

The Role of Thought Suppression in the Relationship between Problematic Short Video Use and Depression

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Abstract: This research aimed to explore the association between problematic short video use and depression in university students, with a particular focus on the mediating influence of thought suppression. A questionnaire-based study was conducted using random sampling among 413 university students across multiple provinces and cities in China. The assessment tools included the Problematic Short Video Use Questionnaire, the Center for Epidemiologic Studies Depression Scale (CES-D), and the Chinese version of the White Bear Suppression Inventory (WBSI). Findings revealed that problematic short video usage significantly predicted higher levels of depression ($\beta=0.482$, $t=11.167$, $p<0.001$). Additionally, thought suppression played a mediating role, accounting for 50.62% of the overall relationship, while the direct effect of problematic short video use constituted 49.38%. These results suggest that problematic engagement with short videos not only directly influences depressive symptoms but also indirectly intensifies these symptoms through enhanced thought suppression. This study emphasizes the psychological risks associated with excessive short video use and highlights thought suppression as a crucial factor, providing valuable insights for developing targeted interventions for depression among university students.

1. Introduction

1.1 Research Background and Significance

According to the China Mental Health Survey, the lifetime prevalence of depressive disorders among Chinese adults is 6.8%, with major depressive disorder accounting for 3.4%. Currently, approximately 95 million individuals in China suffer from depression, and around 280,000 people die by suicide each year-40% of whom are diagnosed with depression. The 2022 National Depression Report, jointly published by the Institute of Depression and People's Daily Health Client, revealed that 50% of individuals with depression are students currently enrolled in school.

In recent years, the internet has become deeply integrated into people's daily lives, and addiction to short-form video platforms has emerged as a significant risk factor contributing to the worsening of depressive symptoms [1-3]. Among various internet activities, short videos have developed at a particularly rapid pace. Their engaging content, personalized algorithmic recommendations, and

immersive experiences greatly increase the risk of addiction among young people [4]. Short videos are brief digital clips ranging from seconds to a few minutes, commonly distributed via social media, video-sharing platforms, or dedicated mobile apps. They have rapidly gained popularity due to their diverse content, ease of interaction, and widespread appeal across different age groups [5]. According to China's 53rd Statistical Report on Internet Development (2024), online video users in China reached 1.067 billion by December 2023, showing an increase of 36.13 million from the previous year and comprising 97.7% of the total internet users. Notably, short video users alone accounted for 1.053 billion, representing a year-on-year growth of 41.45 million, making up 96.4% of all internet users [5]. Platforms such as TikTok, Kuaishou, REDnote, and Bilibili are now deeply embedded in university students' daily routines [6]. For instance, Chinese internet users spend an average of more than 2.5 hours daily on short videos, and about 11.9% of minors spend over two hours per weekday viewing these videos (China Online Audiovisual Development Research Report) [7]. However, excessive short video consumption can significantly disrupt individuals' daily lives by consuming substantial amounts of personal time and contributing to attention deficits, reduced academic or occupational productivity, impaired social interactions, diminished self-efficacy, and emotional regulation difficulties. Collectively, these issues adversely affect social adaptability and heighten the risk of depression [8-10]. Consequently, problematic engagement with short videos emerges as an important psychological risk factor for depression among adolescents and young adults.

Previous studies have demonstrated a direct association between short video addiction and depression. For instance, Qu et al. [11]. employed a longitudinal network analysis and found a dynamic and complex interaction between short video addiction and depressive symptoms among adolescents. While the use of short videos for emotional regulation may temporarily alleviate negative emotions, it can, in the long term, exacerbate depressive symptoms and perpetuate addictive behaviors. Zhu et al. [2]. also reported a positive correlation between short video use and depression among Chinese adolescents. A limited number of studies have examined the underlying mechanisms linking short video use and depression. For example, Zhao et al. [12]. investigated how short video use affects depressive symptoms in female college students, focusing specifically on the chain-mediating roles of self-objectification and body satisfaction. However, the generalizability of this finding to other populations may be limited, and the potential involvement of other mediating variables has been largely overlooked. Therefore, it is necessary to further explore the underlying psychological mechanisms through which excessive short video use contributes to depression in university students.

1.2 The Role of Thought Suppression

Thought suppression refers to intentional and conscious attempts to inhibit specific thoughts or behaviors [13,14]. Research indicates that efforts to suppress unwanted thoughts frequently result in counterproductive outcomes, such as the rebound effect or immediate enhancement effect. Rather than diminishing, these intrusive thoughts often become more frequent or intense following suppression attempts [15,16]. Additionally, persistent failures in suppressing intrusive thoughts can lead to cognitive overload and heightened emotional stress, contributing to various psychological disorders including generalized anxiety disorder, obsessive-compulsive disorder, depression, post-traumatic stress disorder, and insomnia [17]. This ongoing struggle creates a detrimental feedback loop, intensifying psychological distress over time.

Prior research has identified thought suppression as a crucial component in problematic social media usage (PSMU). Metacognitive beliefs, such as the perceived necessity to control thoughts and negative evaluations of uncontrollable thoughts, significantly influence thought suppression and

impulsivity, thus exacerbating social media addiction severity [18]. Specifically, thought suppression efforts during social media engagement frequently trigger rebound effects, intensifying cravings and reinforcing maladaptive usage patterns. Over time, this repetitive cycle increases vulnerability to problematic behaviors and potential addiction.

Compared to general social media, short video platforms attract university students more extensively, both in frequency and duration of use. Given this context, problematic short video usage may elevate depressive symptoms partly through increased thought suppression. As students attempt to suppress intrusive thoughts related to short video use, the associated cognitive strain and emotional stress likely heighten depressive tendencies. Consequently, this study investigates thought suppression as a mediator in the link between problematic short video use and depression among university students.

1.3 Research Objectives and Hypotheses

This study aims to explore the relationship between problematic short video use and depression, and further examine the mediating role of thought suppression in this association. Based on the aforementioned theoretical analysis, the following hypotheses are proposed:

H1: Problematic short video use significantly and positively predicts depression levels.

H2: Thought suppression mediates the relationship between problematic short video use and depression, such that higher levels of problematic use lead to increased thought suppression, which in turn exacerbates depressive symptoms.

2. Research Methods

2.1 Participants

To investigate this hypothesis, a nationwide online survey was administered using a random sampling strategy. University students from a wide range of provinces and cities in China were invited to participate. The total number of responses collected was 442. After removing entries that showed signs of invalidity—such as abnormally fast completion times or uniform response patterns—413 valid responses were retained, resulting in a response validity rate of 93.439%. Among the valid respondents, 221 identified as male (53.511%) and 192 as female (46.489%). With respect to geographical background, 179 students (43.341%) reported coming from rural areas, while 234 (56.659%) were from urban environments. In terms of educational level, 102 participants (24.697%) were enrolled in associate degree programs, 240 (58.111%) in undergraduate programs, and 71 (17.191%) were pursuing graduate studies or higher qualifications.

2.2 Instruments

2.2.1 Sociodemographic Information

The demographic section at the beginning of the questionnaire aimed to gather foundational background data from respondents. This included details such as sex, ethnic group, age range, hometown classification (urban or rural), estimated monthly family income, romantic relationship status, current academic level, and field of study.

2.2.2 Problematic Short Video Use Questionnaire

To measure the extent of problematic short video engagement, this study utilized the scale developed by Zhao Haiyu et al. [19]. The instrument comprises 20 items, capturing behavioral

tendencies across three core domains: compulsive engagement, impaired self-regulation, and social withdrawal. Each item is evaluated using a 4-point Likert scale, where higher scores reflect greater severity of problematic use. In the present sample, the scale demonstrated strong internal reliability, with a Cronbach's alpha of 0.867.

2.2.3 Center for Epidemiologic Studies Depression Scale (CES-D)

Originally developed by Radloff in 1977 at the U.S. National Institute of Mental Health, the Center for Epidemiologic Studies Depression Scale (CES-D) has become a widely adopted tool for evaluating depressive symptoms. Its Chinese adaptation and validation were conducted by Zhang Jie et al. [20], who verified its cultural relevance and psychometric soundness within Chinese populations. The CES-D has since been broadly recognized for its reliability and effectiveness in measuring depressive tendencies across diverse age cohorts in China.

2.2.4 Chinese Version of the White Bear Suppression Inventory (WBSI)

The White Bear Suppression Inventory (WBSI), initially created by Wegner and Zanakos (1994), is designed to assess an individual's habitual inclination to suppress intrusive thoughts. Its Chinese adaptation, validated by Zhou Lihua et al. [21], has demonstrated sound cross-cultural suitability. The instrument contains 15 items rated on a 5-point Likert scale, with higher total scores reflecting a greater propensity for thought suppression. In this study, the scale exhibited excellent internal consistency, as evidenced by a Cronbach's alpha of 0.897.

2.3 Data Analysis

All statistical analyses were conducted using SPSS version 26.0. Initially, descriptive statistics were used to outline the distribution and central tendencies of the key variables. To explore the associations among problematic short video use, thought suppression, and depressive symptoms, Pearson correlation coefficients were computed. Following this, a mediation analysis was carried out using Model 4 of the PROCESS macro for SPSS, wherein problematic short video use was treated as the predictor (X), thought suppression as the mediator (M), and depression as the outcome variable (Y). A bootstrapping approach with 5,000 iterations was employed to generate bias-corrected 95% confidence intervals. Mediation was deemed significant if the resulting interval excluded zero.

3. Results

Table 1 Correlation Analysis Between Problematic Short Video Use and Depression (N = 413)

	1.Gender	2.Age	3.Place of Origin	4.Educational Background	5.Problematic Short Video Use	6.Depression
5.Problematic Short Video Use	-0.053	0.006	-0.058	-0.032	--	--
6.Depression	-0.084	0.117*	-0.077	-0.046	0.482***	--
7.Thought Suppression	-0.085	0.067	-0.040	-0.061	0.777***	0.500***

Note: ***P<0.001, **P<0.01, *P<0.05

As presented in Table 1, Pearson correlation results indicated a significant positive association

between problematic short video use and depressive symptoms ($r = 0.482, p < 0.001$), suggesting that increased engagement in problematic short video behavior is linked to higher levels of depression. Moreover, thought suppression exhibited a strong positive correlation with problematic short video use ($r = 0.777, p < .001$), implying that individuals with a greater tendency to suppress intrusive thoughts are more prone to problematic video consumption. A significant positive correlation was also observed between thought suppression and depression ($r = 0.500, p < 0.001$), indicating that heightened thought suppression may contribute to increased depressive symptoms, potentially serving as a mediating factor. In addition, a modest but statistically significant correlation was found between age and depression ($r = 0.117, p < 0.05$), with older students reporting slightly higher levels of depressive symptoms.

To further examine the underlying mechanism through which problematic short video use influences depressive symptoms, thought suppression was incorporated as a mediating variable within the analytical model. Mediation testing was performed using Model 4 of the PROCESS macro developed by Hayes for SPSS, and the significance of the indirect effect was evaluated through a non-parametric bootstrapping procedure with 5,000 resamples.

The estimated path coefficients for the relationships among problematic short video use (X), thought suppression (M), and depression (Y) are visually depicted in Figure 1.

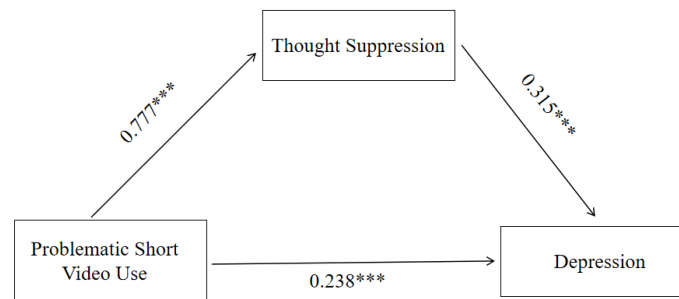


Figure 1 Path Coefficients Among X (Problematic Short Video Use), M (Thought Suppression), and Y (Depression). (Note:*** $P < 0.001$,** $P < 0.01$,* $P < 0.05$, Same notation applies hereafter.)

Table 2 Decomposition of Total, Direct, and Indirect Effects

	Effect Value	Se	LLCI	ULCI	Effect Size
Total Effect	0.482	0.043	0.398	0.567	
Direct Effect	0.238	0.067	0.107	0.370	49.38%
Indirect Effect	0.244	0.065	0.122	0.375	50.62%

As shown in Table 2, the 95% bootstrap confidence intervals for both the direct path from problematic short video use (X) to depression (Y) and the indirect path through thought suppression (M) excluded zero. This indicates that problematic short video use has a significant influence on depression both directly and indirectly via the mediating role of thought suppression. Specifically, the direct effect was estimated at 0.238, while the indirect effect reached 0.244, representing 49.38% and 50.62% of the total effect (0.482), respectively.

4. Discussion

The results of this study confirmed a significant positive relationship between problematic short video use and depression among university students, which is consistent with previous findings [2,11]. Thought suppression was found to play a partial mediating role in this relationship. From a mechanistic perspective, frequent and problematic use of short videos may lead to issues such as reality avoidance and attention distraction. As a cognitive strategy, thought suppression-when

individuals attempt to control or suppress related thoughts-may instead trigger a "rebound effect," further intensifying the accumulation of negative emotions and exacerbating depressive symptoms.

Notably, the magnitude of the mediating effect was nearly equivalent to that of the direct effect, suggesting that simply reducing the frequency of short video use may have limited effectiveness in mitigating depression. Greater attention should be paid to the underlying cognitive processes. Improving individuals' coping strategies for stress and emotion and reducing maladaptive thought suppression may serve as key entry points for psychological interventions.

In addition, this study also found a mild positive correlation between age and depression, indicating that as students advance in grade level or accumulate more stress, their mental health may deteriorate. This finding should attract the attention of relevant institutions and universities.

5. Limitations and Future Directions

This study has several limitations. First, the data were primarily collected through self-report questionnaires, which may be subject to social desirability bias and subjective judgment errors. Future research could incorporate behavioral experiments and physiological indicators to enhance the objectivity of the findings. Second, the study employed a cross-sectional design, which limits the ability to draw causal inferences between variables. It is recommended that future studies adopt longitudinal tracking or experimental designs to further verify the causal pathways. Third, the sample was mainly drawn from university students, which may limit the generalizability of the results to other populations. Future research should consider expanding the sample sources to improve external validity. Finally, this study examined only one mediating variable-thought suppression. Future studies could incorporate additional psychological variables, such as metacognition, emotion regulation strategies, or self-efficacy, to construct a more comprehensive explanatory model of the underlying mechanisms.

6. Conclusion

This study confirmed a significant positive association between problematic short video use and depression among university students and revealed the mediating role of thought suppression in this relationship. The findings indicate that short video addiction not only directly affects students' mental health but may also indirectly exacerbate depressive symptoms by increasing their tendency toward thought suppression. Therefore, interventions aimed at regulating short video use and developing cognitive control strategies-particularly in relation to thought suppression-should be considered important components of mental health programs for university students. When addressing depressive symptoms in this population, it is essential to focus not only on their short video usage behaviors but also on the underlying cognitive control mechanisms involved.

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