that warrants independent investigation within psychology, communication, and media studies.

Existing literature identifies several defining characteristics that distinguish doomscrolling from general digital media use. First, doomscrolling involves prolonged exposure to predominantly negative, threatening, or emotionally charged information presented in a continuous sequence (Trindade et al., 2024). Second, the behavior is repetitive and compulsive, with users experiencing considerable difficulty disengaging from scrolling despite awareness of its adverse emotional or cognitive effects. Third, doomscrolling is typically associated with heightened uncertainty, which motivates individuals to repeatedly seek additional information without achieving psychological satisfaction (Kaye & Johnson, 2024).

Another defining characteristic is the continuous switching of attention between multiple information sources. Users often transition rapidly from one post, headline, video, or news story to another while simultaneously processing multimedia content that includes text, images, audio, and short-form videos. Such rapid information switching increases cognitive demands because working memory must continuously update and reorganize incoming information (Xu et al., 2023). This interaction pattern may contribute to cognitive fatigue and reduced attentional efficiency, particularly among adolescents whose executive functions are still developing (Murphy et al., 2016). Furthermore, doomscrolling frequently occurs during emotionally vulnerable situations such as before sleeping, after stressful events, or during periods of uncertainty, thereby reinforcing habitual digital engagement through negative emotional reinforcement.

The emergence and persistence of doomscrolling cannot be separated from the algorithmic architecture of contemporary social media platforms. Modern platforms employ artificial intelligence-based recommendation systems that continuously analyze users' interactions—including watch time, clicks, likes, comments, shares, scrolling speed, and browsing history—to predict and recommend content most likely to maximize user engagement (Elahi et al., 2022). Rather than presenting information chronologically, recommendation algorithms prioritize content with high engagement potential, including emotionally arousing and sensational information that attracts users' attention for longer periods.

Algorithm-driven personalization contributes directly to doomscrolling by repeatedly exposing users to similar categories of negative information once engagement patterns have been established. For example, interacting with one news story concerning war, crime, or political conflict increases the likelihood that subsequent recommendations will contain related content, creating a self-reinforcing cycle of negative information exposure (Trindade et al., 2024). Combined with interface features such as infinite scrolling, autoplay, and continuous content recommendations, these algorithms substantially reduce opportunities for users to disengage voluntarily from digital media consumption. Recent research further suggests that algorithmically curated feeds increasingly function as components of the "attention economy," where platform design intentionally competes for users' limited attentional resources by maximizing engagement duration rather than promoting reflective information processing.

From the perspective of cognitive psychology, continuous interaction with algorithmically curated information may increase attentional switching and reduce sustained attention because users are repeatedly required to process novel visual and textual stimuli within very short intervals. This process places additional demands on working memory and executive control while simultaneously encouraging rapid rather than reflective information processing (Xu et al., 2023). Consequently, algorithm-driven media environments may contribute not only to emotional consequences but also to broader cognitive outcomes, including attentional regulation and self-control.

Empirical research on doomscrolling has expanded considerably during the past five years, although the majority of studies have primarily examined psychological well-being rather than cognitive functioning. A recent scoping review conducted by Avcı et al. (2026), synthesizing evidence from 50 empirical studies, concluded that doomscrolling is consistently associated with anxiety, depression, psychological distress, stress, and reduced subjective well-being. The review further highlighted that most existing research employs cross-sectional quantitative designs, while experimental and longitudinal investigations remain relatively limited.

Similarly, Kaye and Johnson (2024) argued that doomscrolling is closely associated with uncertainty management and digital information dependence, in which users repeatedly seek negative information despite experiencing emotional discomfort. Their findings indicate that trust in social media and perceived informational uncertainty significantly contribute to prolonged doomscrolling behavior. Meanwhile, Trindade et al. (2024) emphasized that doomscrolling should be understood as a multidimensional digital behavior influenced by technological affordances, individual psychological characteristics, and platform algorithms rather than merely excessive news consumption.

Despite these developments, relatively few studies have investigated the cognitive implications of doomscrolling, particularly its potential influence on attentional regulation among adolescents. Existing research has largely concentrated on emotional outcomes, whereas cognitive processes such as sustained attention, attentional control, executive functioning, and self-regulation remain insufficiently explored. This limitation represents an important gap within the current literature because adolescence is a critical developmental period during which attentional regulation continues to mature while exposure to algorithm-driven media environments increases substantially. Therefore, examining the relationship between doomscrolling and attention regulation may contribute to a more comprehensive understanding of how contemporary digital behaviors influence adolescent cognitive functioning beyond mental health outcomes (Safa, R., 2023; Martinez-Perez, C., 2020).

Attention Regulation

Attention regulation refers to an individual's ability to voluntarily direct, maintain, shift, and control attentional resources in accordance with situational demands and goal-directed behavior. As one of the core components of executive functioning, attention regulation enables individuals to prioritize relevant information while suppressing irrelevant or distracting stimuli, thereby facilitating effective cognitive processing and adaptive behavioral responses (Posner & Rothbart, 2007). Rather than representing a single cognitive ability, attention regulation encompasses multiple attentional processes, including sustained attention, selective attention, attentional shifting, and inhibitory control, all of which work together to support learning, decision-making, communication, and problem-solving (Diamond, 2013).

During adolescence, attention regulation continues to develop alongside the maturation of the prefrontal cortex and executive control systems. This developmental stage is characterized by substantial neurocognitive changes that enhance adolescents' capacity to regulate attention, inhibit impulsive responses, and adapt cognitive resources to increasingly complex environmental demands (Casey et al., 2019). However, because executive functions remain under development, adolescents are particularly susceptible to external environmental influences, including digital media environments that continuously compete for attentional resources (Orben et al., 2024). Consequently, frequent exposure to highly stimulating digital content may influence the efficiency with which adolescents regulate their attention in everyday situations.

Researchers generally conceptualize attention regulation as consisting of several interconnected dimensions. Sustained attention refers to the ability to maintain concentration on a task over an extended period without becoming distracted (Robertson et al., 1997). Selective attention involves prioritizing task-relevant information while filtering out irrelevant stimuli (Posner & Rothbart, 2007). Attentional shifting represents the capacity to flexibly redirect attention between tasks or information sources when necessary. Finally, inhibitory control enables individuals to suppress automatic responses toward distracting stimuli that interfere with goal-directed behavior (Diamond, 2013). Together, these components contribute to effective cognitive self-regulation and adaptive functioning across academic, social, and digital environments.

Attention regulation plays an essential role in adolescents' academic achievement and psychological well-being. Students with stronger attentional regulation demonstrate greater learning efficiency, improved reading comprehension, better working memory performance, and higher levels of academic persistence (Alloway & Alloway, 2010). Beyond educational contexts, attention regulation also facilitates effective interpersonal communication by enabling individuals to maintain conversational focus, interpret verbal and nonverbal cues, and inhibit distractions during social interactions. Conversely, poor attentional regulation has been associated with increased distractibility, impulsivity, cognitive fatigue, emotional dysregulation, and reduced self-control.

The rapid expansion of digital media has introduced new challenges to attentional functioning. Contemporary social media platforms expose users to an uninterrupted sequence of multimedia stimuli—including text, videos, images, notifications, hyperlinks, and advertisements—that require continuous attentional switching within short time intervals (Wilmer et al., 2017). Such environments encourage fragmented patterns of information processing that may reduce individuals' capacity to sustain attention on a single task (Ophir et al., 2009). Although digital multitasking may increase exposure to diverse information, repeated attentional switching imposes additional demands on executive control systems and working memory, potentially reducing cognitive efficiency over time.

Empirical evidence increasingly suggests that problematic digital media use is associated with reduced attentional functioning among adolescents and young adults. A systematic review conducted by Wilmer et al. (2017) concluded that excessive smartphone use was consistently associated with poorer attentional

performance, diminished working memory, and lower executive functioning. Similarly, Orben et al. (2024) argued that social media influences adolescent cognition through mechanisms involving attentional allocation, emotional processing, and reward sensitivity rather than through screen time alone. These findings indicate that digital environments shape cognitive processes by continuously competing for limited attentional resources.

Recent studies have further demonstrated that emotionally salient online content exerts a particularly strong influence on attentional allocation. Information containing elements of fear, uncertainty, conflict, or threat tends to capture attention more rapidly than emotionally neutral information because negative stimuli possess greater evolutionary significance for human survival (Eysenck et al., 2007). Consequently, repeated exposure to distressing online information may increase involuntary attentional capture while reducing individuals' ability to voluntarily regulate attention according to task demands. This mechanism is especially relevant in the context of doomscrolling, where users repeatedly encounter emotionally negative content over prolonged periods.

Despite increasing scholarly interest in digital media and executive functioning, relatively few studies have specifically examined the relationship between doomscrolling and attention regulation. Existing investigations have primarily focused on social media addiction, problematic smartphone use, or excessive screen time without distinguishing the unique cognitive demands associated with compulsive exposure to negative online information. Since doomscrolling combines prolonged media consumption with emotionally threatening content and algorithm-driven information delivery, its influence on attentional regulation may differ from other forms of digital media use. Therefore, examining attention regulation within the context of doomscrolling provides an important opportunity to extend current knowledge regarding the cognitive consequences of contemporary digital media behaviors.

Overall, attention regulation constitutes a critical cognitive mechanism through which adolescents interact with increasingly complex digital environments. Given that doomscrolling repeatedly redirects attentional resources toward emotionally salient information while simultaneously encouraging prolonged engagement with algorithmically curated content, investigating its relationship with attention regulation represents both a theoretically and practically significant area of inquiry. The findings of the present study are expected to contribute to the growing body of literature in digital media psychology by explaining how compulsive consumption of negative online information may influence adolescents' cognitive self-regulation beyond its well-documented effects on mental health.

Theoretical Framework

Information Processing Theory

Information Processing Theory (IPT) explains that human cognition functions through a sequence of stages involving the acquisition, processing, storage, and retrieval of information. Originally proposed by Atkinson and Shiffrin (1968), the theory conceptualizes human cognition as a system with limited processing capacity in which attention serves as the gateway through which external information enters working memory before being encoded into long-term memory. Because cognitive resources are inherently finite, individuals must selectively allocate attention to relevant information while filtering competing stimuli (Atkinson & Shiffrin, 1968; Baddeley, 2012; Cowan, 2010).

Within digital media environments, Information Processing Theory provides an important framework for understanding how continuous exposure to online information influences cognitive functioning. Social media platforms present users with an uninterrupted stream of multimedia stimuli—including text, videos, images, hyperlinks, and notifications—that continuously compete for users' limited attentional resources. As the quantity and complexity of digital information increase, individuals must repeatedly allocate, shift, and reallocate their attention to process new content, increasing the risk of attentional fragmentation and reduced cognitive efficiency (Bawden & Robinson, 2022; Fischer et al., 2021).

Doomscrolling represents a digital behavior that continuously challenges the cognitive mechanisms described by Information Processing Theory. During prolonged scrolling sessions, users are repeatedly exposed to rapidly changing negative information that requires continuous attentional switching, emotional evaluation, and cognitive processing. Rather than engaging in deep information processing, users often perform superficial scanning characterized by frequent transitions between emotionally salient content (Trindade et al., 2024; Fischer et al., 2021). Consequently, habitual doomscrolling may reduce sustained attention and impair adolescents' ability to regulate attention effectively due to the excessive demands placed on limited cognitive resources (Cowan, 2010; Baddeley, 2012).

Cognitive Load Theory

Cognitive Load Theory (CLT), developed by Sweller (1988), proposes that human working memory possesses limited processing capacity. Learning and information processing become less efficient when cognitive demands exceed this limited capacity. The theory distinguishes three forms of cognitive load: intrinsic cognitive load, which reflects the inherent complexity of learning materials; germane cognitive load, which contributes to schema construction and meaningful learning; and extraneous cognitive load, which results from

unnecessary or poorly designed information that interferes with cognitive processing (Sweller, 1988; Sweller et al., 2019; de Jong, 2010).

The characteristics of contemporary digital media frequently generate high levels of extraneous cognitive load. Algorithmically curated social media feeds expose users to rapidly changing news updates, visual content, advertisements, notifications, and emotionally charged information that require continuous cognitive processing within short periods (Paas & Van Merriënboer, 2020; Mayer, 2021). These constant interruptions increase mental effort while reducing the cognitive resources available for sustained attention, comprehension, and goal-directed activities (Kirschner & De Bruyckere, 2017; Junco & Cotten, 2012).

Doomscrolling may substantially increase extraneous cognitive load because users repeatedly consume distressing information without sufficient opportunities for cognitive recovery. Continuous exposure to threatening news encourages repeated cognitive appraisal, emotional evaluation, and attentional switching, all of which consume valuable working memory. Over time, this excessive cognitive burden may impair attentional efficiency by reducing individuals' capacity to maintain concentration while increasing vulnerability to distraction and mental fatigue (Mayer, 2021; Baddeley, 2012). Therefore, Cognitive Load Theory suggests that prolonged doomscrolling may contribute to poorer attention regulation among digital adolescents.

Attention Control Theory

Attention Control Theory (ACT), introduced by Eysenck et al. (2007), explains how emotionally significant stimuli influence the regulation of attention. According to the theory, threatening or anxiety-provoking information captures attentional resources automatically, reducing individuals' ability to voluntarily direct attention toward goal-relevant stimuli. ACT distinguishes between stimulus-driven attention, which is automatically attracted to salient environmental stimuli, and goal-directed attention, which enables individuals to maintain focus on intended objectives despite distractions (Corbetta & Shulman, 2002).

Within digital environments, negative online information possesses particularly strong attentional salience because humans demonstrate an evolutionary tendency to prioritize potentially threatening information. Doomscrolling repeatedly exposes users to emotionally negative news concerning violence, disasters, political conflicts, and public crises. Such information continuously activates stimulus-driven attentional systems, making it increasingly difficult for individuals to disengage from digital content even when they intend to stop scrolling (Soroka et al., 2019). Social media algorithms further reinforce this process by repeatedly recommending emotionally engaging content, thereby prolonging users' exposure to negative information and increasing compulsive scrolling behavior (Cinelli et al., 2021; Kaye & Johnson, 2024).

For adolescents, whose executive control systems are still developing, repeated activation of stimulus-driven attention may gradually weaken voluntary attentional regulation. Frequent exposure to emotionally salient information increases distractibility, reduces attentional persistence, and interferes with inhibitory control mechanisms responsible for maintaining focus on academic, social, and daily tasks (Diamond, 2013; Luna et al., 2015; Casey et al., 2019). Adolescence represents a critical developmental stage during which attentional control and executive functioning continue to mature; therefore, persistent exposure to emotionally stimulating digital environments may place adolescents at greater risk of attentional dysregulation (Steinberg, 2014; Blakemore & Mills, 2014).

Accordingly, Attention Control Theory provides a direct theoretical explanation for why compulsive doomscrolling behavior may impair attention regulation among digital adolescents. Continuous exposure to algorithmically curated negative information not only increases emotional distress but also reduces the availability of cognitive resources required for sustained attention, self-control, and effective information processing.

Theoretical Synthesis

Although Information Processing Theory, Cognitive Load Theory, and Attention Control Theory originate from different areas of cognitive psychology, all three theories consistently suggest that excessive exposure to digitally mediated information places substantial demands on attentional resources. Information Processing Theory emphasizes the limitations of information processing capacity (Atkinson & Shiffrin, 1968), Cognitive Load Theory explains the consequences of excessive demands on working memory during information processing (Sweller, 1988; Paas & Van Merriënboer, 2020), whereas Attention Control Theory focuses on the competition between emotionally salient stimuli and voluntary attentional regulation. Together, these perspectives provide a comprehensive framework for explaining how doomscrolling may interfere with adolescents' cognitive functioning in increasingly complex digital environments (Orben et al., 2024; Xu et al., 2023).

In the present study, doomscrolling is conceptualized as a form of repetitive exposure to algorithmically curated negative information that continuously competes for limited attentional resources. Such exposure is expected to increase cognitive load, encourage frequent attentional switching, and strengthen stimulus-driven attention, thereby reducing adolescents' capacity to regulate attention effectively. Accordingly, this study proposes that higher levels of doomscrolling behavior are associated with lower levels of attention regulation among digital adolescents.

METHODS

Research Design

This study employed a quantitative research approach using a cross-sectional survey design to investigate the effect of doomscrolling behavior on attention regulation among digital adolescents. A quantitative approach was considered appropriate because it enables researchers to examine the statistical relationship between variables and objectively measure the magnitude of the influence of the independent variable on the dependent variable (Creswell & Creswell, 2018). The cross-sectional design was selected because data were collected at a single point in time, allowing the assessment of participants' current doomscrolling behaviors and attention regulation without manipulating the research environment (Setia, 2016).

The conceptual model of this study consisted of one independent variable, doomscrolling behavior (X), and one dependent variable, attention regulation (Y). The proposed relationship between these variables was analyzed using simple linear regression to determine whether doomscrolling behavior significantly predicted adolescents' attention regulation.

Participants

The participants consisted of 200 digital adolescents aged between 15 and 24 years, representing individuals who actively engage with digital technologies and social media platforms in their daily lives. This age range was selected because adolescence and emerging adulthood are developmental stages characterized by intensive social media use and continued maturation of executive cognitive functions, including attentional regulation.

Participants were recruited using purposive sampling based on the following inclusion criteria:

1. Aged between 15 and 24 years.
2. Actively used at least one social media platform (e.g., Instagram, TikTok, X, Facebook, or YouTube).
3. Used social media for a minimum of two hours per day.
4. Had experience consuming online news or information through social media.
5. Voluntarily agreed to participate by providing informed consent.

Individuals who reported diagnosed neurological disorders or attention-related disorders (e.g., Attention-Deficit/Hyperactivity Disorder) were excluded to minimize potential confounding effects on attention regulation.

Research Instrument

Data were collected using a structured self-administered online questionnaire distributed through Google Forms. The questionnaire consisted of three sections: demographic information, the Doomscrolling Scale, and the Attention Regulation Scale.

Doomscrolling Scale

Doomscrolling behavior was measured using an adapted instrument developed based on the conceptual framework proposed by Trindade et al. (2024) and recent empirical studies examining compulsive consumption of negative online information. The scale consisted of 10 items assessing the frequency and intensity of doomscrolling behaviors.

The indicators included:

- compulsive scrolling of negative news;
- difficulty stopping scrolling;
- repeated exposure to distressing information;
- excessive checking of crisis-related news;
- fear of missing important negative information;
- prolonged scrolling duration;
- emotional attachment to negative news;
- repetitive information seeking;
- inability to disengage from negative content;
- habitual doomscrolling before sleeping.

Attention Regulation Scale

Attention regulation was measured using an adapted instrument based on executive attention literature and attentional control frameworks proposed by Posner and Rothbart (2007), Diamond (2013), and Eysenck et al. (2007).

The instrument consisted of 10 items representing four dimensions:

- sustained attention;
- selective attention;
- attentional shifting;
- inhibitory control.

Participants indicated the extent to which each statement reflected their everyday experiences while performing academic, social, and daily activities.

Measurement Scale

All questionnaire items were measured using a five-point Likert scale, ranging from:

Score Response

- 1 Strongly Disagree
- 2 Disagree
- 3 Neutral
- 4 Agree
- 5 Strongly Agree

Higher scores on the Doomscrolling Scale indicated greater engagement in doomscrolling behavior, whereas higher scores on the Attention Regulation Scale indicated better attention regulation abilities.

Instrument Validity and Reliability

Before the primary analysis, instrument quality was evaluated through validity and reliability testing.

Validity Test

Construct validity was examined using Pearson Product-Moment Correlation. Each questionnaire item was considered valid when the corrected item-total correlation exceeded the critical value ($r\text{-count} > r\text{-table}$) at a significance level of 0.05 (Hair et al., 2022).

Reliability Test

Internal consistency was assessed using Cronbach's Alpha. Following Hair et al. (2022), a Cronbach's Alpha coefficient greater than 0.70 indicated acceptable reliability, while coefficients above 0.80 indicated good internal consistency.

Data Collection Procedure

Data collection was conducted over a four-week period through an online survey. The questionnaire link was distributed via social media platforms, including Instagram, WhatsApp, Telegram, and Line communities targeting adolescents and university students.

Prior to completing the questionnaire, participants received an explanation regarding the study's objectives, voluntary participation, anonymity, confidentiality, and data protection. Only participants who provided informed consent were allowed to continue to the questionnaire.

To ensure data quality, duplicate responses were removed based on timestamp verification and response consistency. Incomplete questionnaires were excluded from the final dataset.

Data Analysis

Data were analyzed using IBM SPSS Statistics version 27.

The analysis consisted of several stages.

Descriptive Statistics

Descriptive analysis was performed to summarize participants' demographic characteristics and describe the distribution of doomscrolling behavior and attention regulation.

Classical Assumption Tests

Prior to regression analysis, several assumptions were examined:

- Normality Test using the Kolmogorov–Smirnov Test.
- Heteroscedasticity Test using the Glejser Test.
- Linearity Test using ANOVA for linearity.

Because this study employed only one independent variable, multicollinearity testing was not required.

Inferential Statistics

The relationship between doomscrolling behavior and attention regulation was analyzed using:

- Pearson Correlation Analysis;
- Simple Linear Regression Analysis;
- Coefficient of Determination (R^2);
- t-test to examine the significance of the regression coefficient.

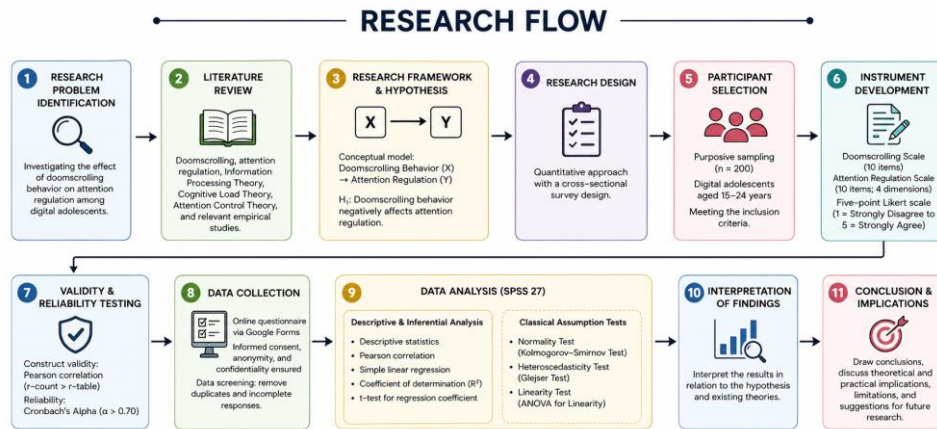


Figure 1. Research Flow

RESULTS AND DISCUSSION

Results

Respondent Characteristics

A total of 200 respondents participated in this study. Among them, 118 (59.0%) were female and 82 (41.0%) were male. The majority of respondents were aged 19–21 years (48.5%), followed by 22–24 years (31.5%), and 15–18 years (20.0%). Regarding social media usage, 67.5% reported spending more than four hours per day on social media platforms, while 32.5% used social media for two to four hours daily. Instagram (87.5%) and TikTok (84.0%) were the most frequently used platforms, followed by YouTube (69.5%) and X (45.5%).

Table 1. Demographic Characteristics of Respondents (N = 200)

Variable	Category	n	%
Gender	Male	82	41.0
	Female	118	59.0
Age	15–18 years	40	20.0
	19–21 years	97	48.5
	22–24 years	63	31.5
Daily Social Media Use	2–4 hours	65	32.5
	>4 hours	135	67.5

Instrument Validity and Reliability

The validity test indicated that all questionnaire items met the required validity criteria, with corrected item-total correlation coefficients ranging from 0.521 to 0.824, exceeding the minimum acceptable threshold. Therefore, all measurement items were retained for further analysis.

Reliability analysis demonstrated satisfactory internal consistency for both constructs. The Doomscrolling Scale obtained a Cronbach's Alpha coefficient of 0.913, while the Attention Regulation Scale achieved a Cronbach's Alpha coefficient of 0.901, indicating excellent reliability according to Hair et al. (2022).

Table 2. Reliability Analysis

Variable	Number of Items	Cronbach's Alpha	Interpretation
Doomscrolling	10	0.913	Excellent
Attention Regulation	10	0.901	Excellent

Descriptive Statistics

Descriptive analysis revealed that respondents demonstrated a relatively high level of doomscrolling behavior ($M = 3.72$, $SD = 0.68$). In contrast, the mean score for attention regulation was 3.21 ($SD = 0.64$), indicating a moderate level of attentional regulation among digital adolescents.

Table 3. Descriptive Statistics

Variable	Mean	SD	Category
Doomscrolling	3.72	0.68	High
Attention Regulation	3.21	0.64	Moderate

Assumption Testing

Prior to hypothesis testing, classical assumption tests were performed. The Kolmogorov–Smirnov test indicated that the regression residuals were normally distributed ($p = .087 > .05$). Furthermore, the Glejser test showed no evidence of heteroscedasticity ($p = .318 > .05$), confirming that the regression model satisfied the assumptions required for linear regression analysis.

Correlation Analysis

Pearson correlation analysis demonstrated a significant negative relationship between doomscrolling behavior and attention regulation ($r = -0.463$, $p < .001$). This finding indicates that adolescents who engaged more frequently in doomscrolling tended to report lower levels of attention regulation.

Table 4. Pearson Correlation

Variables	r	p
Doomscrolling – Attention Regulation	-0.463	< .001

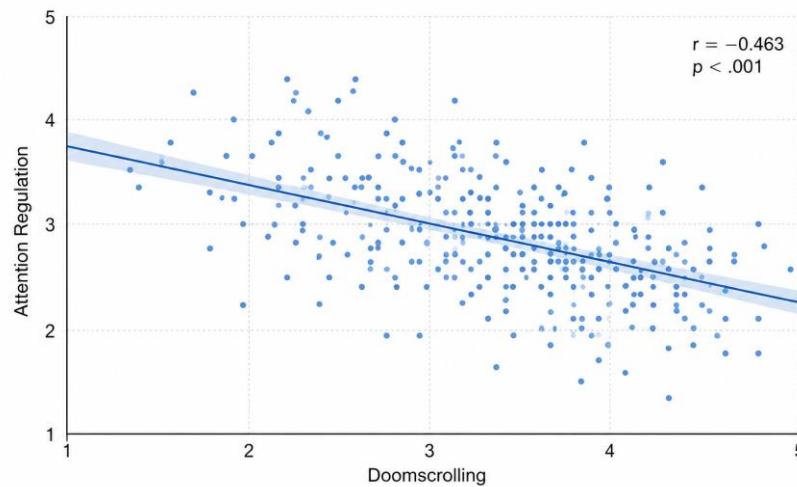


Figure 3. Scatter Plot with Regression Line

Regression Analysis

Simple linear regression analysis was conducted to examine whether doomscrolling significantly predicted attention regulation among digital adolescents.

The regression model was statistically significant, $F(1,198) = 53.96$, $p < .001$, indicating that doomscrolling significantly explained variations in attention regulation.

The standardized regression coefficient revealed a significant negative effect ($\beta = -0.463$, $t = -7.35$, $p < .001$), suggesting that increased doomscrolling behavior was associated with decreased attention regulation.

The coefficient of determination indicated that doomscrolling explained 21.5% of the variance in attention regulation ($R^2 = .215$), while the remaining 78.5% was attributable to other variables not examined in this study.

Table 5. Regression Analysis

Variable	B	β	t	p
Constant	4.812	—	16.28	< .001
Doomscrolling	-0.428	-0.463	-7.35	< .001

Model Summary

R	R^2	Adjusted R^2	F	p
0.463	0.215	0.211	53.96	< .001

Hypothesis Testing

The proposed hypothesis stated that doomscrolling behavior significantly affects attention regulation among digital adolescents. Because the significance value was below 0.05 ($p < .001$) and the standardized regression coefficient was negative ($\beta = -0.463$), H_1 was accepted. The findings indicate that higher levels of doomscrolling are associated with lower levels of attention regulation among digital adolescents.

Discussion

The present study examined the effect of doomscrolling behavior on attention regulation among digital adolescents. The findings revealed that doomscrolling significantly and negatively predicted attention regulation, indicating that adolescents who engaged more frequently in compulsive consumption of negative online information tended to demonstrate lower levels of attentional regulation. These findings support the proposed hypothesis and suggest that excessive exposure to algorithmically curated negative content may interfere with adolescents' ability to sustain, direct, and regulate attention in everyday activities.

One plausible explanation for this finding can be understood through Information Processing Theory (Atkinson & Shiffrin, 1968; Lang, 2000). According to this theory, human cognitive systems possess limited processing capacity, requiring individuals to selectively allocate attention to relevant information while filtering out distractions. In digital environments, however, social media platforms continuously present users with rapidly changing multimedia content that competes for these limited cognitive resources. During doomscrolling, adolescents repeatedly encounter emotionally salient news, short-form videos, images, and headlines that require constant attentional switching. Such repeated reallocation of attentional resources may reduce the efficiency of information processing and impair sustained attention. Therefore, the negative relationship identified in this study is consistent with the theoretical assumption that excessive digital information processing may diminish attentional regulation.

The findings also align with Cognitive Load Theory, which proposes that working memory has limited capacity for processing information (Sweller, 1988; Sweller et al., 2019). Doomscrolling exposes users to continuous streams of emotionally negative and cognitively demanding information without natural opportunities for cognitive recovery. As adolescents process multiple distressing events, compare information across different sources, and respond emotionally to online content, the demands placed on working memory increase substantially. Excessive extraneous cognitive load may reduce cognitive efficiency by consuming mental resources that would otherwise support sustained attention and executive control (Paas & Van Merriënboer, 2020). Consequently, adolescents who frequently engage in doomscrolling may experience greater difficulty maintaining concentration during academic activities, conversations, or other goal-directed tasks.

The present findings further support Attention Control Theory, which argues that emotionally threatening stimuli automatically capture attentional resources and reduce individuals' capacity for goal-directed attentional control (Eysenck et al., 2007). Negative news concerning disasters, violence, political conflict, or economic uncertainty is inherently salient because human cognition evolved to prioritize potentially threatening information. Social media algorithms amplify this tendency by repeatedly recommending similar emotionally engaging content based on previous interactions (Kaye & Johnson, 2024). As a result, adolescents may become increasingly reliant on stimulus-driven attention rather than voluntary attentional control. This mechanism helps explain why frequent doomscrolling is associated with poorer attention regulation, as users experience increasing difficulty disengaging from negative digital content even when they intend to focus on other activities.

The findings are also consistent with previous empirical studies investigating the psychological consequences of doomscrolling. Trindade et al. (2024) argued that doomscrolling should be viewed as a multidimensional digital behavior influenced by technological affordances, emotional responses, and individual cognitive characteristics rather than merely excessive news consumption. Likewise, Kaye and Johnson (2024) reported that uncertainty management and repeated exposure to alarming online information contribute to compulsive scrolling behaviors that are difficult to control. Although these previous studies primarily focused on psychological distress and emotional well-being, the present study extends their findings by demonstrating that doomscrolling is also associated with cognitive self-regulation, particularly attention regulation among adolescents.

Furthermore, the results complement the broader literature examining digital media use and executive functioning. Wilmer et al. (2017) concluded that intensive smartphone use was associated with poorer attentional performance and reduced executive functioning. More recently, Orben et al. (2024) emphasized that the influence of social media on adolescent development should not be understood solely in terms of screen time but rather through the cognitive and emotional mechanisms activated during digital engagement. The present study supports this perspective by suggesting that the manner in which adolescents consume digital information—specifically through repetitive engagement with negative algorithmically curated content—may be more influential than the amount of time spent online alone.

From a communication and media perspective, the findings highlight the important role of algorithm-driven recommendation systems in shaping adolescents' cognitive experiences. Contemporary social media platforms operate within an attention economy, where recommendation algorithms prioritize content that maximizes user engagement rather than cognitive well-being (Zuboff, 2019). Once users interact with distressing information, recommendation systems frequently deliver increasingly similar content, reinforcing repetitive exposure and prolonging scrolling sessions. Such algorithmic personalization may unintentionally

strengthen maladaptive information consumption patterns that compete for users' attentional resources and reduce opportunities for cognitive recovery.

The findings also carry important practical implications. For educators, integrating digital literacy and attention management strategies into school curricula may help adolescents develop healthier information consumption habits. Rather than focusing exclusively on limiting screen time, educational programs should encourage critical evaluation of online information, conscious interruption of compulsive scrolling behaviors, and the development of self-regulation strategies when engaging with digital media. Parents may also play a significant role by promoting balanced digital routines, encouraging offline activities, and modeling mindful technology use within the family environment.

For social media platforms and policymakers, the results suggest the need to reconsider interface features that encourage prolonged exposure to emotionally negative information. Platform design interventions—such as optional scrolling reminders, personalized well-being notifications, or greater transparency regarding recommendation algorithms—may help reduce excessive engagement with distressing content while supporting healthier digital experiences for adolescents. As digital media continue to become increasingly integrated into everyday life, understanding the cognitive consequences of algorithmically curated information environments becomes essential for promoting adolescent well-being.

Despite these contributions, several limitations should be acknowledged. First, the cross-sectional design limits the ability to establish causal relationships between doomscrolling and attention regulation. Longitudinal or experimental studies are therefore recommended to examine changes in attentional functioning over time. Second, the study relied on self-reported questionnaire data, which may be influenced by recall bias or social desirability bias. Future studies may combine self-report measures with behavioral attention tasks or digital trace data to obtain more objective assessments. Finally, attention regulation is influenced by numerous factors—including sleep quality, academic stress, mental health, personality traits, and overall digital media habits—that were not examined in the present study. Including these variables in future research may provide a more comprehensive understanding of adolescents' cognitive functioning in digital environments.

Overall, the present study contributes to the growing literature on digital media psychology by demonstrating that doomscrolling is associated not only with emotional well-being but also with adolescents' cognitive self-regulation. By integrating Information Processing Theory, Cognitive Load Theory, and Attention Control Theory, this research provides a comprehensive explanation of how compulsive exposure to algorithmically curated negative information may reduce attention regulation among digital adolescents. These findings underscore the importance of promoting healthier patterns of digital information consumption to support adolescents' cognitive development in an increasingly algorithm-driven society.

CONCLUSIONS

This study examined the effect of doomscrolling behavior on attention regulation among digital adolescents using a quantitative cross-sectional survey involving 200 respondents. The findings demonstrated that doomscrolling has a significant negative effect on attention regulation, indicating that adolescents who engage more frequently in compulsive consumption of negative online information tend to exhibit lower levels of attentional control. Specifically, increased doomscrolling behavior was associated with reduced ability to sustain attention, filter distractions, shift attention appropriately, and maintain goal-directed cognitive processes. These findings support the proposed hypothesis and provide empirical evidence that doomscrolling is not merely an emotional or behavioral phenomenon but also a cognitive issue that may influence adolescents' executive functioning.

The findings are consistent with Information Processing Theory (Atkinson & Shiffrin, 1968), which suggests that excessive digital information competes for limited cognitive resources, Cognitive Load Theory (Sweller, 1988), which explains how continuous exposure to overwhelming information increases cognitive load and reduces processing efficiency, and Attention Control Theory (Eysenck et al., 2007), which posits that emotionally salient stimuli capture attentional resources and weaken goal-directed attention. Collectively, these theoretical perspectives explain why prolonged exposure to algorithmically curated negative content may impair adolescents' ability to regulate attention in increasingly complex digital environments.

The present study contributes to the growing literature on digital media psychology by extending previous research beyond the emotional consequences of doomscrolling to its cognitive implications. While earlier studies have primarily associated doomscrolling with anxiety, stress, and psychological distress (Trindade et al., 2024), this study demonstrates that compulsive engagement with negative online content is also related to diminished attention regulation. These findings highlight the importance of considering both technological and psychological factors when examining adolescents' interactions with social media platforms.

From a practical perspective, the results suggest that educators, parents, and policymakers should promote healthier digital media habits by encouraging mindful information consumption, strengthening digital literacy, and fostering self-regulation strategies among adolescents. Social media platforms may also contribute

by implementing user-centered features that help reduce excessive exposure to algorithmically recommended negative content and encourage healthier patterns of online engagement.

Despite these contributions, several limitations should be acknowledged. The cross-sectional design limits causal inference, and the use of self-reported data may introduce response bias. In addition, this study examined only one predictor of attention regulation, whereas other factors such as sleep quality, emotional well-being, academic stress, personality traits, and overall digital media use may also influence attentional functioning. Therefore, future studies are encouraged to employ longitudinal or experimental designs, incorporate objective measures of attention, and investigate additional psychological and environmental variables to provide a more comprehensive understanding of the cognitive effects of doomscrolling among adolescents.

ACKNOWLEDGMENT

The author would like to express sincere gratitude to all respondents who voluntarily participated in this study. Their valuable time and willingness to complete the questionnaire made this research possible. The author also extends appreciation to colleagues and reviewers for their constructive comments and suggestions, which helped improve the quality of this manuscript. Finally, the author acknowledges the support provided by the affiliated institution throughout the research process. This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

AUTHOR CONTRIBUTIONS STATEMENT

The author solely conceived and designed the study, conducted the literature review, developed the research instrument, collected and analyzed the data, interpreted the findings, and wrote, revised, and approved the final version of the manuscript. The author takes full responsibility for the content of this article.

REFERENCES

- Akat, M., & Hamarta, E. (2025). *Doomscrolling and social media addiction in adolescents: A two-wave longitudinal study*. *Journal of Addictive Diseases*, 43(4), 377–385. <https://doi.org/10.1080/10550887.2025.2504231>
- Alloway, T. P., & Alloway, R. G. (2010). Investigating the predictive roles of working memory and IQ in academic attainment. *Journal of Experimental Child Psychology*, 106(1), 20–29. <https://doi.org/10.1016/j.jecp.2009.11.003>
- Atkinson, R. C., & Shiffrin, R. M. (1968). Human memory: A proposed system and its control processes. In K. W. Spence & J. T. Spence (Eds.), *The Psychology of Learning and Motivation* (Vol. 2, pp. 89–195). Academic Press. [https://doi.org/10.1016/S0079-7421\(08\)60422-3](https://doi.org/10.1016/S0079-7421(08)60422-3)
- Baddeley, A. D. (2012). Working memory: Theories, models, and controversies. *Annual Review of Psychology*, 63, 1–29. <https://doi.org/10.1146/annurev-psych-120710-100422>
- Bawden, D., & Robinson, L. (2022). *Introduction to Information Science* (3rd ed.). Facet Publishing. <https://doi.org/10.29085/9781783304967>
- Blakemore, S. J., & Mills, K. L. (2014). Is adolescence a sensitive period for sociocultural processing? *Annual Review of Psychology*, 65, 187–207. <https://doi.org/10.1146/annurev-psych-010213-115202>
- Canoğulları, Ö. (2025). *The Effect of Social Media Addiction on Psychological Stress: The Indirect Role of Doomscrolling*. *Kuramsal Eğitim Bilim*, 18(3), 491–508. <https://doi.org/10.30831/akukeg.1586146>
- Casey, B. J., Heller, A. S., Gee, D. G., & Cohen, A. O. (2019). Development of the emotional brain. *Neuroscience Letters*, 693, 29–34. <https://doi.org/10.1016/j.neulet.2017.11.055>
- Cinelli, M., Morales, G. D. F., Galeazzi, A., Quattrocioni, W., & Starnini, M. (2021). The echo chamber effect on social media. *Proceedings of the National Academy of Sciences*, 118(9), e2023301118. <https://doi.org/10.1073/pnas.2023301118>
- Corbetta, M., & Shulman, G. L. (2002). Control of goal-directed and stimulus-driven attention in the brain. *Nature Reviews Neuroscience*, 3(3), 201–215. <https://doi.org/10.1038/nrn755>
- Cowan, N. (2010). The magical mystery four: How is working memory capacity limited, and why? *Current Directions in Psychological Science*, 19(1), 51–57. <https://doi.org/10.1177/0963721409359277>
- Creswell, J. W., & Creswell, J. D. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th ed.). Sage Publications.
- de Jong, T. (2010). Cognitive load theory, educational research, and instructional design. *Instructional Science*, 38(2), 105–134. <https://doi.org/10.1007/s11251-009-9110-0>

- Diamond, A. (2013). Executive functions. *Annual Review of Psychology*, 64, 135–168. <https://doi.org/10.1146/annurev-psych-113011-143750>
- Dominguez-Rodriguez, A., Apprich, F., Friehs, M. A., van der Graaf, S., & Steinrücke, J. (2025). *Climate Change News and Doomscrolling: An Examination of Influencing Factors and Psychological Effects*. *Acta Psychologica*, 255, 104925. <https://doi.org/10.1016/j.actpsy.2025.104925>
- Ehrenreich, S. E., Underwood, M. K., & Ackerman, R. A. (2021). Adolescents' social media use and psychological adjustment: A review of the evidence. *Current Opinion in Psychology*, 44, 58–68. <https://doi.org/10.1016/j.copsyc.2021.08.017>
- Elahi, M., et al. (2022). Recommender systems and personalized social media content: A review. *Information Processing & Management*, 59(6).
- Epstein, Z., Lin, H., Pennycook, G., & Rand, D. (2022). Quantifying attention via dwell time and engagement in a social media browsing environment. *arXiv preprint arXiv:2209.10464*.
- Eysenck, M. W., Derakshan, N., Santos, R., & Calvo, M. G. (2007). Anxiety and cognitive performance: Attentional Control Theory. *Emotion*, 7(2), 336–353. <https://doi.org/10.1037/1528-3542.7.2.336>
- Fischer, T., Cudeck, R., & Klein, P. (2021). Digital information overload and attentional fragmentation in online environments. *Computers in Human Behavior Reports*, 4, 100126. <https://doi.org/10.1016/j.chbr.2021.100126>
- George, M. J., et al. (2025). *More time spent on social media is linked to a thinner cerebral cortex in young adolescents*. *NeuroImage*.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2022). *Multivariate Data Analysis* (9th ed.). Cengage Learning.
- Junco, R., & Cotten, S. R. (2012). No A 4 U: The relationship between multitasking and academic performance. *Computers & Education*, 59(2), 505–514. <https://doi.org/10.1016/j.compedu.2011.12.023>
- Kaya, B., & Griffiths, M. D. (2025). Intolerance of uncertainty and mental wellbeing: The mediating and moderating role of doomscrolling. *Behaviour & Information Technology*, 44(10), 2323–2332. <https://doi.org/10.1080/0144929X.2024.2314747>
- Kaye, B. K., & Johnson, T. J. (2024). I can't stop myself! Doomscrolling, conspiracy theories, and trust in social media. *Atlantic Journal of Communication*, 32(3), 471–483. <https://doi.org/10.1080/15456870.2024.2316844>
- Kirschner, P. A., & De Bruyckere, P. (2017). The myths of the digital native and the multitasker. *Teaching and Teacher Education*, 67, 135–142. <https://doi.org/10.1016/j.tate.2017.06.001>
- Lang, A. (2000). The limited capacity model of mediated message processing. *Journal of Communication*, 50(1), 46–70. <https://doi.org/10.1111/j.1460-2466.2000.tb02833.x>
- Luna, B., Marek, S., Larsen, B., Tervo-Clemmens, B., & Chahal, R. (2015). An integrative model of the maturation of cognitive control. *Annual Review of Neuroscience*, 38, 151–170. <https://doi.org/10.1146/annurev-neuro-071714-034054>
- Martinez-Perez, C., Alvarez-Peregrina, C., Villa-Collar, C., & Sánchez-Tena, M. Á. (2020). Current state and future trends: a citation network analysis of the academic performance field. *International Journal of Environmental Research and Public Health*, 17(15), 5352. <https://doi.org/10.3390/ijerph17155352>
- Mayer, R. E. (2021). *Multimedia Learning* (3rd ed.). Cambridge University Press. <https://doi.org/10.1017/9781108894333.003>
- Meinhardt, L. M., Elhaidary, M., Colley, M., Rietzler, M., Rixen, J. O., Purohit, A. K., & Rukzio, E. (2025, April). Scrolling in the deep: Analysing contextual influences on intervention effectiveness during infinite scrolling on social media. In *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems* (pp. 1-17).
- Murphy, K., et al. (2016). Attention regulation and executive functioning in adolescence. *Developmental Cognitive Neuroscience*, 19, 125–134.
- Nie, M. (2025). Algorithmic addiction by design: big tech's leverage of dark patterns to maintain market dominance and its challenge for content moderation. *arXiv preprint arXiv:2505.00054*.
- Ophir, E., Nass, C., & Wagner, A. D. (2009). Cognitive control in media multitaskers. *Proceedings of the National Academy of Sciences*, 106(37), 15583–15587. <https://doi.org/10.1073/pnas.0903620106>
- Orben, A., Meier, A., Dalgleish, T., Blakemore, S. J., et al. (2024). Mechanisms linking social media use to adolescent mental health vulnerability. *Nature Reviews Psychology*, 3, 407–423. <https://doi.org/10.1038/s44159-024-00307-y>
- Paas, F., & Van Merriënboer, J. J. G. (2020). Cognitive Load Theory: Methods to manage working memory load in the learning of complex tasks. *Current Directions in Psychological Science*, 29(4), 394–398. <https://doi.org/10.1177/0963721420922183>
- Poll, G. H., et al. (2021). Executive function development during adolescence: A systematic review. *Developmental Review*, 60, 100980.

- Posner, M. I., & Rothbart, M. K. (2007). Research on attention networks as a model for the integration of psychological science. *Annual Review of Psychology*, 58, 1–23. <https://doi.org/10.1146/annurev.psych.58.110405.085516>
- Robertson, I. H., Manly, T., Andrade, J., Baddeley, B., & Yiend, J. (1997). Oops! Performance correlates of everyday attentional failures. *Neuropsychologia*, 35(6), 747–758. [https://doi.org/10.1016/S0028-3932\(97\)00015-8](https://doi.org/10.1016/S0028-3932(97)00015-8)
- Safa, R., Edalatpanah, S. A., & Sorourkhah, A. (2023). Predicting mental health using social media: A roadmap for future development. In *Deep learning in personalized healthcare and decision support* (pp. 285–303). Academic Press. <https://doi.org/10.1016/B978-0-443-19413-9.00014-X>
- Setia, M. S. (2016). Methodology series module 3: Cross-sectional studies. *Indian Journal of Dermatology*, 61(3), 261–264. <https://doi.org/10.4103/0019-5154.182410>
- Soroka, S., Fournier, P., & Nir, L. (2019). Cross-national evidence of a negativity bias in psychophysiological reactions to news. *Proceedings of the National Academy of Sciences*, 116(38), 18888–18892. <https://doi.org/10.1073/pnas.1908369116>
- Steinberg, L. (2014). *Age of Opportunity: Lessons from the New Science of Adolescence*. Houghton Mifflin Harcourt.
- Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science*, 12(2), 257–285. https://doi.org/10.1207/s15516709cog1202_4
- Sweller, J., Van Merriënboer, J. J. G., & Paas, F. (2019). Cognitive architecture and instructional design: Twenty years later. *Educational Psychology Review*, 31(2), 261–292. <https://doi.org/10.1007/s10648-019-09465-5>
- Trindade, A. S. C. E., Chaves, K. V., Oliveira, H. P. C., & Sousa, M. R. F. (2024). Doomscrolling: Why do people spend so much time "consuming" content on social media? *Informação & Informação*, 29(2), 56–80. <https://doi.org/10.5433/1981-8920.2024v29n2p56>
- Wilmer, H. H., Sherman, L. E., & Chein, J. M. (2017). Smartphones and cognition: A review of research exploring the links between mobile technology habits and cognitive functioning. *Frontiers in Psychology*, 8, Article 605. <https://doi.org/10.3389/fpsyg.2017.00605>
- Xu, X., et al. (2023). Digital media multitasking and adolescent cognitive functioning: A systematic review. *Computers in Human Behavior*, 145, 107783.
- Zawacki, O., et al. (2023). Algorithmic recommendation systems and adolescent social media engagement: A systematic review. *New Media & Society*.
- Zuboff, S. (2019). *The Age of Surveillance Capitalism*. PublicAffairs.