

Short-Form Video Consumption and Sustained Attentional Stability in Young People

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Abstract

The study of short-form video and attention was designed to explore the relationship between the amount of short-form video that young people consume on a daily basis and two measures of attentional stability (i.e. sustained focus duration and mind-wandering frequency). Using a quantitative cross-sectional survey of 200 participants (14–24 years of age), data were analyzed using Spearman's rank-order correlations, multiple linear regression, and non-parametric group comparisons. The results of the study demonstrated that an increase in short-form video consumption on a daily basis was associated with a decrease in sustained focus duration, and an increase in mind-wandering. These two measures of attentional instability were also highly correlated and predicted by short-form video consumption. After controlling for a number of potential confounding variables (i.e. age, gender, level of education, reading habits), multiple regression revealed that short-form video consumption remained the strongest predictor of attentional instability. Importantly, an analysis of the data by age-group (i.e. adolescents, 14–18 years of age; young adults, 18–24 years of age) revealed that attentional difficulties were reported by the adolescents in the study more frequently than by the young adults. However, there were no reported differences in attentional instability between males and females in the study. Overall, the results of the current study provide support for a number of existing theoretical models of the impact of short-form video on attention and suggest that habitual exposure to fast-paced short-form video, which is curated by algorithms, results in a reduction in attentional capacity.

Keywords: *Short Videos, Reels, Facebook Shorts, Tik Tok, Dopaminergic Reward Conditioning*

Introduction

Short-form video platforms like TikTok, Instagram Reels and YouTube Shorts have become a staple in young people's media consumption. By 2025, TikTok had surpassed 1.6 billion users, and short-form content is now prevalent on most platforms and among different age groups (Wei et al., 2026). These services provide short, algorithmically recommended videos that are designed to keep users engaged by autoplay, never ending scrolls and personalized recommendations. From entertainment to education and advertising, its cognitive and psychological impacts have become a concern (Lin et al., 2024; Nguyen et al., 2025). These platforms might be particularly distracting due to a number of design elements. The continuous scrolling can create "scroll immersion" which is the habit of losing time (Alruwaili, 2025). This format is similar to a variable reward schedule which is used in behavioral addiction, where every swipe could provide novelty or some reward (Sharpe & Spooner, 2025). This can reduce users' tolerance for less demanding tasks over time.

The concern is backed up by empirical research. In a study of 98,299 participants in 71 studies, a meta-analysis

revealed that heavier short-form video consumption was correlated with poorer attention ($r = -.38$) and inhibitory control ($r = -.41$) (Nguyen et al., 2025). A similar review of 23 studies in adolescents and young adults found comparable results, involving impacts on memory and decision-making (Mona et al., 2026). The biological explanation is offered by neuroimaging. Fragmented short-form video led to less memory accuracy than matched long-form video, and less activation of brain regions related to information integration, as well as of less connectivity between attention-related structures than the matched long-form video (Wei et al., 2026). Research into dopamine further supports this idea, as consistent shifts in attention when using these platforms seem to stimulate repetitive dopamine release, which could be referred to as "dopamine-scrolling" (De et al., 2025; Sharpe & Spooner, 2025). It may be especially vulnerable to adolescent and young adults, since the reward circuits mature before the regulatory brain systems, and it affects tasks that have less immediate reward (such as reading or attending lectures). Such patterns are corroborated by behavioural studies. Heavy users of short videos exhibit poorer sustained attention and poor academic performance (Haliti-Sylaj & Sadiku, 2024; Asif & Kazi, 2024), and eye-tracking studies have found that frequent users have shorter, but more numerous fixations and poorer performance on subsequent attentional tasks (Chen et al., 2022). There is some previous research on "Media Multitasking" (Ophir et al., 2009), which found that heavy multitaskers were more likely to be poorer on attention and working memory tasks than light multitaskers were, even though heavy multitaskers were more exposed to multi-stream media. These findings are also echoed in broader research, which has found a correlation between passive social media consumption and poorer academic performance (Lara & Bokoch, 2021) and with short-form video, where users were required to constantly process new stimuli, which increased cognitive load (Paltaratskaya, 2023).

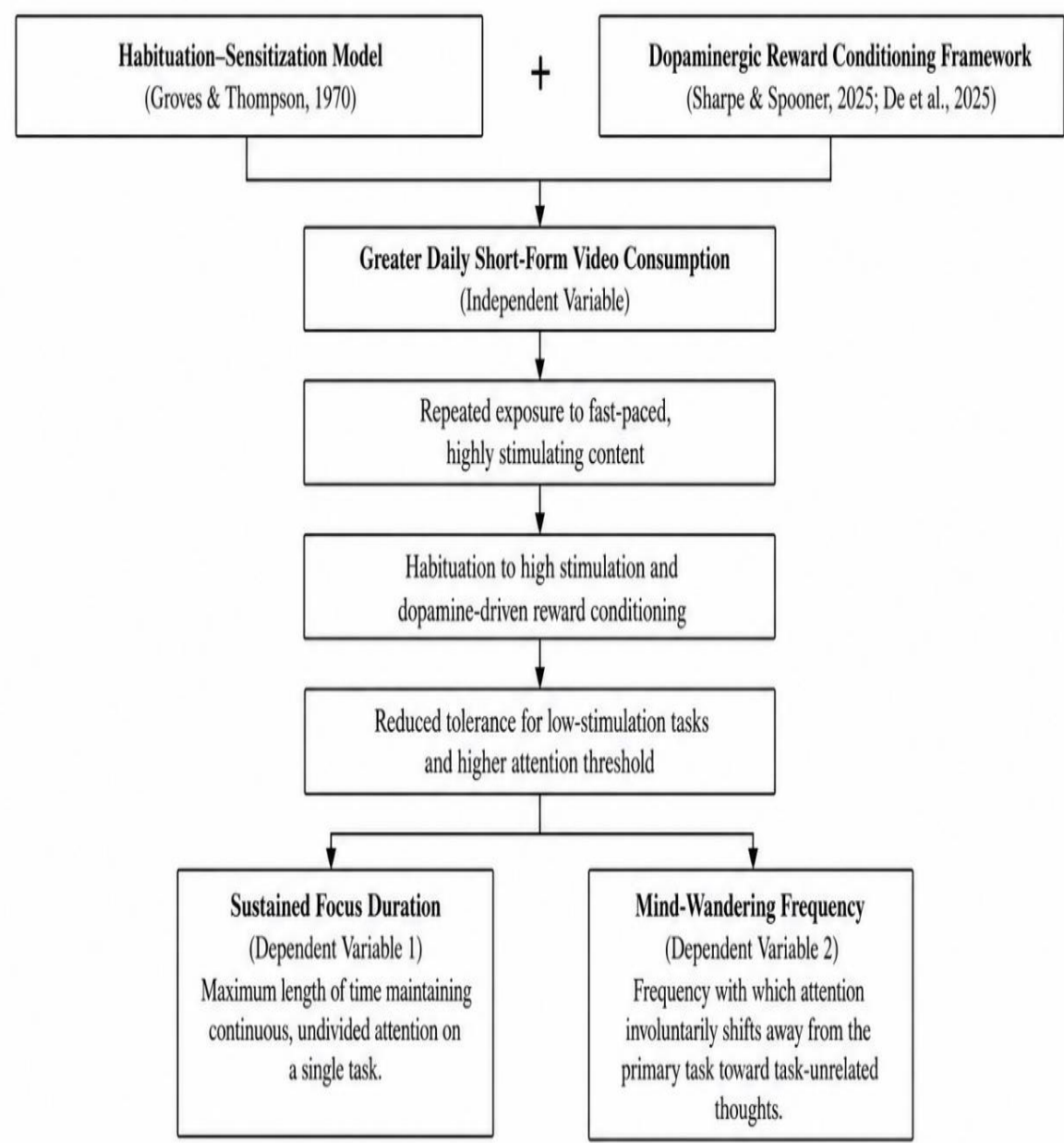
The current study builds on this literature by looking at how sustained attentional stability relates to daily video consumption of short-form videos in 200 youth between the ages of 14-24. Sustained attention is the foundational ability for academic success and learning, as well as for maintaining focus over time (Lin et al., 2024). Present evidence is correlational, and more empirical research is required. In this study, two indicators were examined: sustained focus duration and mind-wandering frequency, both of which were previously found to be important measures of attentional stability that are negatively impacted by fragmented media use (Alruwaili, 2025; Mona et al., 2026). Hypothesis 1: Increasing daily use of short-form videos will relate to a decrease in sustained attention and Hypothesis 2: Increasing daily use of short-form videos will relate to an increase in mind wandering. In a quantitative and cross-sectional design, this study is designed to add empirical evidence to the cognitive toll of the short-form video content, and to provide guidance on how to engage media healthier with young people.

Conceptualization & Operationalization

Theoretical Framework

Figure 1 illustrates the theoretical and conceptual basis of the current study. The framework combines the Habituation–Sensitization Model (Groves & Thompson, 1970) with the Dopaminergic Reward Conditioning Framework (Sharpe & Spooner, 2025; De et al., 2025) to account for the proposed connection between short-form video viewing on a daily basis and attentional outcomes. It suggests that repeated viewing of highly stimulating, algorithmically-picked short-form video content leads to habituation to the high levels of stimulation and dopamine-mediated reward conditioning, meaning that tolerance for low stimulation cognitive tasks will decline, and that the attentional threshold will increase. Such mechanisms are thought to underlie decreased sustained attention and more mind-wandering.

Figure 1
Theoretical and Conceptual Framework of the Study



Note. The framework proposes that greater daily short-form video consumption leads to repeated exposure to highly stimulating content, resulting in habituation and dopamine-mediated reward conditioning. These mechanisms reduce tolerance for low-stimulation cognitive tasks and increase the attentional threshold, ultimately contributing to shorter sustained focus duration and more frequent mind-wandering.

Operationalization of Study Variables

Variable	Operational Definition	Measurement Item	Response Scale	Level of Measurement
Daily Short-Form Video Consumption (IV)	Average daily time spent watching short-form videos over the past month.	"On a typical day over the past month, approximately how many hours have you spent watching short-form videos?"	Less than 1 hour; 1–2 hours; 3–4 hours; 5–6 hours; More than 6 hours	Ordinal
Sustained Focus Duration (DV1)	Maximum time a participant can maintain attention on a non-preferred task before attention drifts.	"When working on a single, non-preferred task without external interruptions, how long can you typically maintain focused attention?"	Less than 5 minutes; 5–15 minutes; 15–30 minutes; 30–60 minutes; More than 60 minutes	Ordinal
Mind-Wandering Frequency (DV2)	Frequency with which attention shifts from the primary task to unrelated thoughts.	"How often does your mind wander or drift away from lectures or study tasks to unrelated thoughts?"	Never; Rarely; Sometimes; Often; Almost Always	Ordinal

Additional Descriptive Variables

Demographic and media use variables such as age (14-16 years, 16-18 years, 18-20 years, 20-22 years, 22-24 years), gender, education level, platform preference (Instagram Reels, YouTube Shorts, TikTok, Facebook Shorts), and reading frequency were gathered descriptively. Four other items were designed to reflect self-reported experiences of attention: trouble concentrating on something, having to re-read text, doing things without trying to focus your attention and listening half attentively. These are included for exploratory description and not as a validated scale.

Significance of the study

This study is of significance both academically and practically as short-form videos have become a common practice among young people. Previous studies have already demonstrated that heavy users suffer from attentional problems (Nguyen et al., 2025; Haliti-Sylaj & Sadiku, 2024) and most of the work focuses on the attention outcome only. Considering the sustained focus duration and mind-wandering frequency simultaneously, this study provides a comprehensive understanding of attentional instability, especially in adolescence and early adulthood, when the brain's attention systems are still maturing and highly susceptible to the influence from the environment (Mona et al., 2026).

The results are also applicable. Sustained attention is the basis of reading, comprehension of lectures, and overall academic performance (Lin et al., 2024), so grasping its relationship with watching videos may help educators develop a more effective approach to supporting students, such as study space modifications or digital literacy courses. The findings also apply to other people treating the youth, as attention issues are seen across a broad spectrum of conditions such as depression, anxiety, and ADHD, and even an assessment of the youth's media use may become a part of their clinical assessment.

In the broader context, this research contributes to the existing debate on the impact of platform design, specifically designed for maximizing engagement, on cognitive health, and provides evidence for improved public guidance or platform accountability. Methodologically, the study's sample size of 200 persons and the

use of Spearman's rank correlation of ordinal data is descriptive and has a good replicable approach that can be followed by future studies on this topic.

Objectives of the Study

1. To assess the prevalence and patterns of daily short-form video consumption among young people aged 14-24.
2. To examine the relationship between daily short-form video consumption and sustained focus duration among young people.
3. To examine the relationship between daily short-form video consumption and mind-wandering frequency among young people.

Hypothesis

H1: There is a statistically significant negative correlation between daily short-form video consumption and sustained focus duration among young people aged 14-24. That is, as daily short-form video consumption increases, sustained focus duration decreases.

H2: There is a statistically significant positive correlation between daily short-form video consumption and mind-wandering frequency among young people aged 14-24. That is, as daily short-form video consumption increases, mind-wandering frequency increases.

Literature Review

Haliti-Sylaj & Sadiku (2024)

One of the most directly relevant investigations was carried out by Haliti-Sylaj and Sadiku (2024), who looked at the effect of short-form video reels on attentional capacity among 150 college students. According to their study, those who consumed short-form video content on TikTok and Instagram Reels on a regular basis were “significantly less able to sustain attention,” than those who watched it less. This attention decrement was not only a subjective impression, but was supported by objective performance measures indicating that the heavy reels consumers' concentration was poorer on academic tasks. Critically, the effects of attention were found to be statistically relevant for variance in academic GPA, accounting for around 25%. This means that attentional effects of high viewing levels also have measurable effects in academic performance. The results of this study directly support the hypothesis of the present study and they confirm that short video consumption has measurable and tangible impacts on the type of sustained attention needed for learning at university level.

Asif & Kazi (2024)

Asif and Kazi (2024) investigated the correlation between consumption of short videos and attention span and academic performance of university students. Their quantitative study identified a significant negative correlation between hours spent on short video platforms and self-reported attention capacity, such that there was a linear decline in attention capacity in their reported study sessions, and more attentional lapses reported over time with higher video hours. Furthermore, students who engaged with short reels for more time reported significantly lower GPAs, further confirming the educational cost of heavy platform involvement. The authors concluded that the cognitively fragmented nature of short-form content could start to redefine attentional habits in ways that will ultimately have a negative effect on extended concentration necessary for academic achievement. This research is of specific relevance because it utilizes a procedure similar to that used in the present study, with self-report survey instruments and students at universities.

Chen et al. (2023)

A controlled experimental study was carried out by Chen, Li, Guo, and Wang (2023) to investigate the impact of short-form video addiction on attention. The researchers found that those who were deemed addicted to short form video had more fixations but shorter fixation durations when viewing content, suggesting a pattern of discontinuous visual attention. These participants also exhibited poorer attention functioning on attention tasks given after the videos, indicating that watching short-form videos is not just associated with poor attention, but that it actually disrupts attention in the short-term. The tendency to scan behavior generated by the viewing of short video formats seems to permeate into other mental domains, and results in poorer attentional engagement even when the platform is not in use.

Ophir, Nass & Wagner (2009)

A famous study by Ophir, Nass, and Wagner (2009) in the Proceedings of the National Academy of Sciences laid the groundwork for an empirical relationship between heavy media multitasking and diminished cognitive control. The researchers tested heavy and light media multitaskers using a series of cognitive tests and discovered that the heavy media multitaskers experienced significant deficits on tests of task switching, attentional filtering and working memory capacity. Interestingly, despite their extensive exposure to media-rich environments, heavy multitaskers did not perform better on this task than did light multitaskers. The authors found that repeated exposure to fast-paced, multi-source stimuli led to a shift in the brain's ability to recruit the general pattern of broad attention instead of focussed, sustained attention. This study was conducted before TikTok and Instagram Reels, but the results can be understood in terms of how the algorithmically paced short-video content might produce similar deficits in attention in today's Gen Z users.

Lara, R. S., & Bokoch, R. (2021)

The study carried out by Lara, R. S., & Bokoch, R. (2021) was a quantitative study that examined the relationship between the frequency of using social media, and academic performance among university students. They discovered that the more they used social media, the lower their academic GPA scores, and that passive use (scrolling, watching videos) was the most negatively correlated with academic outcomes. The present study is important since it shows that watching quick video content on TikTok and Instagram Reels tends to be a passive activity. The results highlight the need to clearly identify the qualitatively different ways in which social media is used to understand their cognitive impacts, and suggest that watching short videos passively is the most vulnerable for attentional and academic damage.

Research Archive of Rising Scholars (2025):

A recent study, published in the Research Archive of Rising Scholars (2025), investigated the effect of social media on the cognitive functioning of participants in the Generation Z by using an experimental design that required participants to do cognitive tasks measuring memory, attention span and problem-solving before and after 30-minute sessions of short-form content consumption. Results showed that after exposure to the contents, there was a significant reduction in performance in all the cognitive tasks, with the reduction effects being greater among those participants who reported higher social media use at the baseline. This discovery is especially significant as it indicates that the effects of short-form video are not just a week or even a month on week after viewing, but can be observed within a single short session, thus highlighting the importance of comprehending the impact of daily viewing habits.

3.3.1 Sharpe & Spooner (2025)

Dopamine-scrolling is the compulsive scrolling through social media and its effects on attentional capacity and well-being were examined by Sharpe and Spooner (2025). The authors state that short-form video platforms are designed to trigger a variation in reward schedules, giving audiences a little dopamine with

every new video and scroll. This neural mechanism closely parallels the reinforcement schedules used in behavioral addiction, and there is a progressive increase in the amount of stimulation necessary to engage attention. This leads to an increasing inability to pay attention to tasks that provide slower, less immediately rewarding feedback, which is the kind of feedback found in academic reading, lecture attendance and writing essays. This effect is even more pronounced when autoplay, infinite scroll and personalised recommendation algorithms are used, because they remove the natural pause points for attentional recovery.

Paltaratskaya (2023)

In her doctoral dissertation (2023) at the University of Illinois at Urbana-Champaign, Paltaratskaya explores the impact of short-form video applications on cognitive load and time perception. These applications were found to significantly increase the cognitive load when using them, since they involve having to process and evaluate new stimuli with every change of the videos. It was observed that this frequent shifting of attention from one cognitive state to another negatively affected users' capacities for deep thinking and deliberate processing. The brain receives regular short bursts of information, and it increasingly fails to process information slowly enough or with effort to accomplish academic work. For heavy users, Paltaratskaya also found that they perceived time passing differently, generally under-estimating the amount of time that passed during the use of these apps, which aligns well with the attention capturing and immersive nature of the platforms.

Xiong et al. (2024)

In their systematic review, Xiong et al. (2024) investigated the psychological and behavioural underpinnings of problematic short-form video platform use. The authors suggested a multi-dimensional framework that indicates that individual characteristics, social/environmental factors, and platform design features are likely to interact, such as exposure to excessive personalised platform content via algorithmic algorithms and continuous scrolling. The review found that these characteristics provide strong reinforcement that leads to increased engagement, curiosity and over-consumption of media. These patterns can lead to problems with paying attention, poor self-regulation, and a greater risk for problematic use, especially for adolescents and young adults, over time. This point was emphasized by the authors, who believe the ease and the quality of short-form video platforms need to be explored more by researchers and clinicians, due to its impact on cognitive functions and mental health.

Nguyen et al. (2025)

To date, Nguyen et al. (2025) have performed the first systematic review and meta-analysis to thoroughly investigate the cognitive and mental health effects of short-form video (SFV) consumption. Collecting evidence from research on platforms like TikTok, Instagram Reels, YouTube shorts and Douyin, the authors identified commonalities in the associations with higher short-form video consumption and negative cognitive outcomes, such as lower attention span, poor cognitive control, media problematic consumption and mental health problems. The endless scrolling interface, quick transitions and content algorithmic personalisation developed by platforms for short form video can foster habit behaviours, cognitive overload and hence attentional disruption, it was concluded in the review. While more research is required to establish causal links, the authors noted that the corpus of evidence is quite compelling to suggest that excessive consumption of short-form video is detrimental to attentional functioning. This meta-analytic evidence will greatly support the theoretical assumptions and hypotheses of the present study because it shows that attentional impairment is a constant phenomenon in a wide range of populations and studies.

Research Archive of Rising Scholars (2025)

This comprehensive systematic review, published on medRxiv (2025), drew conclusions from studies included across eight of the main databases (PsycINFO, PubMed, Scopus, and CINAHL) that considered the cognitive and mental health effects among adults (18 to 29 years old) using short-form video. A consistent theme emerged through the review: Increased use of short videos was consistently correlated with decreased attention span and inhibitory control. The authors used the habituation and sensitization theoretical model to account for these cognitive results, suggesting that repeated exposure to stimulating content with high-speed creates sensitization to slower, more effortful cognitive tasks. The review suggests that there is consistent evidence that the consumption of short-form video is a significant risk factor for attentional problems among young adults in the present generation (Gen Z), which further supports the theoretical basis of the present study.

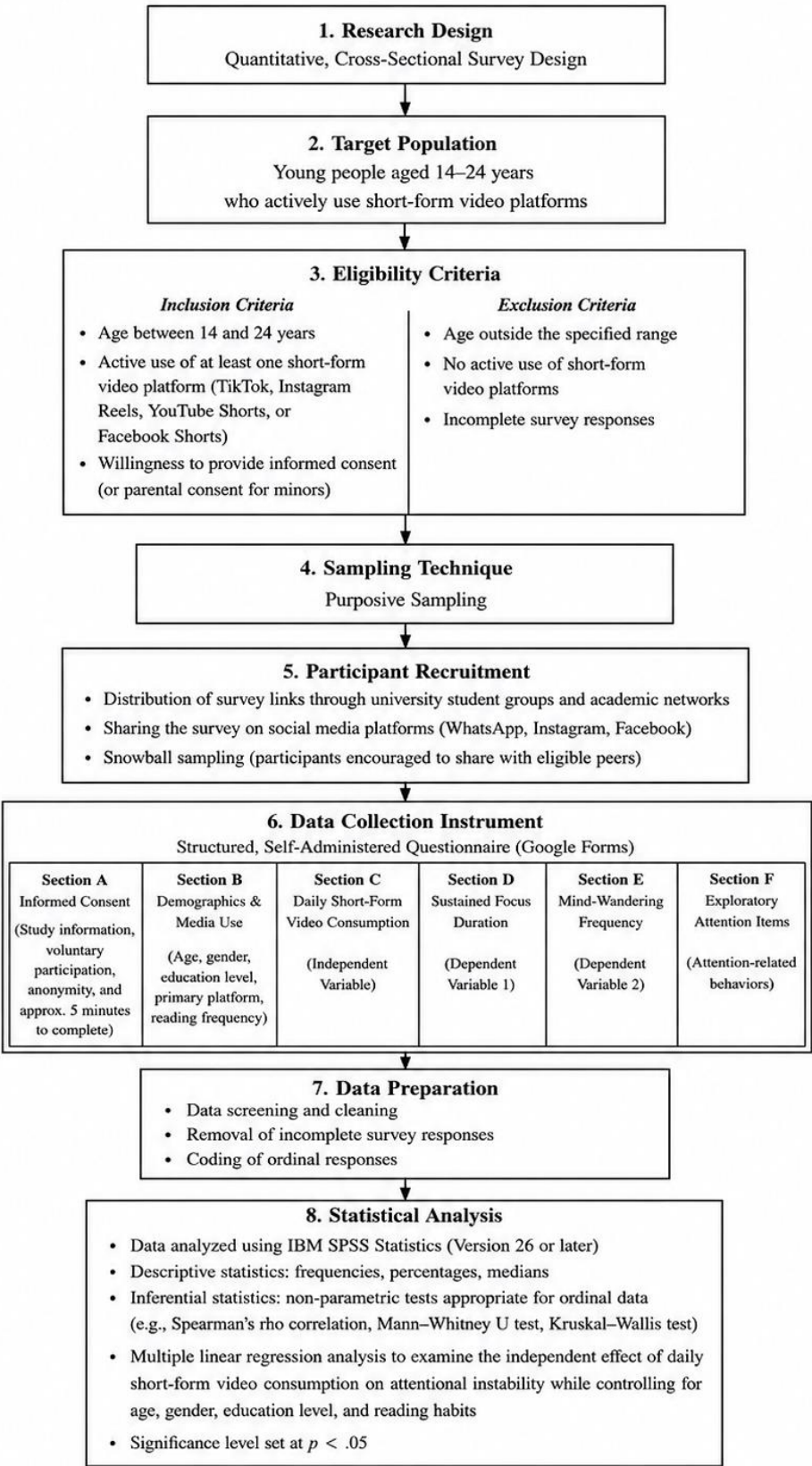
Research Gap and Rationale for the Present Study

The literature examined yielded converging evidence that viewing shorter-form videos is associated with attentional impairment, but there are a number of important gaps. First, most studies to date have focused on attention as a single measure whereas the present study concurrently measures two attention indicators: duration of sustained attention and frequency of mind-wandering. Secondly, most research has used cognitive measures or scales self-reported by the participants; the present study uses self-reported behavioral indicators based on real-world academic contexts. Third, a specific focus on the 14-24 age range has been limited in research, which marks this period as being particularly prone to neural plasticity and attentional habituation as a result of media exposure (Mona et al., 2026). Fourth, few studies have systematically evaluated the dose-response association between hours of use and attentional outcomes, and many use binary categories of heavy versus light use.

The present study attempts to overcome these limitations by using a quantitative cross-sectional design with 200 youth as a sample, as well as by testing directional hypotheses using Spearman's rank correlation, and by studying both the duration of the focus and mind-wandering as independent attentional indicators. This research thus advances the literature on the effects of digital media in an empirical way and offers practical implications for educators, clinicians, and policymakers who are interested in the attentional health of the digital age.

Methodology

Figure 2
Research Procedure of the Study

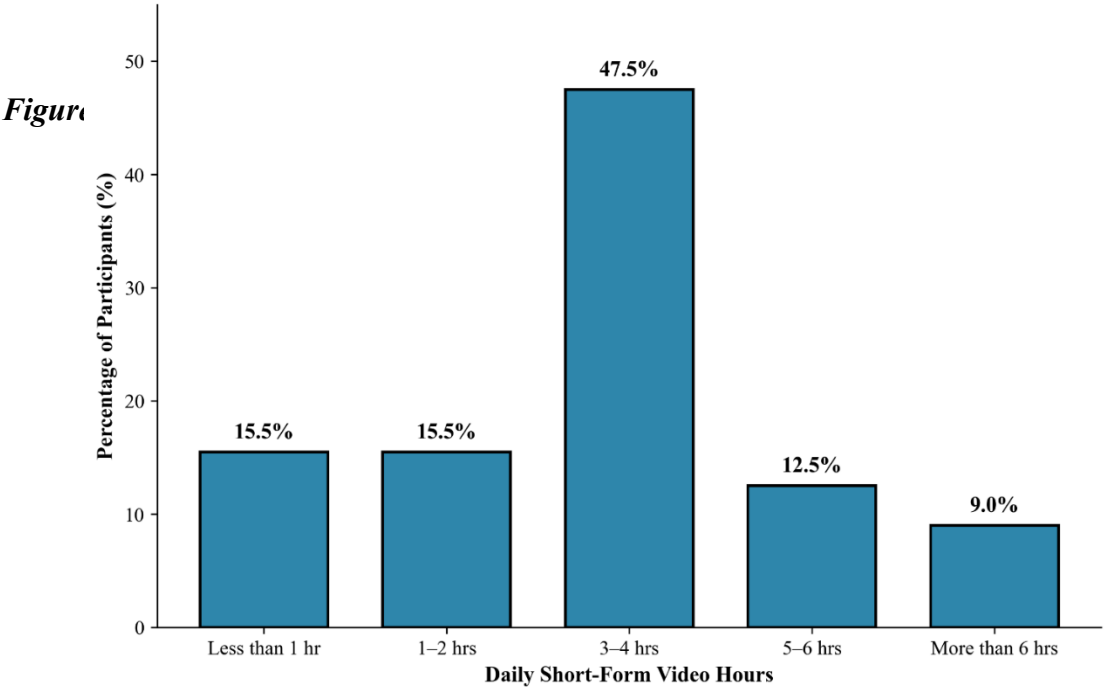


RESULTS

Descriptive Statistics

The study included 200 participants: 103 females (51.5%) and 97 males (48.5%). The majority of them were in the age group 20-24 and less were in the age group of 18-24. Almost half (44.5%) came from Bachelor's students while the remaining students were from college, master's and secondary or middle school. The top three platforms used were Instagram Reels (58.5%), TikTok (20.0%) and Facebook Shorts (17.0%), followed by YouTube Shorts (4.5%). Almost half of participants (47.5%) watched short-form video for 3–4 hours a day. In regards to attention, slightly more than half (51.5%) were able to only maintain attention for 5-15 minutes. 61.5% sometimes, 27.0% often did mind-wandering, and only a small minority seldom (7.0%) or rarely (4.5%) did.

Figure 3. Distribution of Daily Short-Form Video Consumption Among Participants (N = 200)
Note. N = 200. Participants reported their typical daily consumption of short-form videos over the past month.



Over the past month, participants indicated their average use of short-form videos (TikTok, Instagram Reels, YouTube Shorts). The majority of participants (47.5%) reported watching 3-4 hours everyday, with fewer in the lower and higher levels of consumption. Descriptive statistics for all the demographic and study variables are summarized in Table 1.

Table 1*Frequencies and Percentages for Demographic and Primary Variables (N = 200).*

Variable	Category	<i>n</i> (%)
Age	14-16	18 (9.0)
	16-18	26 (13.0)
	18-20	29 (14.5)
	20-22	87 (43.5)
	22-24	40 (20.0)
Gender	Male	97 (48.5)
	Female	103 (51.5)
Education	Middle School	10 (5.0)
	Secondary School	17 (8.5)
	College (Grades 11–12)	37 (18.5)
	BS/Bachelor's	89 (44.5)
	Master's	35 (17.5)
	Other	12 (6.0)
Daily Short-Form Video Hours	Less than 1 hour	31 (15.5)
	1–2 hours	31 (15.5)
	3–4 hours	95 (47.5)
	5–6 hours	25 (12.5)
	More than 6 hours	18 (9.0)
Platform	Instagram Reels	117 (58.5)
	YouTube Shorts	9 (4.5)
	TikTok	40 (20.0)
	Facebook Shorts	34 (17.0)
Sustained Focus Duration	Less than 5 minutes	20 (10.0)
	5–15 minutes	103 (51.5)
	15–30 minutes	51 (25.5)
	30–60 minutes	21 (10.5)
	More than 60 minutes	5 (2.5)
Mind-Wandering Frequency	Never	9 (4.5)
	Rarely	14 (7.0)
	Sometimes	123 (61.5)
	Often	54 (27.0)
	Almost Always	0 (0.0)
<i>Note. N = 200.</i>	Percentages may not sum to	100% due to rounding

Figure 4. Distribution of Sustained Focus Duration Among Participants (N = 200)
Note. N = 200. Participants reported how long they could maintain focused attention on a non-preferred task.

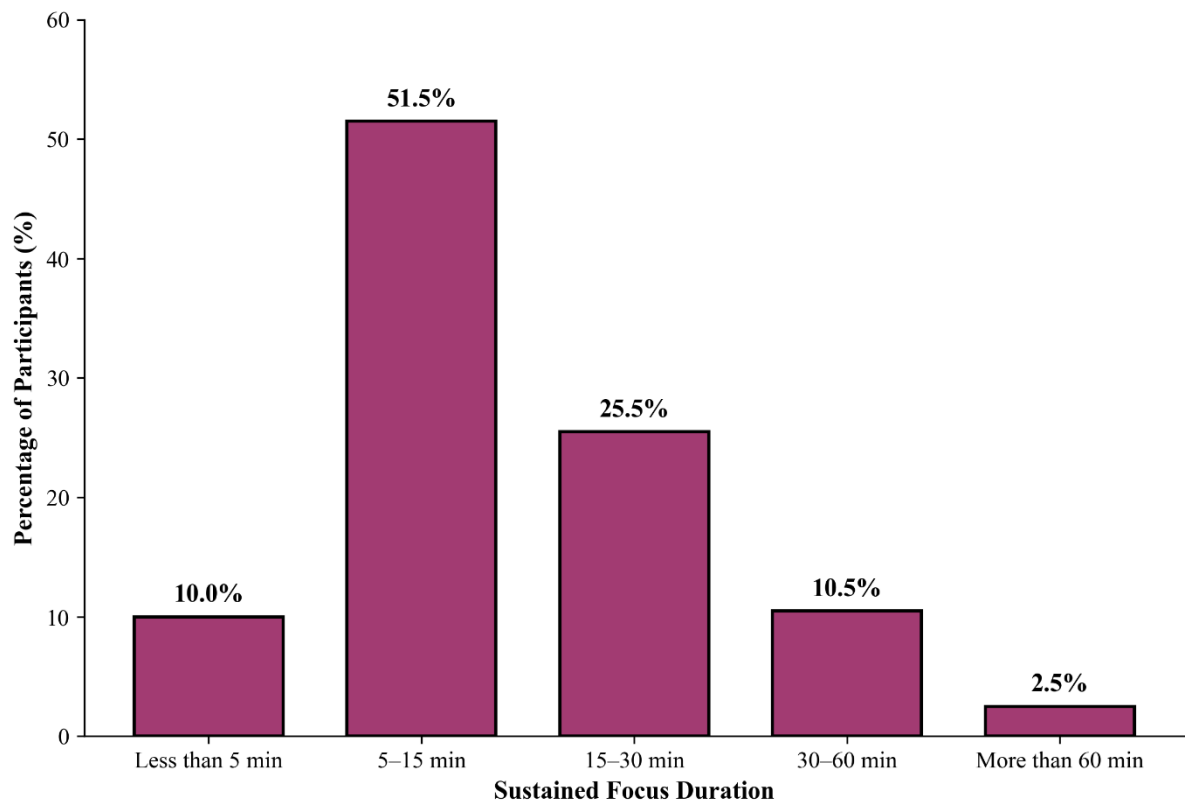


Figure 4. Participants stated the duration they were able to keep their attention focused on a task they did not like without any external interruptions. More than half of the samples (51.5%) said they could maintain their attention for about 5-15 minutes, and even fewer reported that they could maintain attention for a longer duration.

Figure 5. Distribution of Primary Platform Preference Among Participants (N = 200)
Note. N = 200. Participants selected the platform they use most frequently for watching short-form videos.

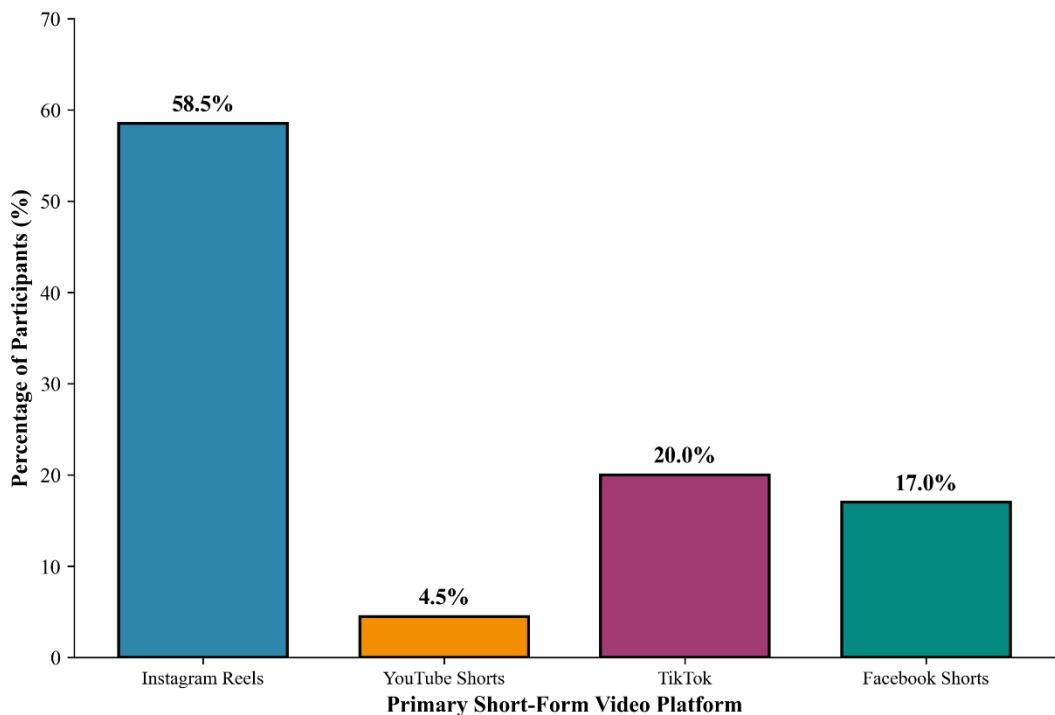


Figure 5. The platform used by the participants for watching short videos was indicated. Instagram Reels was the most used (58.5%), followed by TikTok (20.0%), Facebook Shorts (17.0%), and YouTube Shorts (4.5%).

Figure 6. Age Distribution of Participants (N = 200)

Note. N = 200. Participants ranged from 14 to 24 years of age.

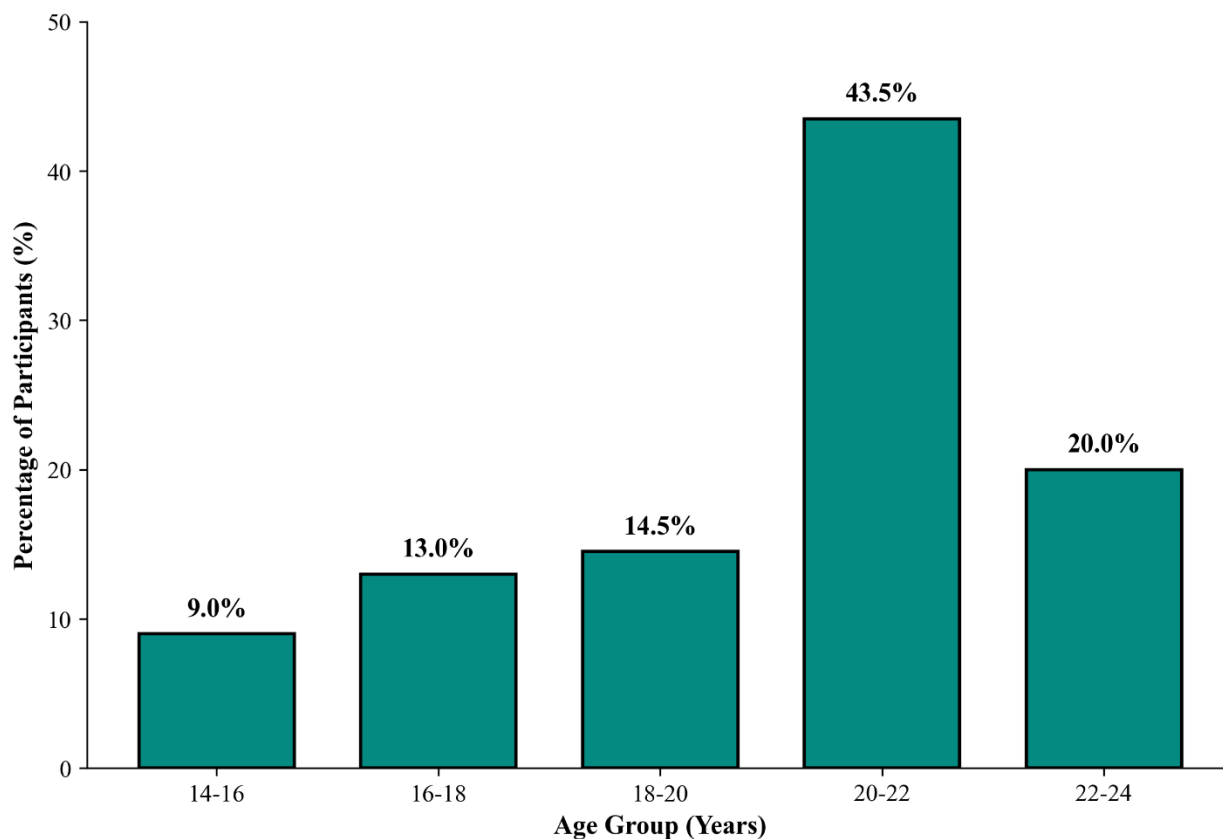


Figure 6. The age of the participants was between 14 and 24 years. The majority of participants fell within the 20–22 age range (43.5%), followed by 22–24 (20.0%), 18–20 (14.5%), 16–18 (13.0%), and 14–16 (9.0%).

Figure 7. Distribution of Mind-Wandering Frequency Among Participants (N = 200)

*Note. N = 200. Participants reported how often their mind wanders during lectures or study tasks.
The "Almost Always" category had zero responses and is excluded.*

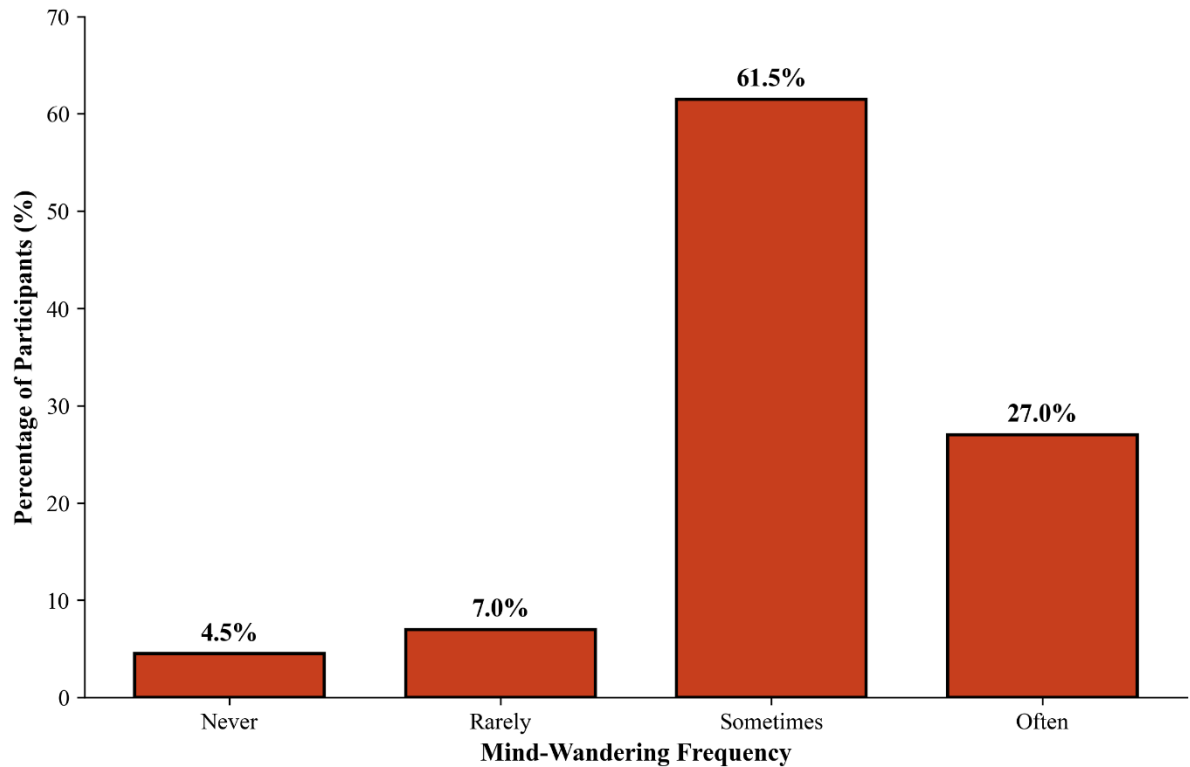


Figure 7. Participants reported on the frequency they experience their mind wandering during lectures and during study tasks. Most reported being distracted from their thoughts by their mind wandering “Sometimes” (61.5%) or “Often” (27.0%), with relatively small numbers reporting “Rarely” (7.0%) and “Never” (4.5%). Since there were no responses in the "Almost Always" category, it has been omitted.

Reliability Analysis

To test the internal consistency of the 4 exploratory attention items (MWQ_1 - MWQ_4) Cronbach's alpha was computed. Good internal consistency ($\alpha = .720$) was found, which suggests that the items are measuring a single construct of self-reported attentional difficulties. The results are given in Table 2.

Table 2: Cronbach's alpha

Measure	Value
Cronbach's Alpha	.720
Number of Items	4

Note. *N = 200. Cronbach's alpha indicates acceptable internal consistency for the four exploratory attention items (MWQ1–MWQ4).*

Spearman's Rank Correlation

Spearman's rank order correlation was calculated to investigate the relationships between daily short-form video viewing, prolonged attention span and mind-wandering rate. Daily short-form video viewing showed a statistically significant negative correlation with sustained focus duration ($r = -.257$, $p < .001$), suggesting

that higher levels of daily video viewing was correlated with lower sustained focus duration. MWF was also positively correlated with daily video consumption ($r_s = .483$, $p < .001$). In addition, the duration of focused attention was inversely related to the frequency of mind-wandering ($r_s = -.199$, $p < .001$).

Table 3

Spearman's Rank-Order Correlation Matrix for the Primary Study Variables

Variable	1	2	3
Daily Short-Form Video Hours	1.000		
Sustained Focus Duration (Reversed)	-.257**	1.000	
Mind-Wandering Frequency	.483**	-.199**	1.000

Note. Correlation is significant at the 0.01 level (2-tailed). $N = 200$ for all correlations. Higher scores on Sustained Focus Duration (Reversed) indicate shorter focus duration.

Figure 8. Spearman's Correlation Heatmap of Primary Study Variables (N = 200)

Note. $N = 200$. All correlations with absolute values > 0.199 are significant at $p < .01$.
Focus Duration is reversed coded (higher scores = shorter focus).

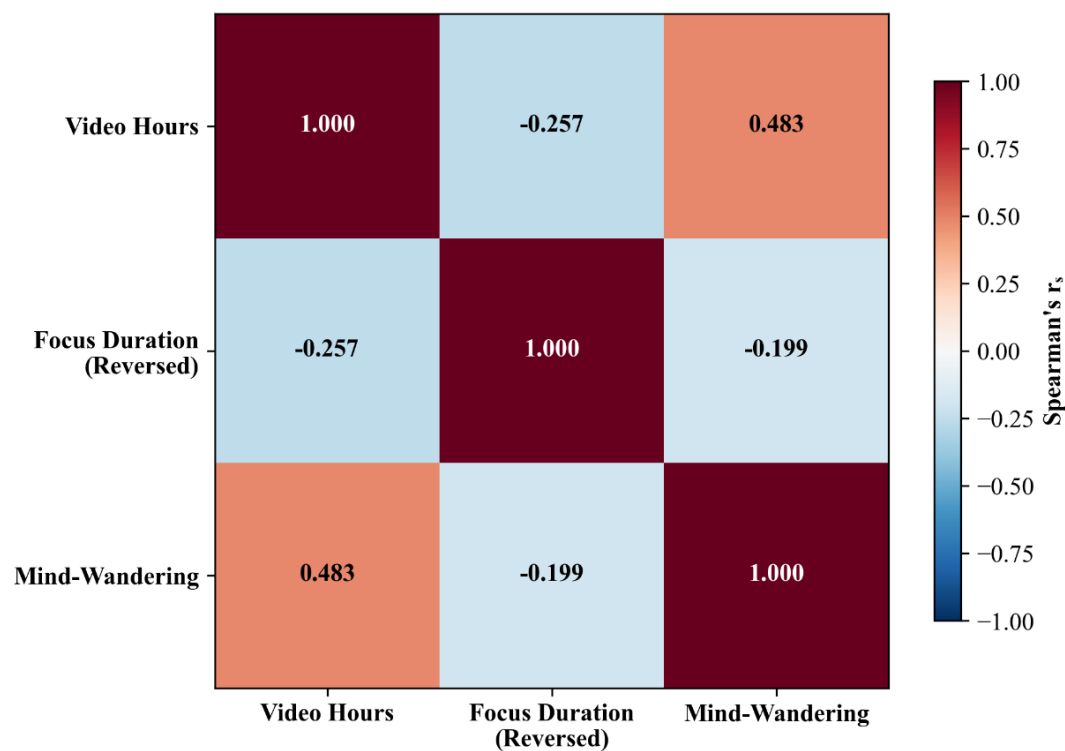


Figure 8. The heatmap shows the correlation values (r_s) between time spent on short-form video viewed daily, sustained attention (reversed coded), and mind-wandering frequency. A significant negative correlation was found between daily consumption of short-form videos and sustained focus ($r_s = -.257$, $p < .001$), while there was a significant positive correlation between daily consumption of short-form videos and mind-wandering

frequency ($r_s = .483$, $p < .001$). Focus Duration is reverse coded (higher scores = less focused). Significant ($p < .01$) values for the correlation with absolute values larger than .199 are indicated.

H1: Video Hours and Sustained Focus Duration

A statistically significant negative correlation was found between daily short-form video consumption and sustained focus duration, $r_s = -.257$, $p < .001$. Indicating higher video consumption was associated with shorter sustained focus duration thus supporting the hypothesized direction.

H2: Video Hours and Mind-Wandering Frequency

A statistically significant positive correlation was found between daily short-form video consumption and mind-wandering frequency, $r_s = .483$, $p < .001$. Indicating higher video consumption was associated with more frequent mind-wandering thus supporting the hypothesized direction.

Supplementary Analysis: Composite Score

A composite Attentional Instability score was created by averaging the four items on attention (MWQ1–MWQ4). There was a strong positive correlation between the daily short-form video consumption and attentional instability, as indicated by Spearman's rank-order correlation ($r_s = .695$, $p < .001$). The results are shown in Table 4.4

Figure 9. Scatter Plot of Daily Video Hours and Attentional Instability (N = 200)

Note. N = 200. Attentional Instability is a composite score of four attention items (MWQ1–MWQ4).

****Correlation is significant at the 0.01 level (2-tailed).**

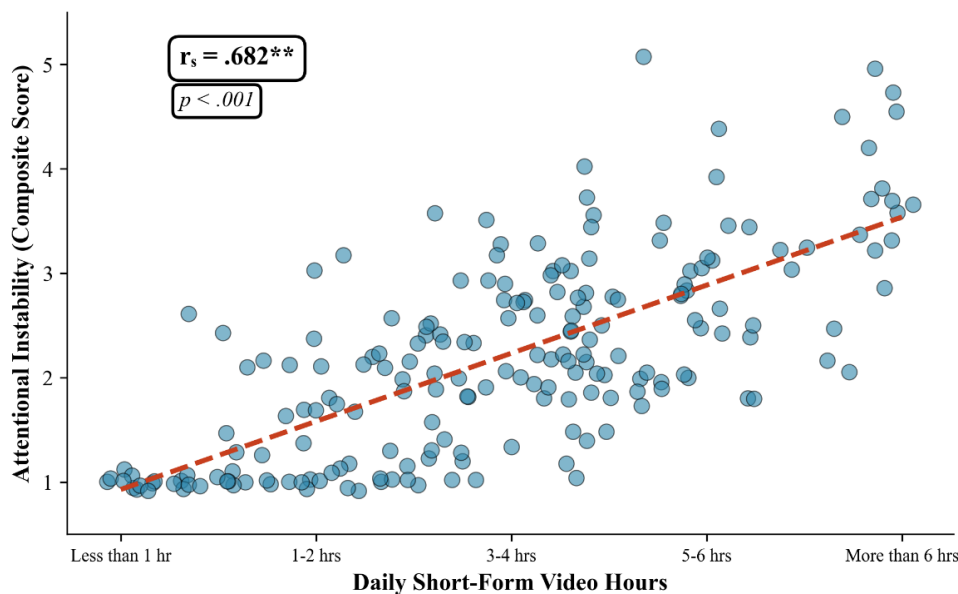


Figure 9. The scatter plot below illustrates the daily hours spent on videos compared to attentional instability for N = 200. Attentional Instability (AIS) is a sum of four items related to attention (MWQ1 – MWQ4). There was a strong positive correlation between daily consumption of short-form videos and attentional instability ($r_s = .682$, $p < .001$), suggesting that attentional instability is positively related to increased consumption across the full range of short-form videos. The linear trendline is shown in red dashed lines. There is a significant correlation between both variables at 0.01 level (two-tailed).

Table 4

Spearman's Rank-Order Correlation Between Daily Short-Form Video Consumption and Attentional Instability

Variable	1	2
Daily Short-Form Video Hours	1.000	
Sustained Focus Duration (Reversed)	-.682**	1.000

Note: Correlation is significant at the 0.01 level (2-tailed). N = 200.

Multiple Linear Regression Analysis

Multiple linear regression was conducted to see if short-form video viewing predicted attentional instability, when controlling for age, gender, education level and reading habits. The model was significant, $F(5, 194) = 44.03$, $p < .001$, and explained 53.2% of the variance in attentional instability ($R^2 = .532$, adjusted $R^2 = .519$). The results in Table 5 showed that short form videos continued to be a significant predictor ($\beta = .634$, $t = 10.23$, $p < .001$) of attentional instability, even after the other factors were accounted for. Other factors such as reading habits had significant predictive value for attentional instability ($\beta = .205$, $p = .002$), whereas age, sex and educational level did not (all p 's $> .05$).

Table 5

Multiple Linear Regression Predicting Attentional Instability from Daily Short-Form Video Consumption After Controlling for Age, Gender, Education Level, and Reading Habits (N = 200)

Predictor	B	SE B	β	t	p
Constant	1.649	0.320		5.153	< .001
Daily Short-Form Video Hours	0.362	0.035	.634	10.226	< .001
Age	-0.054	0.053	-.102	-1.020	.309
Gender	0.015	0.065	.011	0.225	.822
Education Level	0.061	0.051	.112	1.199	.232
Reading Habits	0.110	0.035	.205	3.112	.002

Note. $R = .729$, $R^2 = .532$, Adjusted $R^2 = .519$, $F(5, 194) = 44.03$, $p < .001$. The dependent variable was Attentional Instability. Higher scores indicate greater attentional instability. β = standardized regression coefficient; B = unstandardized regression coefficient; SE B = standard error of B.

Exploratory Analyses

Age Differences (Kruskal-Wallis H Test)

The Kruskal-Wallis H test was used to analyze the differences between age groups in terms of their sustained focus and the frequency of mind-wandering. There were significant differences between age groups for both sustained focus duration, $H(4) = 48.603$, $p < .001$, and mind-wandering frequency, $H(4) = 71.190$, $p < .001$. Inspection of mean ranks showed significant differences between the younger (14-16 and 16-18) and older (20-22 and 22-24) groups in terms of attentional difficulties. In Table 6, results are displayed.

Table*Kruskal-Wallis H Test Results by Age Group*

Variable	Age Group	n	Mean Rank	H	df	p
Sustained Focus Duration	14–16	18	144.17	48.603	4	< .001
	16–18	26	145.08			
	18–20	29	109.64			
	20–22	87	76.89			
	22–24	40	96.61			
Mind-Wandering Frequency	14–16	18	148.92	71.190	4	< .001
	16–18	26	156.48			
	18–20	29	109.02			
	20–22	87	81.22			
	22–24	40	78.08			

Note. *H* = Kruskal–Wallis test statistic; *df* = degrees of freedom; *p* = significance level.

Gender Differences (Mann-Whitney U Test)

To test for gender differences in frequency of mind-wandering, a Mann-Whitney U test was performed. No significant difference was found between males (Mean Rank = 99.86) and females (Mean Rank = 101.10), $U = 4933.50$, $Z = -.175$, $p = .861$. The results are summarized on **Table 7**.

Mann-Whitney U Test Results by Gender

Variable	Group	n	Mean Rank	<i>U</i>	<i>Z</i>	<i>p</i>
Mind-Wandering Frequency	Male	97	99.86	4933.50	-0.175	.861
	Female	103	101.10			

Platform Preferences (Chi-Square Test of Independence)

A chi-square test of independence was used to determine if there was a significant association between platform preference and daily consumption level, which was found to be significant, $\chi^2(12) = 37.306$, $p < .001$. While TikTok and Facebook Shorts users were more balanced in consumption levels, Instagram Reels users were mostly grouped in the moderate to heavy consumption range (3-4 hours or more). This is a preliminary result that should be interpreted with caution as 8 cells (40.0%) had their expected count less than 5. Results are shown in Table 8.

Table 8*Platform Preferences (Chi-Square Test of Independence)*

Test	Value	df	<i>p</i>
Pearson Chi-Square	37.306	12	< .001
Likelihood Ratio	38.819	12	< .001
Linear-by-Linear Association	6.464	1	.011

Discussion

The results support both hypotheses. People who viewed the short-form video more often a day also reported having a shorter attention span and more mind-wandering, regardless of age, gender, education and reading habits. The results are consistent with the Habituation-Sensitization Model proposed previously, in which, during habituation, the brain needs to be fully alerted to the task while in sensitization it needs to be more relaxed and less active. Also consistent with the Dopaminergic Reward Conditioning framework, proposed earlier, the brain in habituation would require more activation while the brain in sensitization would require less. The relationship was found to be significant across all measures of attention used and across all demographics, indicating that the relationship is not just a matter of who uses these platforms, but rather a matter of how these platforms affect attention over time. These two models together help account for the relation's occurrence on all of the measures of attention examined in this study and for the persistence of the relation across demographic backgrounds. This hints that it is not the matter of who is using such platforms, but also about how these platforms condition attention over time.

Strengths and Limitations

Several strengths of this study were the sample size, multiple attention measures, and a regression analysis that was significant after controlling for demographics. But the cross-sectional design does not allow for cause-and-effect relationships to be determined, and participants' self-reported responses may introduce recall or social desirability bias. The sample was also not randomly selected, and skewed towards Instagram Reels users and older teenagers, limiting its generalizability. Lastly, other factors influencing attention (such as ADHD symptoms, sleep quality, anxiety or depression) were not assessed. Longitudinal design, as well as more objective measures of attention, would be helpful to address these gaps in the future.

Ethical Considerations

This research was conducted in accordance with standard ethical norms in research with human subjects. Everyone who participated volunteered, was informed about the study, and was told that he or she can withdraw at any time without penalty. As a few participants were minors (ages 14-17) parents/guardians' consent as well as participant assent was obtained. All answers were anonymous and stored securely and no personal information was associated with each answer.

Conclusion

The findings of this study clearly indicate that watching short videos on a daily basis is linked to lower levels of attentional functioning in youth, even when controlling for age, sex, education, and reading behaviors. Although the cross-sectional design does not allow for any conclusions about causation, the consistency of this pattern across correlational and regression analyses provides some credence to it. Overall, the results indicate that the use of short-form video isn't just an unintended consequence of attentional problems in youth, but an issue that should be considered in its own right, as an area for future longitudinal study, and as a real-world problem for educators, clinicians, and policy makers in a media landscape that is designed for constant engagement.

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