



The Impact of Problematic Short-Form Media Usage on Attention Control and Delayed Gratification in Young Adults

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Abstract: This study examines the impact of problematic short-form media usage on attentional control and delayed gratification among young adults. A sample of 174 participants filled out questionnaires on short-form media addiction, attentional control, and delayed gratification. Results showed a significant negative correlation between problematic short-form media use and both attentional control ($r = -0.209$, $p = .006$) and delayed gratification ($r = -0.335$, $p < .001$). Additionally, regression analyses confirmed that problematic use significantly predicts lower attentional control and delayed gratification. These findings highlight the need for educating young adults about healthier digital habits to support cognitive and self-regulation skills.

Keywords: *Short-Form Media, Attentional Control, Delayed Gratification, Young Adults*

1. Introduction

The current age of internet is witnessing a meteoric rise of a new form of content consumption: short form media. This shift was led by the popular Chinese app, TikTok, whose successful format quickly inspired other major platforms like Instagram, which introduced 'Reels', and YouTube, which launched 'Shorts.' These platforms collectively have popularised short-form media, defined as content that typically lasts 60 seconds or less (Qin et al., 2022).

The ban on TikTok in India displaced 200 million users, many of whom shifted to Instagram Reels. This led to a 3.5% increase in average time spent on Instagram and an 11.4% rise in downloads (Menon, 2022). As these platforms grow in popularity, so have the concerns about their potential impact on cognitive processes. Researchers have noted issues like shortened attention spans, addiction-like symptoms due to dopamine release, cognitive impairment, and algorithmic bias (Kim, 2024).

Attentional control is defined as involving abilities like focusing attention, shifting attention between tasks, and flexibly controlling thought (Derryberry & Reed, 2002). Short form media apps offer frequent context changes, and engaging content which has been reported to overwhelm attention and memory, making it harder to remember tasks (Chiossi et al., 2023). These concerns are reinforced by research using neurocognitive measures and behavioral assessments. For instance, Chen et al. (2022) found that individuals addicted to short-form videos exhibited impaired cognitive performance and increased distractibility. Asif and Kazi (2024) also reported a negative relationship between short video usage and academic outcomes, which was linked to reduced attention span and difficulty in concentration.

Similarly, delayed gratification, the process of prioritising a future goal over an immediate, short-term objective, involving both motivational and cognitive elements (Tobin & Graziano, 2010), has been studied extensively in the context of media. Neurobiological studies identify the ventral tegmental area of the brain as critical in delayed gratification (Gao et al., 2021). Another study by Su et al. (2021) demonstrated that personalised TikTok videos elicit heightened activity in the default mode network (DMN) and ventral tegmental area (VTA), suggesting a relation between short form media consumption and delayed gratification processes. Meade (2012) concluded through his research that new media provides instant access to information, entertainment, and rewards, potentially fostering a preference for immediate gratification over delayed.

Despite the growing body of literature on the impact of social media on various cognitive, academic, and emotional outcomes, relatively few studies have focused specifically on the effects of short-form media on attentional control and delayed gratification. Most existing research focuses on the broader category of social media, without differentiating between the specific challenges posed by short-form platforms like TikTok, Instagram Reels, or YouTube Shorts. Furthermore, while delayed gratification has been studied indirectly in relation to impulsivity and social media addiction, it remains largely unexplored as a distinct variable in its own right. Young adulthood is a critical period for developing self-regulatory habits, making this group particularly vulnerable to the cognitive effects of media overuse. The investigation

of delayed gratification in young adults, particularly in the context of short-form media usage, is therefore a critical area that warrants further exploration. Additionally, according to a 2023 report by IAMAI, Indian users spend an average of 45 minutes daily on social media platforms, with the highest engagement among those aged 18–24. Hence it is important to understand the impact of these factors on the Indian young adult population which has not been sufficiently examined in existing studies.

2. Methodology

2.1 Purpose

The purpose of the study was to evaluate the relationship between problematic short-form media usage, attentional control, and delayed gratification in young adults.

2.2 Research Objectives

1. To examine the correlation between problematic short-form media usage and attentional control in young adults.
2. To examine the correlation between problematic short-form media usage and delayed gratification in young adults.
3. To determine whether problematic short-form media usage significantly predicts attentional control using regression analysis.
4. To determine whether problematic short-form media usage significantly predicts delayed gratification using regression analysis.

2.3 Hypotheses

Alternate Hypotheses

H₁: Higher short-form media usage will be negatively associated with attentional control in young adults and delayed gratification in young adults.

2.4 Sample

The study included a total of 174 young adults, recruited through convenience sampling. Gender was not considered as a variable in this research. Participants provided informed consent before participating in the study.

2.5 Measures

Short-Form Video Addiction Scale (SFVAS). Problematic short-form media use was assessed using the Short-Form Video Addiction Scale (SFVAS), adapted from Leung's (2008) Internet Addiction Scale. The SFVAS consists of items measuring excessive use, loss of control, and negative consequences related to short-form video consumption. Responses are recorded on a 5-point Likert scale, with higher scores indicating greater addiction. The scale

demonstrates strong internal consistency (Cronbach's $\alpha = .91$) and a good model fit confirmed through Confirmatory Factor Analysis (CFA) (Leung, 2008).

Attentional Control Scale – Short Form (ACS-S). Attentional control was measured using the Attentional Control Scale – Short Form (ACS-S). The ACS-S consists of items rated on a 4-point scale, with higher scores indicating greater attentional control. The scale has demonstrated good psychometric properties, with an overall internal consistency of $\alpha = .85$. The ACS-S has been validated through positive correlations with working memory tasks and negative correlations with measures of anxiety and depression (Judah et al., 2014).

Delaying Gratification Inventory (DGI-10). Delayed gratification was assessed using the Delaying Gratification Inventory (DGI-10), a brief measure that evaluates an individual's ability to delay gratification across different domains (Hoerger et al., 2011). The DGI-10 includes items rated on a 5-point response scale, with higher scores indicating a greater ability to delay gratification. The scale retains a five-factor structure and has demonstrated strong internal consistency ($\alpha \geq .77$) and test-retest reliability ($r = .87$). Construct validity is supported by its positive associations with self-control and conscientiousness. Reverse-coded items were carefully scored to maintain measurement accuracy (Hoerger et al., 2011).

2.6 Variables

Independent Variable (IV): Problematic Short-Form Media Usage

Dependent Variables (DV): Attentional Control, Delayed Gratification

2.7 Research Design

The study adopted a quantitative, correlational research design using standardized self-report questionnaires to measure the key variables.

2.8 Procedure

Data were collected via an online survey containing demographic questions and the three standardized scales. Participants completed the survey in approximately 15–20 minutes. Ethical standards were maintained, including informed consent and anonymity. Participants were informed they could withdraw at any point.

2.9 Statistical Analysis

Data were analysed using SPSS. Descriptive statistics were calculated for all variables, including means and standard deviations. Pearson's correlation analysis was conducted to examine relationships between short-form video addiction, attentional control, and delayed gratification. Multiple regression analysis was performed to determine the predictive effect of problematic short-form media use on attentional control and delayed gratification.

3. Analysis of Data

Descriptive statistics were computed for all key variables in the study, including problematic short-form media use (SFM), attentional control (ATT), and delayed gratification (DG). The means and standard deviations for each variable are presented in Table 1.

Table 1: *Descriptive Statistics for Key Variables (N = 174)*

Variable	Minimum	Maximum	Mean	SD	Skewness	SE Skewness
SFM Total Score	22.00	84.00	51.26	12.15	-0.09	0.18
ACS Total Score	19.00	36.00	26.83	3.13	0.18	0.18
DGI Total Score	21.00	45.00	35.66	4.82	-0.39	0.18

Note. SFM = Short-Form Media; ACS = Attentional Control Scale; DGI = Delaying Gratification Inventory.

SD = Standard Deviation; SE = Standard Error.

Pearson correlation analyses were conducted to examine the relationships between problematic short-form media use, attentional control, and delayed gratification. Results indicated a significant negative correlation between problematic short-form media use and attentional control, $r(172) = -0.209$, $p = .006$. This suggests that higher engagement with short-form media is associated with lower attentional control, though the relationship is weak. Additionally, a moderate negative correlation was observed between problematic short-form media use and delayed gratification, $r(172) = -0.335$, $p < .001$. This indicates that individuals who engage more in short-form media tend to have a reduced capacity for delayed gratification. The results are presented in Table 2.

Table 2: *Pearson Correlations Between Problematic Short-Form Media Use, Attentional Control, and Delayed Gratification*

Variables	1	2	3
1. Problematic Short-Form Media Use	—		
2. Attentional Control	-.209**	—	
3. Delayed Gratification	-.335**	—	

Note. $N = 174$. $p < .01$ for all significant correlations.

To further examine the predictive value of problematic short-form media use on attentional control and delayed gratification, separate linear regression analyses were conducted. A simple linear regression was performed to assess whether problematic short-form media use significantly predicted attentional control. The overall model was statistically

significant, $F(1, 172) = 7.85$, $p = .006$, accounting for 4.4% of the variance in attentional control ($R^2 = .044$).

The regression coefficient was $\beta = -0.209$, $p = .006$, indicating that for each unit increase in problematic short-form media use, attentional control decreases significantly. However, the effect size was small.

Table 3: *Linear Regression Predicting Attentional Control from Problematic Short-Form Media Use (N = 174)*

Predictor	B	SE	β	t	p
Constant	29.58	1.01	—	29.27	<.001
Problematic Short-Form Media Use (SFMTOT)	-0.054	0.019	-0.209	-2.80	.006

Note. $R^2 = .044$, $F(1, 172) = 7.85$, $p = .006$.

Another linear regression analysis was conducted to examine whether problematic short-form media use predicted delayed gratification. The model was statistically significant, $F(1, 172) = 21.73$, $p < .001$, explaining 11.2% of the variance ($R^2 = .112$). The standardized regression coefficient was $\beta = -0.335$, $p < .001$, suggesting that higher problematic short-form media use is a significant predictor of lower delayed gratification. Compared to attentional control, problematic short-form media use had a stronger effect on delayed gratification.

Table 4: *Linear Regression Predicting Delayed Gratification from Problematic Short-Form Media Use (N = 174)*

Predictor	B	SE	β	t	p
Constant	42.47	1.50	—	28.27	<.001
Problematic Short-Form Media Use (SFMTOT)	-0.133	0.029	-0.335	-4.66	<.001

Note. $R^2 = .112$, $F(1, 172) = 21.73$, $p < .001$.

4. Discussion

The present study aimed to examine the impact of problematic short-form media use on attentional control and delayed gratification among young adults. The results demonstrated that problematic short-form media use is significantly associated with both reduced attentional control and diminished delayed gratification. However, the effect was stronger for delayed gratification, as indicated by the correlation and regression analyses.

The weak but significant negative correlation between SFM and attentional control aligns with existing literature suggesting that excessive engagement with short-form media may contribute to attentional difficulties. Chen et al. (2022) and Asif and Kazi (2024) have found similarly that excessive short-form video consumption negatively impacts attention span and cognitive performance, supporting the present study's findings.

The moderate negative correlation and stronger regression effect of SFM on delayed gratification suggest that problematic engagement with short-form media may lead to impulsive behaviours and a preference for immediate rewards over long-term goals. This finding is consistent with research by Su et al. (2021) and Zhu et al. (2024), which highlighted how algorithm-driven content delivery on platforms like TikTok exploits users' need for instant gratification, reinforcing compulsive engagement patterns.

The findings of this study have significant implications. Given that problematic short-form media use is linked to reduced attentional control and delayed gratification, promoting digital well-being are essential. Media literacy programs should be considered to help young adults develop healthier media consumption habits.

On a broader level, this study emphasizes the need for further research into the long-term cognitive and behavioural consequences of short-form media consumption. The present study suggests statistically significant results, weak effect sizes indicate that problematic short-form media use is only one of many factors influencing attentional control and delayed gratification. Future studies should explore potential intervention strategies that could help individuals develop better self-regulation skills and mitigate the negative impacts of excessive media use.

5. Conclusion

The present study investigated the association between young adults' problematic use of short-form media, attentional control, and capacity for delayed gratification. Results showed that more problematic use was significantly related to poorer attentional control and decreased ability for delayed gratification. Regression analyses affirmed that problematic usage strongly predicted both measures, with the effect being stronger on delayed gratification. These results imply that over-reliance on short-form media could undermine critical thinking functions necessary for self-regulation. Although the effect sizes were small, the statistical inference of the results reveals that the use of short-form media is a significant factor in shaping these psychological processes. Overall, this study underscores the imperative of promoting healthier

media use and provides a basis for further research into the cognitive impact of digital media use.

The current study, though offering useful findings, is not without limitations. To begin with, the sample size was small ($N = 174$), and selected through convenience sampling, which might restrict the generalizability of the results. Secondly, the procedure of using questionnaires for self-reporting has the possibility to introduce social desirability and/or self-monitoring biases as well. Subsequent studies may alleviate these constraints through the use of larger, more diverse samples, longitudinal or experimental study designs to identify causal links. Investigations might also gain more depth through the use of neuropsychological or behavioural assessment measures in combination with self-report measures to improve the validity of outcomes.

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