EFFECTIVENESS OF A CLASS-FOCUSED INTERVENTION PROGRAM IN IMPROVING SHORT-FORM VIDEO USE BEHAVIORS AND MENTAL HEALTH IN ADOLESCENTS.

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ABSTRACT

This study investigated the effectiveness of a class-focused intervention program on short-form video (SFV) use behaviors and mental health in adolescents. A sample of 100 eighth-grade students from two parallel classes at a public junior high school in Xuchang City, Henan Province, China, was recruited. The experimental group (n=50) received a two-month embedded curriculum and group activity intervention, while the control group (n=50) underwent routine management. Results indicated that the experimental group showed a significant 21.2% reduction in entertainment-focused SFV usage time, an 18.1% decrease in anxiety scores, and a 33.3% increase in information-focused SFV usage time post-intervention, all significantly superior to the control group ($p < .05$). This school-based program requires no family-school collaboration, providing a feasible intervention pathway for resource-limited educational settings.

Keywords: Class-focused intervention; Short-form video use; Adolescent mental health; Anxiety; School-led program.

INTRODUCTION

The fragmented nature of short-form video (SFV) content profoundly impacts adolescent mental health. Preliminary studies confirm a strong positive correlation between entertainment-focused SFV use and anxiety ($r = .52$, $\beta = .21$), while information-focused use correlates negatively with stress ($r = -.44$). The classroom, as a core setting for adolescent socialization, offers inherent advantages for behavioral shaping through peer interactions and collective activities. Building on this, we designed a three-stage class-focused intervention ("Cognitive Guidance – Behavioral Substitution – Reinforcement Consolidation"), integrating evidence-based practices from mindfulness training (Zeng & Zhao, 2025) and media literacy education to explore school-independent effectiveness.

Existing research suggests class-level interventions leverage "group promotion effects" through peer influence and collective norms (Gregory et al., 2010). For instance, integrating mindfulness into class activities enhances emotion regulation (Nesrine et al., 2025), while structured media literacy curricula reduce dependence on entertainment content (Weiser, 2001). This study refines operational procedures for class-focused interventions, examining their unique value in managing SFV use.

Participants

Two parallel eighth-grade classes (N=100) from a public junior high school in Xuchang, Henan, were assigned to:

- Experimental Group: 50 students (26 male, 24 female; M_age=13.2 years)

- Control Group: 50 students (27 male, 23 female; M_age=13.1 years)

Baseline measures showed no significant differences between groups ($p > .05$, Table 1).

Table 1. Baseline Characteristics (Pre-intervention)

Measure	Experimental Group	Control Group	t值	p值
Entertainment SFV (hours/day)	5.2±1.3	5.1±1.2	0.38	0.70
Informational SFV (hours/day)	2.1±0.8	2.0±0.7	0.65	0.52
Anxiety Score (DASS-12)	3.65±3.22	3.60±3.15	0.08	0.93

Intervention Program & Implementation

- Experimental Group: Class-Focused Intervention (8 weeks, 3 stages)

Core Logic: Strengthen the "Awareness-Substitution-Habit Formation" chain via collective activities, incorporating mindfulness for emotion regulation (Zeislmeier et al., 2025).

- Stage 1: Cognitive Guidance (Weeks 1-2)

- Media Literacy Curriculum (40 mins, integrated into mental health class):

1. Presented school-specific data (scatterplot: r=.52 between entertainment use & anxiety) and analyzed "social comparison traps" in influencer content (Festinger, 1954).

2. Hosted debate: "Does entertainment SFV increase anxiety?" Introduced the "3-Second Rule" (prioritize videos with keywords like "tutorial"/"knowledge") (Weiser, 2001).

- "Knowledge Harvest Corner":* Students posted daily sticky notes listing one fact/skill learned from SFV (e.g., "math formula mnemonic"). Teacher gave 30-sec daily reminders; weekly "Harvest Star" awarded.

-Stage 2: Behavioral Substitution (Weeks 3-6)

- Group Activities (Weekly, 40 mins after school):

- Skills Challenge (Weeks 3-4): Watched 5-min informational SFV (e.g., origami tutorial), practiced 20 mins in groups with teacher guidance, presented results, voted for "Skill Master" (class points reward).

- Mindfulness Training (Weeks 5-6): Taught "5-4-3-2-1 Grounding Technique" (name 5 seen, 4 heard, etc.) (Zeng & Zhao, 2025). Groups practiced 20 mins, rated pre/post "agitation" (1-10), shared experiences. Teacher summarized "3 instant techniques for SFV-induced anxiety."

- Classroom Micro-reminders: Daily 1-min "mindful breathing" audio; "Today's Info Check-in" board for voluntary skill sharing.

- Stage 3: Reinforcement (Weeks 7-8)

- Showcase & Reflection: Created class "Knowledge Tree" poster from Harvest Corner; students shared behavioral changes (e.g., "replaced 1hr entertainment with origami").

- Class Pact: Co-created and displayed "Class SFV Use Agreement" (e.g., "Entertainment ≤45 mins/day," "Share ≥1 info video/week").

- Control Group

Received standard mental health curriculum (weekly generic emotion management), no specific SFV intervention.

Data Collection & Analysis

- Quantitative: Pre/post questionnaires assessed:

- SFV Use: Entertainment/Informational duration (classified per 2021 China Minors Internet Usage Report, test-retest r=.82).

- Mental Health: Anxiety subscale of DASS-12 (Lee et al., 2019; α=.81).

- Qualitative: Teacher weekly logs tracked Harvest Corner additions, activity participation, and behavioral observations (e.g., shift in break-time discussions).

- Analysis (SPSS 27.0): Paired t-tests (within-group), independent t-tests (between-group); thematic analysis for qualitative data.

RESULTS

Quantitative Findings

- **SFV Use Behavior (See Tables 2 & 3 and Figures 1 & 2)**

Entertainment Use: Significant Time × Group interaction ($F(1,98)=14.23$, $p<.001$, $\eta^2=.11$). Experimental group decreased significantly (5.2±1.3 to 4.1±1.1 hours/day, $t(49)=4.23$, $p<.001$; -21.2%). Control group showed no change ($p>.05$). Post-test between-group difference was significant ($t(98)=3.89$, $p<.001$). Visual comparison of pre-post changes is presented in Figure 1.

Informational Use: Significant Time × Group interaction ($F(1,98)=10.56$, $p=.001$, $\eta^2=.09$). Experimental group increased significantly (2.1±0.8 to 2.8±0.9 hours/day, $t(49)=3.67$, $p<.001$; +33.3%). Control group showed no change ($p>.05$). Post-test between-group difference was significant ($t(98)=3.25$, $p<.01$). Visual comparison is presented in Figure 2.

Table 2. Descriptive Statistics of SFV Use (hours/day, M±SD)

Group	N	Entertainment (Pre)	Entertainment (Post)	Informational (Pre)	Informational (Post)
Experimental	50	5.2±1.3	4.1±1.1***	2.1±0.8	2.8±0.9***
Control	50	5.1±1.2	4.9±1.2	2.0±0.7	2.1±0.8

Note: ***p<.001 for within-group pre-post change (Experimental only).

Table 3. Repeated Measures ANOVA for SFV Use

Dependent Variable	Effect Type	F	P	η^2
Entertainment Use	Time	15.68	＜0.001	0.12
	Group	2.15	0.145	-
	Time × Group	14.23	＜0.001	0.11
Informational Use	Time	9.84	0.002	0.08
	Group	1.94	0.167	-
	Time × Group	10.56	0.001	0.09

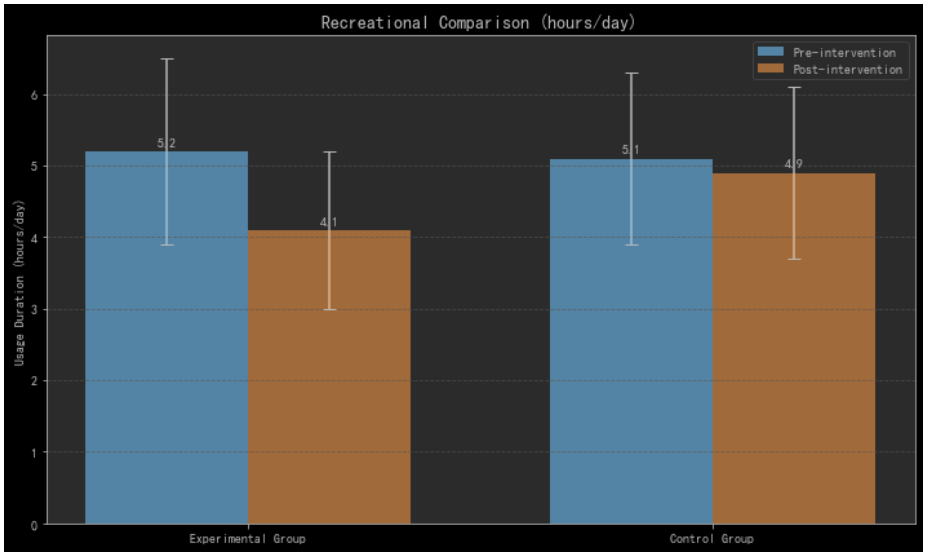

Figure 1. Comparison of Entertainment-Focused SFV Use Before and After Intervention

Note: Bar graph showing significant reduction in experimental group with minimal change in control group (Figure 1).

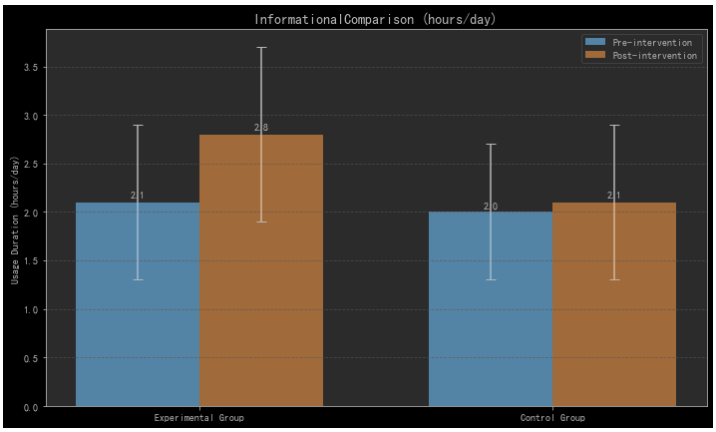

Figure 2. Comparison of Information-Focused SFV Use Before and After Intervention

Note: Bar graph showing significant increase in experimental group with minimal change in control group (Figure 2)

- **Anxiety Levels (See Table 4)**

Significant Time × Group interaction for anxiety ($F(1,98)=3.21$, $p<.05$). Experimental group decreased significantly (3.65±3.22 to 2.99±2.88, $t(49)=2.31$, $p<.05$; -18.1%). Control group showed no change ($p>.05$). Post-test between-group difference was significant ($t(98)=2.04$, $p<.05$).

Table 4. Descriptive Statistics of Anxiety (DASS-12 Anxiety Subscale, M±SD)

Group	N	Anxiety (Pre)	Anxiety (Post)
Experimental	50	3.65±3.22	2.99±2.88
Control	50	3.60.1±3.15	3.50±3.08

Qualitative Findings

- Knowledge Harvest Corner: Daily additions increased from 3-5 (Week 2) to 12-15 (Week 8), primarily learning tips (42%) and life skills (31%).

- Group Activity Participation: Rose from 70% (Week 3) to 92% (Week 8). Logs noted "students proactively inquired about future topics."

- Classroom Climate: Break-time discussions shifted from 85% "entertainment snippets" pre-intervention to 63% "sharing informational videos" post-intervention.

DISCUSSION

Effectiveness of the Intervention

The class-focused intervention significantly improved SFV behaviors and reduced anxiety through:

1. Cognitive Disruption: Media literacy sessions using localized data and the "3-Second Rule" enhanced awareness of the "entertainment-use → anxiety" link and content discernment (Weiser, 2001), aligning with mindfulness' "present-moment awareness" (Kabat-Zinn, 2003).

2. Behavioral Substitution: Skills challenges translated informational SFV into offline mastery, reducing entertainment time while boosting self-efficacy via achievement (Bandura, 1997). Mindfulness directly improved emotion regulation, corroborating Nesrine et al. (2025).

3. Collective Reinforcement: Activities like the Harvest Corner and Class Pact fostered positive peer norms, solidifying behavioral change (Gregory et al., 2016).

Strengths and Limitations

Strengths:

- School-based implementation eliminates need for complex family-school coordination.

- Integrates mindfulness and media literacy for dual focus on emotion and behavior.

- Provides concrete, replicable techniques (e.g., 5-4-3-2-1, 3-Second Rule).

Limitations:

- Short duration (2 months); long-term effects (e.g., holiday rebound) unknown.

- Single-class design potentially influenced by teacher implementation fidelity; requires multi-class trials.

- Weekend SFV use unmonitored; potential for "school-compliance only" effect.

Practical Implications

1. Integrate media literacy and mindfulness into standard curricula with weekly group activities.

2. Design "SFV-to-practice" assignments (e.g., watch science demo → conduct experiment).

3. Implement class point systems to reward positive behaviors (e.g., points for sharing info videos redeemable for books).

CONCLUSION

The three-stage class-focused intervention ("Cognitive Guidance – Behavioral Substitution – Reinforcement Consolidation") effectively reduced entertainment SFV use, increased informational SFV use, and lowered anxiety among adolescents. Its school-based, teacher-delivered model offers a replicable solution for settings with limited resources or challenges in family-school collaboration. Future research should extend the intervention period and expand the sample size to confirm long-term efficacy and generalizability.

REFERENCE

1. Bandura, A. (1978). Self-efficacy: Toward a unifying theory of behavioral change. Advances in Behaviour Research and Therapy, 1(4), 139–161. https://doi.org/10.1016/0146-6402(78)90002-4
2. China Internet Network Information Center. (2021). 2021 national survey report on internet usage among minors in China. https://www.cnnic.net.cn
3. Festinger, L. (1954). A theory of social comparison processes. Human Relations, 7(2), 117–140. https://doi.org/10.1177/001872675400700202
4. Gregory, A., Skiba, R. J., & Noguera, P. A. (2010). The achievement gap and the discipline gap: Two sides of the same coin? Educational Researcher, 39(1), 59–68. http://www.jstor.org/stable/27764554
5. Kabat-Zinn, J. (2003). Mindfulness-based interventions in context: Past, present, and future. Clinical Psychology: Science and Practice, 10(2), 144–156. https://doi.org/10.1093/clipsy.bpg016
6. Lee, J., Lee, E. H., & Moon, S. H. (2019). Systematic review of the measurement properties of the Depression Anxiety Stress Scales–21. Quality of Life Research, 28(9), 2325–2339. https://doi.org/10.1007/s11136-019-02177-x
7. Nesrine, B. M., Jarraya, S., & Caprioli, L. (2025). The effectiveness of a mindfulness-based program in improving cognitive and socio-affective skills among adolescents with

intellectual and developmental disabilities: A randomized controlled study. Mindfulness, 16, 133–148. https://doi.org/10.1007/s12671-024-02345-9

8. Weiser, E. B. (2001). The functions of Internet use and their social and psychological consequences. CyberPsychology & Behavior, 4(6), 723–743. https://doi.org/10.1089/109493101753376678
9. Zeng, N., & Zhao, M. (2025). Mindfulness interventions for children and adolescents: Efficacy, mechanisms, and future directions. Counseling Psychology: Theory and Practice, 7(7), 427–435. (Add DOI or URL if available)
10. Zeislmeier, A. L., Wolter, V. B., Eskic, J., & others. (2025). Mindfulness in preadolescents—A feasibility study on the efficacy and acceptance of a school-based training ("8SAM"). Mindfulness, 16, 494–506. https://doi.org/10.1007/s12671-024-02399-9