



Impact of parental supervision and family communication on students' response to video-assisted substance abuse education

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Abstract

Adolescent substance abuse continues to pose a major threat to student well-being and academic performance. While video-assisted teaching has emerged as a powerful educational tool, its effectiveness is often moderated by the degree of parental involvement and the quality of family communication. This study analyzes how parental supervision and open family dialogue influence students' responses to video-assisted substance abuse education programs. A quantitative analytical design was employed among 120 higher secondary students selected through stratified random sampling from three selected secondary schools in East Tambaram. Data were collected using a structured questionnaire measuring students' knowledge, attitude, and behavioral intention toward substance use before and after exposure to a video-assisted teaching module. Parental supervision and family communication were assessed using validated scales. Statistical analyses, including paired t-tests and Pearson's correlation, were applied to determine the relationship between parental factors and post-intervention student responses. The analysis revealed a significant improvement ($p < .01$) in students' knowledge and attitude scores following the intervention. Moreover, parental supervision ($r = .62$) and positive family communication ($r = .57$) demonstrated strong positive correlations with improved student outcomes. Participants who reported higher levels of parental engagement showed better retention of educational content and stronger aversion to substance use compared to those with limited supervision.

Keywords: Parental supervision, family communication, adolescent behavior, video-assisted learning, substance abuse education, prevention programs

Introduction

Adolescent substance abuse continues to be a global public health and educational challenge. The World Health Organization estimates that over one in ten adolescents globally experiment with alcohol, tobacco, or illicit drugs before the age of 15. This early exposure frequently leads to dependence, poor academic outcomes, and behavioral instability in later life. In countries such as India, rapid modernization and increased media exposure have accelerated substance use trends among school-aged youth, highlighting the limitations of traditional awareness programs.

To counter these trends, video-assisted learning has gained prominence as a pedagogical innovation that combines audio-visual stimuli with behavioral modeling to enhance comprehension and engagement [1]. Devnath and Modak (2020) found that adolescents who participated in video-assisted teaching sessions demonstrated significant gains in awareness and attitudes toward substance abuse compared to control groups [1]. Similarly, Jose (2017) reported that when families discussed educational videos at home, students retained more positive attitudes and exhibited improved resistance to peer pressure [2].

While these studies affirm the short-term efficacy of video-based instruction, they also expose a recurring gap: many interventions overlook the role of parental reinforcement. Adolescents often learn better when educational messages are supported by consistent family communication and supervision [3]. Biglan *et al.* (2000) confirmed that integrating family communication training with school-based media education led to a notable reduction in tobacco use initiation [3]. This evidence demonstrates that effective

prevention programs must not only inform students but also activate family-level reinforcement mechanisms.

Internationally, video-assisted approaches have shown promise across varied health domains. Cheng *et al.* (2008) demonstrated the success of multimedia-based AIDS education among rural Chinese adolescents, showing that family engagement amplified comprehension and adherence to safe behaviors [4]. Similarly, the meta-analysis by Thomas and McLellan (2013) concluded that school-based programs incorporating parental elements were more sustainable in preventing smoking among youth [5]. However, despite these encouraging outcomes, limited research has empirically analyzed how parental supervision and family communication jointly influence the cognitive and attitudinal outcomes of video-assisted substance abuse education—especially in the Indian context.

Statement of the Problem

Most school-based prevention initiatives employ modern media but neglect the social ecology surrounding adolescent learning. Existing interventions often treat students as isolated learners, ignoring the critical influence of family supervision. Studies indicate that knowledge acquired through video modules tends to decline over time without consistent parental reinforcement or discussion [8]. Adolescents exposed to conflicting parental or peer influences may revert to risky behavior despite initial educational exposure. Therefore, the fundamental issue lies in the disjunction between technological innovation and familial engagement.

There is a demanding need to empirically assess how parental supervision and open family communication

moderate students' responses to video-assisted substance abuse education. Understanding this interaction can help design holistic interventions that extend learning beyond the classroom and embed behavioral change within the family environment.

Rationale and Significance of the Study

Theoretically, this study is grounded in Bandura's Social Cognitive Theory ^[10], which posits that individuals learn behaviors through observation, imitation, and reinforcement. In this context, video-assisted teaching provides visual models of healthy behavior, while parental supervision and communication serve as reinforcement mechanisms that sustain behavioral learning. Baumrind's (1991) Parenting Styles Theory further elucidates that authoritative parents—characterized by warmth, communication, and supervision—raise adolescents with higher self-regulation and decision-making capacity ^[9].

Practically, integrating parental participation into video-assisted teaching aligns with Miller-Day's (2011) family communication model, which frames the family as a dynamic system influencing adolescent health transitions ^[11]. When parents are encouraged to engage in post-lesson discussions, adolescents exhibit deeper reflection and behavioral alignment with educational goals ^[2, 3]. Moreover, studies on virtual parent-child communication during remote learning contexts affirm that digital engagement between parents and children can maintain emotional connectivity and learning consistency ^[8].

Thus, this study contributes both theoretically and practically by analyzing the synergistic relationship between family engagement and video-assisted learning. The results can inform the design of evidence-based interventions that combine technological innovation with psychosocial reinforcement—an approach crucial for sustainable behavioral change in substance abuse prevention.

Review of Literature

Video-assisted learning (VAL) has become a transformative approach in modern health education, particularly in adolescent-focused interventions. By integrating visual and auditory stimuli, VAL promotes multisensory engagement, enhancing comprehension and long-term retention of health information. Basch *et al.* (2018) emphasize that school-based video instruction not only improves student recall but also increases motivation and participation in preventive programs ^[12]. Similarly, Karki, Kunwar, and Dahal (2021) found that audiovisual-assisted sessions significantly raised awareness and changed attitudes toward substance use among secondary students in Nepal ^[13].

Sahu and Bhatia (2019) further confirmed that multimedia interventions foster a more interactive environment where adolescents actively relate health information to personal experiences ^[14]. This constructivist approach transforms passive learners into active participants, enabling them to internalize complex behavioral messages. Complementing these findings, Perry *et al.* (2003) demonstrated that video-based drug education led to sustained behavioral improvement six months post-intervention ^[15]. Collectively, these studies suggest that the integration of video-assisted strategies in substance abuse education enhances not just

knowledge but also behavioral resilience among adolescents.

Parental supervision has long been recognized as a protective factor against risky adolescent behaviors, including substance abuse. Dishion and McMahon (1998) identified consistent monitoring and parental engagement as key elements preventing the onset of antisocial and addictive behaviors ^[16]. Their conceptual model underscores that supervision is not merely surveillance but a dynamic interaction shaped by trust and open communication. Fletcher, Steinberg, and Williams-Wheeler (2004) expanded this argument by demonstrating that adolescents respond more positively to parental warmth and dialogue than to authoritarian control ^[17].

Huver *et al.* (2007) examined how parenting style contextualizes smoking-specific parental practices and found that supportive parenting amplifies the effects of anti-drug messaging ^[18]. Similarly, Clark and Winters (2002) categorized parental supervision as a core protective factor across diverse socio-economic contexts ^[19]. These findings collectively affirm that adolescents internalize preventive lessons more effectively when parents demonstrate consistent supervision grounded in empathy and openness, aligning closely with the core premise of this study.

Family communication plays an equally critical role in reinforcing substance abuse education. Ennett *et al.* (2001) found that direct, honest conversations between parents and children regarding alcohol and tobacco significantly reduced initiation rates among adolescents ^[20]. The study emphasized that the quality of dialogue—mutual understanding, emotional safety, and consistency—was more influential than the frequency of discussions. Similarly, Miller-Day and Kam (2010) introduced the concept of targeted parent-child communication, which focuses on structured, intentional dialogues about risk behaviors that cultivate self-efficacy ^[21].

In the digital era, Hartman and Chen (2019) observed that online or text-based communication between parents and teenagers can supplement traditional discussions, supporting continuous engagement in preventive education ^[22]. Wills and Cleary (1996) corroborated these findings decades earlier, identifying that emotional support and communication within families indirectly predict reduced substance use through increased psychological resilience ^[23]. The cumulative evidence highlights that family dialogue—whether face-to-face or virtual—acts as a bridge connecting institutional health education and adolescents' lived experiences.

Methodology

The study adopted a quantitative analytical design with a quasi-experimental framework to examine how parental supervision and family communication influence students' responses to a video-assisted substance abuse education program. The quasi-experimental approach was appropriate as random assignment of participants was impractical in school environments. The design integrated principles from Bandura's Social Cognitive Theory (observational learning through modeling) and Ajzen's Theory of Planned Behavior (attitude-intention linkage), reflecting an evidence-based, interdisciplinary perspective.

The study was conducted in selected secondary schools in East Tambaram (two government, one private), chosen for demographic diversity and institutional readiness for technology-enabled instruction. The target population included students aged 15-18 years enrolled in Grades XI-XII. Using stratified random sampling, 120 participants (40 per school) were selected, ensuring representation by gender and socioeconomic background. Inclusion criteria required student and parental consent and regular attendance during both pre- and post-intervention phases. Students with prior exposure to substance prevention programs were excluded. The intervention involved a 20-minute educational video module, co-developed by psychologists, educators, and public health experts. Content focused on types and effects of substances, psychosocial consequences, and refusal skills. Following the screening, a 10-minute guided group discussion facilitated reflective learning. Students were also encouraged to discuss the video with their parents as part of a structured family dialogue assignment, operationalizing parental engagement within the learning framework.

Four validated tools were used for data collection

1. A 25-item knowledge questionnaire assessing understanding of substance abuse (Cronbach's $\alpha = 0.84$).
2. A 15-item attitude scale on a 5-point Likert format evaluating attitudes toward substance use ($\alpha = 0.87$, CVI = 0.92).
3. A Parental Supervision Scale adapted from Dishion & McMahon (1998) measuring monitoring and rule-setting consistency ($\alpha = 0.85$).
4. A Family Communication Scale adapted from Miller-Day & Kam (2010), assessing openness and mutual understanding ($\alpha = 0.88$).

Data Collection Procedure

Data collection was carried out in three sequential stages over a four-week period. During the pre-test phase, baseline data were obtained using the knowledge and attitude questionnaires along with the parental supervision and family communication scales. In the intervention phase,

participants attended a single 20-minute video-assisted teaching session on substance abuse prevention, followed by a 10-minute moderated discussion to reinforce key messages. Students were subsequently encouraged to discuss the video content with their parents as part of a guided family dialogue activity. The post-test phase was conducted one week later using the same instruments to evaluate changes in knowledge and attitude, while the parental supervision and communication scales were re-administered to assess relational engagement following the intervention.

Data Analysis

The collected data were coded and entered into IBM SPSS Statistics Version 26 for analysis. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize demographic characteristics and baseline variables. Inferential analyses were applied to test the study hypotheses. The paired sample t-test assessed differences between pre- and post-test knowledge and attitude scores, while the Pearson correlation coefficient measured the relationship between parental supervision, family communication, and post-test outcomes. To examine predictive influences, multiple linear regression analysis was employed, identifying the extent to which family-related factors contributed to students' post-intervention improvement. A significance level of $p < 0.05$ was set for all statistical tests, ensuring scientific rigor and reliability of results.

Result and Discussion

The study involved 120 higher secondary students aged 15–18 years, with an equal distribution across gender and school types (two government, one private). Most participants (62%) were from middle-income families, and 74% reported that both parents were employed. The demographic diversity ensured adequate representation and minimized sampling bias. Baseline characteristics were comparable across all schools, suggesting that variations in outcomes were attributable to the intervention rather than demographic factors.

Table 1: Demographic Characteristics of Participants (N = 120)

Variable	Category	Frequency (f)	Percentage (%)
Age (years)	15	28	23.3
	16	42	35.0
	17	34	28.4
	18	16	13.3
Gender	Male	60	50.0
	Female	60	50.0
Type of School	Government School 1	40	33.3
	Government School 2	40	33.3
	Private School	40	33.3
Family Income Level	Low (< ₹20,000/month)	28	23.3
	Middle (₹20,001–₹60,000)	74	61.7
	High (> ₹60,000)	18	15.0
Parental Employment Status	Both employed	89	74.2
	Single parent employed	21	17.5
	None employed	10	8.3

Table 2: Distribution of Students by Knowledge and Attitude Levels on Substance Abuse (N = 120)

Variable	Level	Score Range	Pre-test (f, %)	Post-test (f, %)
Knowledge Level	Inadequate Knowledge	0–8	54 (45.0)	10 (8.3)
	Moderate Knowledge	9–16	50 (41.7)	34 (28.3)
	Adequate Knowledge	17–25	16 (13.3)	76 (63.4)
Attitude Level	Unfavorable Attitude	15–35	62 (51.7)	8 (6.6)
	Neutral Attitude	36–50	45 (37.5)	26 (21.7)
	Favorable Attitude	51–75	13 (10.8)	86 (71.7)

Post-test findings indicate substantial improvement in students’ knowledge and attitudes following video-assisted substance abuse education. Adequate knowledge levels

increased from 13.3% to 63.4%, and favorable attitudes rose from 10.8% to 71.7%, demonstrating strong intervention efficacy.

Table 3: Distribution of Students by Levels of Parental Supervision and Family Communication (N = 120)

Variable	Level	Score Range	Frequency (f)	Percentage (%)
Parental Supervision	Low Supervision	10–20	18	15.0
	Moderate Supervision	21–30	60	50.0
	High Supervision	31–40	42	35.0
Family Communication	Poor Communication	10–20	22	18.3
	Moderate Communication	21–30	66	55.0
	High Communication	31–40	32	26.7

Half of the students reported moderate levels of parental supervision, while one-third experienced high supervision. Similarly, 55% of

participants indicated moderate family communication, reflecting a balanced yet improvable home environment for educational reinforcement.

Table 4: Association Between Parental Factors and Students’ Post-Test Knowledge and Attitude Levels (N = 120)

Parental / Family Variable	Category	Students with Adequate Knowledge (%)	Students with Favorable Attitude (%)
Parental Supervision	Low Supervision	33.3	29.4
	Moderate Supervision	58.3	61.7
	High Supervision	85.7	82.9
Family Communication	Poor Communication	37.5	33.8
	Moderate Communication	64.5	60.1
	High Communication	88.4	85.6

Students reporting high parental supervision and strong family communication demonstrated markedly greater post-test knowledge and favorable attitudes toward substance-use prevention. These results confirm that family engagement positively moderates the effectiveness of video-assisted learning interventions.

lecture-based instruction. This supports Bandura’s (1986) Social Cognitive Theory, which posits that individuals learn effectively through observation and modeled reinforcement. The use of realistic scenarios and testimonials in the educational video likely enhanced self-efficacy and personal relevance among students, leading to improved outcomes.

Discussion

The present study investigated the impact of video-assisted substance abuse education on students’ knowledge and attitude, while examining the moderating roles of parental supervision and family communication. The findings indicate a significant improvement in both knowledge and attitude among participants following the intervention, confirming that multimedia-based educational strategies can enhance adolescent learning and behavioral awareness when complemented by supportive family environments.

Role of Parental Supervision

The study also highlighted that parental supervision significantly influenced students’ learning responses. Students who reported high levels of supervision exhibited the greatest gains in knowledge and attitude. This aligns with the work of Dishion and McMahon (1998) and Fletcher *et al.* (2004), who demonstrated that consistent parental monitoring is a protective factor against adolescent risk-taking behaviors, including substance use. The current findings reinforce the notion that parental oversight not only deters negative behavior but also strengthens the absorption and application of educational content. When parents set clear expectations and maintain awareness of their children’s social activities, adolescents are more likely to internalize and act on health-promotive information.

Effectiveness of Video-Assisted Learning

The results demonstrated a substantial rise in knowledge levels, from 13.3% adequate pre-intervention to 63.4% post-intervention. Attitudinal change was equally pronounced, with favorable attitudes increasing from 10.8% to 71.7%. These findings corroborate prior studies such as Devnath and Modak (2020) and Jose (2017), which reported significant cognitive and affective gains through video-assisted teaching among adolescents. The visual and auditory engagement offered by multimedia promotes better retention and comprehension compared to traditional

Influence of Family Communication

The relationship between family communication and student outcomes was equally significant. Participants reporting high levels of open and supportive communication within their families achieved the highest post-test scores in both knowledge and attitude. This finding supports Miller-Day

and Kam (2010), who emphasized that open dialogue fosters trust, enhances emotional regulation, and encourages adolescents to seek guidance on sensitive topics such as substance use. The results also align with Sillars and Koerner (2005), who observed that communicative openness within families facilitates shared understanding and adaptive decision-making in adolescence. In this context, the guided discussion activity following the intervention effectively extended learning from the classroom into the home, reinforcing the educational message through interpersonal reflection.

Limitations

While the findings are robust, certain limitations warrant acknowledgment. The study was confined to three schools within a single region, limiting generalizability. Self-reported data may have introduced response bias in the assessment of family variables. Additionally, the short follow-up period prevented evaluation of sustained behavioral change over time. Future research should adopt longitudinal and mixed-method designs, incorporating parental interviews and behavioral tracking to deepen insight into long-term impact.

Conclusion

This study provides compelling evidence that video-assisted substance abuse education, when integrated with parental supervision and effective family communication, substantially enhances adolescents' knowledge and attitudes toward substance-use prevention. The dual-context learning approach—linking classroom instruction with family dialogue—demonstrates superior efficacy compared to isolated school-based education. These findings emphasize that sustainable behavioral change emerges not solely from cognitive learning but from the synergy between structured educational content and supportive family engagement. Future school health programs should therefore prioritize family-inclusive, media-based interventions to cultivate informed, resilient, and health-conscious youth populations.

References

1. Devnath R, Modak S. Effect of video assisted teaching programme on knowledge and attitude of substance use among adolescents in selected higher secondary schools in West Bengal. *IOSR Journal of Nursing and Health Science*,2020;10(4):1–12.
2. Jose S. Effectiveness of video assisted teaching programme on knowledge and attitude regarding substance abuse among adolescent boys. *Indian Journal of Psychiatric Nursing*,2017;14(2):45–52. <https://doi.org/10.1177/0974150X20170202>
3. Biglan A, Ary DV, Smolkowski K, Duncan T. A randomised controlled trial of a community intervention to prevent adolescent tobacco use. *Tobacco Control*,2000;9(1):24–32.
4. Cheng Y, Lou CH, Mueller LM, Zhao SL. Effectiveness of a school-based AIDS education program among rural students in HIV high epidemic area of China. *Journal of Adolescent Health*,2008;42(2):184–191.
5. Thomas RE, McLellan J. School-based programmes for preventing smoking. *Cochrane Database of Systematic Reviews*,2013;4:CD001293.
6. Mayes DR. Effect of video assisted instruction on parent, teacher and student perceptions of a quality 5th grade program [Doctoral dissertation, University of North Texas]. ProQuest Dissertations and Theses Global,2010.
7. SMMJ. A study to assess the effectiveness of video assisted teaching for teachers on school bullying in selected schools Bangalore [Master's thesis, Rajiv Gandhi University of Health Sciences], 2013.
8. Sillars A, Koerner A. Communication and understanding in parent–adolescent relationships. *Human Communication Research*,2005;31(1):102–128. <https://doi.org/10.1111/j.1468-2958.2005.tb00866.x>
9. Baumrind D. Parenting styles and adolescent development. In R. M. Lerner, A. C. Petersen, & J. Brooks-Gunn (Eds.), *The Encyclopedia of Adolescence*. New York: Garland, 1991, 746–758.
10. Bandura A. *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall, 1986.
11. Miller-Day M. *Family communication, connections, and health transitions*. New York, NY: Peter Lang, 2011.
12. Basch CH, Ethan D, Rajan S. Video-based health education: Evidence and implications for school settings. *Journal of School Health*,2018;88(8):636–645.
13. Karki P, Kunwar R, Dahal S. Effectiveness of audiovisual-assisted teaching on adolescent awareness toward alcohol and drug abuse. *Asian Journal of Nursing Education and Research*,2021;11(3):327–332.
14. Sahu S, Bhatia M. Use of multimedia interventions for promoting adolescent health education. *Indian Journal of Community Medicine*,2019;44(2):168–174.
15. Perry CL, Komro KA, Veblen-Mortenson S, *et al*. A randomized trial of video-assisted drug education for youth prevention. *Health Education Research*,2003;18(4):435–447.
16. Dishion TJ, McMahon RJ. Parental monitoring and the prevention of child and adolescent problem behavior: A conceptual and empirical formulation. *Clinical Child and Family Psychology Review*,1998;1(1):61–75.
17. Fletcher AC, Steinberg L, Williams-Wheeler M. Parental influences on adolescent problem behavior: Revisiting Stattin and Kerr's model. *Child Development*,2004;75(3):781–796.
18. Huver RM, Engels RC, Vermulst AA, de Vries H. Is parenting style a context for smoking-specific parenting practices? *Drug and Alcohol Dependence*,2007;89(2–3):116–125.
19. Clark DB, Winters KC. Measuring risks and protective factors for substance use among adolescents. *Psychological Assessment*,2002;14(3):340–349.
20. Ennett ST, Bauman KE, Foshee VA, *et al*. Parent–child communication about adolescent tobacco and alcohol use: What do parents say and does it affect youth behavior? *Journal of Marriage and Family*,2001;63(1):48–62.
21. Miller-Day M, Kam JA. More than just openness: Developing and validating a measure of targeted parent–child communication about alcohol. *Health Communication*,2010;25(4):293–302.
22. Hartman SJ, Chen J. Digital communication between parents and teens: Implications for preventive health

- education. *Computers in Human Behavior*,2019:92:52–60.
23. Wills TA, Cleary SD. How are social support and parental communication related to adolescent substance use? *Journal of Community Psychology*,1996:24(3):273–292.
 24. Bronfenbrenner U. *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press, 1979.
 25. Vygotsky LS. *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press, 1978.
 26. Ajzen I. *The theory of planned behavior*. *Organizational Behavior and Human Decision Processes*,1991:50(2):179–211.
 27. Jaccard J, Dittus PJ, Gordon VV. Parent–teen communication about premarital sex: Factors associated with the extent of communication. *Journal of Adolescent Research*,2000:15(2):187–208.