

# Initiating a Life Skills Module to Prevent Drug Abuse Among Indonesian Adolescents Using Social Cognitive Theory

Yunita Candra Utami<sup>1,2</sup>, Fedri Ruluwedrata Rinawan<sup>3</sup>, Puspa Sari<sup>4</sup>, Kuswandewi Mutyara<sup>3</sup>, Dewi Marhaeni Diah Herawati<sup>3</sup>

<sup>1</sup>Master Program of Public Health, Faculty of Medicine, Universitas Padjadjaran, Bandung, West Java, Indonesia; <sup>2</sup>National Narcotics Board (BNN), West Bandung Regency, West Java, Indonesia; <sup>3</sup>Department of Public Health, Faculty of Medicine, Universitas Padjadjaran, Sumedang, West Java, Indonesia; <sup>4</sup>Department of Applied Sciences, Vocational School, Universitas Padjadjaran, Sumedang, West Java, Indonesia

Correspondence: Fedri Ruluwedrata Rinawan, Department of Public Health, Faculty of Medicine, Universitas Padjadjaran, Jl. Ir. Soekarno No.km. 21, Sumedang, West Java, 45363, Indonesia, Email f.rinawan@unpad.ac.id

**Purpose:** Drug abuse among adolescents is a major public health concern. While life skills education is a recognized preventive strategy, existing national modules, such as Siaga Lawan Narkoba (SIGAB) 2.0 developed by the National Narcotics Board (BNN, Indonesia's national anti-narcotics agency), are primarily designed for peer facilitators and often emphasize information delivery over participatory skill development. Grounded in Social Cognitive Theory (SCT), this study aimed to initiate the development of a life skills module by identifying the essential skills needed by adolescents and adapting the national module to the local context to facilitate experiential learning.

**Methods:** A qualitative design was employed in three public senior high schools located in West Bandung Regency, Indonesia, classified as high-risk areas by BNN. Through purposive sampling, data were gathered from 13 participants (seven adolescents, four teachers, and two drug abuse prevention counselors) via in-depth interviews and document review. The newly developed module validated by five experts in adolescent psychology, education, drug abuse prevention, language, and media. Interview and document data were analyzed thematically, and expert validation scores were analyzed descriptively.

**Results:** Thematic analysis identified five essential life skills: self-awareness, emotional regulation, stress management, effective communication, and interpersonal relationship building. These findings informed the development of an improved module featuring simple language, engaging visuals, and interactive methods such as role-play and group discussions. Expert validation confirmed feasibility, with scores ranging from 68% to 92%, indicating readiness for refinement and pilot implementation.

**Conclusion:** This study identified the essential life skills for adolescent drug abuse prevention and developed a draft SCT-based module emphasizing experiential learning through interactive and participatory methods. Validation outcomes demonstrated strong implementation potential, suggesting readiness for further pilot testing within school-based health programs.

**Keywords:** prevention, youth resilience, experiential learning, health education

## Introduction

Drug abuse remains a critical global public health issue that threatens the wellbeing of individuals and societies. According to the World Drug Report 2025 by the United Nations Office on Drugs and Crime (UNODC), an estimated 316 million people aged 15–64 years used drugs in 2023, representing 6.0% of the global population. This figure marks a significant increase from 246 million in 2013, not only due to population growth but also to a rise in prevalence from 5.2% to 6.0%.<sup>1</sup> Although comprehensive global prevalence data specifically for adolescents (10–19 years) are limited, this age group is widely recognized as particularly vulnerable due to ongoing neurodevelopmental and psychosocial changes that characterize this developmental stage.<sup>2,3</sup> Indonesia faces a similar challenge, with a national prevalence of 1.7% among the population aged 15–64 years in 2023, equivalent to approximately 3.3 million people.<sup>4</sup> Available



national data indicate a persistently high prevalence among youth (15–24 years),<sup>4</sup> which may reflect early initiation of drug use during late adolescence and highlights the importance of preventive interventions targeting adolescents. Furthermore, the distribution of drug-prone areas at the provincial level underscores the severity of the issue. The Indonesia Drug Report 2025 identified West Java as one of the top five provinces with the highest number of drug-prone areas, which includes 51 classified as hazardous and 726 under surveillance.<sup>5</sup> West Bandung Regency, part of the Bandung metropolitan area, represents a high-risk setting due to its dense population, high mobility, and proximity to major urban centers.<sup>6,7</sup>

Adolescence is a developmental stage characterized by identity exploration, high curiosity, and risk-taking behavior. These characteristics, combined with peer pressure, increase the likelihood of experimentation with drugs.<sup>7</sup> Drug use during adolescence can severely disrupt brain development, impairing executive function, impulse control, and memory. The consequences include academic decline, increased involvement in delinquent or criminal activities, and heightened risks of mental disorders such as depression and anxiety, as well as overdose-related mortality.<sup>8</sup> Within the framework of adolescent reproductive health, drug abuse is considered one of the major threats, alongside issues related to sexuality and HIV/AIDS.<sup>9</sup> Peer influence plays a pivotal role in adolescent decision-making. The need for social acceptance often drives young individuals to engage in risky behaviors, including drug use. However, the presence of strong life skills defined as the abilities to manage emotions, cope with stress, communicate assertively, build healthy interpersonal relationships, and resist peer pressure can serve as protective factors against drug abuse.<sup>8,10</sup> According to social influences theory, adolescents with poor social competence are more susceptible to environmental pressures from peers, family, or media to experiment with drugs, this highlights the importance of comprehensive life skills education in prevention efforts.<sup>11,12</sup>

Various structured programs have demonstrated the effectiveness of life skills training in preventing adolescent drug use. For instance, the Life Skills Training (LST) program, the Adolescent Learning Experience in Resistance Training (ALERT), and the Information + Psychosocial Competence = Protection (IPSY) model emphasize self-management, social skills, and resistance strategies. These include stress management, emotional regulation, assertive communication, decision-making, and refusal skills that enable adolescents to reject peer pressure and strengthen normative beliefs regarding the dangers of drugs.<sup>3</sup> A study by Ayers et al demonstrated that interventions focusing on practical skills, such as strategies to resist drug-related peer pressure and coping with high-risk situations, were among the most effective approaches to prevention. These interventions equip adolescents with flexible refusal and coping strategies that can be adapted to different social contexts. Furthermore, adolescents with stronger communication skills have been shown to be at lower risk of engaging in harmful behaviors, including drug use.<sup>13</sup> Schools are strategic venues for preventive interventions because they provide structured settings for knowledge transfer and behavior change among adolescents. Evidence shows that schools exert a significant influence on adolescent knowledge, attitudes, and behavior regarding health risk.<sup>3,14</sup> Moreover, schools engage not only students but also teachers, parents, and the wider community, making them suitable for comprehensive prevention strategies. Health professionals, particularly those in community and public health, play a complementary role by designing and implementing health promotion activities, increasing awareness of drug risks, empowering local communities, and supporting sustainable prevention efforts.<sup>15</sup>

Recent studies underscore the value of structured, school-based modules in adolescent drug prevention. In Nepal, Shrestha et al have developed the School-based Substance use Prevention Program (SSPP), a structured training module designed to strengthen adolescents' protective skills and awareness.<sup>16</sup> Similarly, an empirical study by Ramamurthy et al in Bengaluru, India, demonstrated that a prevention module significantly improved adolescents' knowledge of drug risks and enhanced their coping strategies to resist peer pressure.<sup>17</sup> These findings suggest that structured educational modules are an effective component of adolescent drug prevention strategies. In Indonesia, BNN has developed several educational programs, including the SIGAB 2.0 module, which employs peer facilitators to deliver drug prevention messages. However, the module remains limited in reach and impact, as it primarily targets peer educators rather than all students and continues to emphasize information delivery over practical skill development. Although it includes several key life skills, its implementation provides limited opportunities for students to apply these skills in real-life situations, particularly in resisting peer pressure.<sup>18</sup>

Given these gaps, a more comprehensive life skills-based module is urgently needed. This study addresses this need by developing a module grounded in SCT. SCT emphasizes the dynamic interaction among cognitive, behavioral, and

environmental factors in the learning process.<sup>19,20</sup> Observational learning, modeling, and reinforcement of self-efficacy are central components that enable adolescents to acquire, internalize, and practice healthy behaviors. Guided by these SCT principles, the module integrates experiential learning through observational learning and modeling, supported by role-playing and group discussions. This approach enables adolescents to develop the necessary skills in a direct and applicable manner. By integrating these activities, adolescents can directly practice and internalize the skills required to resist drug use in real life situations.<sup>20,21</sup> Building on these principles, this study initiates the development of a life skills-based module using SCT strategies to create an inclusive, accessible, and contextually relevant prevention tool that addresses the actual needs of adolescents in Indonesia.

## Materials and Methods

### Study Design

This study employed a qualitative research design focused on module development. The process consisted of two main phases: (1) a qualitative needs assessment conducted through in-depth interviews and document review to inform module development, and (2) expert validation to assess the feasibility and content validity of the module.<sup>22,23</sup> The module was developed by integrating insights from the qualitative phase with the principles of SCT. This theoretical foundation was embedded throughout the module's design. Key SCT constructs such as observational learning (facilitated through case studies and peer modeling), modeling (embedded in role-play scenarios), and reinforcement of self-efficacy (built through skill-building exercises and reflection) were operationalized into specific activities to enable adolescents to acquire, practice, and internalize healthy behaviors.<sup>20,21,24</sup>

### Study Setting

The study was conducted in three public senior high schools located in the subdistricts of Lembang, Ngamprah, and Padalarang in West Bandung Regency, Indonesia. These sites were chosen because they are classified as high-risk areas by BNN.<sup>5</sup> Each school represents a different geographical and social context within the regency, allowing for variation in student backgrounds and school environments. This setting was considered suitable for exploring adolescents' life skills needs related to drug abuse prevention.

### Participants

A total of 13 participants were involved in this study, consisting of seven adolescents, four teachers, and two drug prevention counselors from BNN. Purposive sampling was used to ensure diverse and information-rich perspectives across roles and school contexts.

**Adolescents:** Eligible participants were students in 10<sup>th</sup> or 11<sup>th</sup> grade from SMAN 1 Lembang, SMAN 1 Ngamprah, or SMAN 1 Padalarang, who demonstrated adequate communication skills and willingness to participate. School counselors and homeroom teachers assisted in identifying potential participants. These participants were general students, not pre-identified based on drug use behavior, allowing the study to capture perspectives on universal prevention needs from a typical adolescent population within these high-risk areas. Students in 12<sup>th</sup> grade or those without parental consent were excluded.

**Teachers:** Eligible teachers were those currently teaching at one of the three selected schools. Teachers with less than two years of teaching experience were excluded to ensure they had sufficient experience with the student population and school dynamics.

**Drug Prevention Counselors:** Counselors were recruited from the West Java Provincial BNN. Inclusion criteria included active assignment in drug prevention programs and certification or formal training in drug prevention education. Counselors with less than two years of experience or no prior involvement in adolescent-focused prevention education were excluded.

All participants were contacted through school or institutional coordination and provided written informed consent prior to participation. To ensure anonymity, participant codes are used throughout this article: "R" refers to adolescents, "G" to teachers, and "P" to counselors.

## Data Collection

Data were collected between May and August 2025 through two primary methods: document review and in-depth interviews, followed by expert validation of the developed module.<sup>23,25</sup>

### Document Review

A structured review of the national module (*BNN's SIGAB 2.0*) was performed to examine its structure, content coverage, pedagogical approach, strengths, and limitations. The insights obtained were used to inform the development of the enhanced SCT-based module.

### In-Depth Interviews

Semi-structured interviews were conducted with all 13 participants (seven adolescents, four teachers, and two counselors) using group-specific interview guides. The guides consisted of open-ended questions exploring participants' perspectives on: (1) the essential life skills adolescents need to prevent drug abuse; (2) the relevance and limitations of existing prevention modules; and (3) recommendations for improving module content, design, and delivery. Each interview lasted approximately 45–60 minutes, was conducted in Bahasa Indonesia, and was audio-recorded with permission. Field notes were also taken to capture contextual details and non-verbal cues.

### Expert Validation

The drafted module was reviewed by five experts representing the fields of adolescent psychology, education, drug prevention, language, and media. Using a structured validation instrument with a five-point Likert scale, experts assessed the module across five key criteria: psychological suitability, educational/pedagogical alignment, drug prevention content validity, language and readability, and media and design quality. Their feedback was analyzed descriptively and used to guide the final revision of the module.<sup>26</sup>

## Data Analysis

Data from the three collection methods were analyzed separately and then integrated to inform module development and validation.

### Qualitative Data from Interviews and Document Review

The interview transcripts and document notes were analyzed using the systematic thematic analysis approach proposed by Naeem et al.<sup>27</sup> This structured, six-step process involved transcription, keyword identification, coding, theme development, conceptualization, and model construction. This structured six-step method was chosen for its ability to enhance analytical rigor and support the integration of inductive insights with the theoretical framework of Social Cognitive Theory. The analysis was conducted iteratively, with continuous reflection on the relationships between data, codes, and themes, supported by NVivo version 15.3.2 (Lumivero Pty Ltd, 2024) for data management and organization. This process ensured a transparent, consistent, and evidence-driven interpretation of the qualitative data, with significant quotations and keywords deliberately selected to ground the findings firmly in the data.

### Expert Validation

Scores from the expert validation questionnaires were analyzed descriptively. Each item was rated on a five-point Likert scale, and the total scores were converted into percentages of the maximum possible score. The module's feasibility was interpreted using the following predefined criteria:

- 81–100%: Very Good/Highly Feasible
- 61–80%: Good/Feasible with minor revisions
- 41–60%: Fair
- 21–40%: Poor
- 0–20%: Very Poor

A module was considered feasible for implementation if it achieved a minimum overall score of “Good” ( $\geq 61\%$ ).<sup>26</sup>

### Trustworthiness of Qualitative Data

Rigor in qualitative analysis was ensured using several strategies. The approach adopted in this study incorporated the four trustworthiness criteria proposed by Lincoln and Guba.<sup>28</sup> Credibility was achieved through methodological triangulation (interviews with adolescents, teachers, and counselors) and member checking, where a summary of preliminary findings was reviewed by a subset of participants (two adolescents, one teacher, and one counselor) to confirm interpretive accuracy. Dependability was supported by consistent use of the interview guide and maintenance of an audit trail documenting key analytical decisions. Confirmability was ensured through reflexive journaling by the primary researcher to bracket prior assumptions, coupled with regular discussions within the research team where coding frameworks and interpretations were critically reviewed. Transferability was enhanced by providing thick descriptions of the study context and participant characteristics.

### Ethical Considerations

This study was conducted in accordance with the principles of the Declaration of Helsinki. The study protocol was approved by the Research Ethics Committee of Universitas Padjadjaran, Indonesia (Approval No. 416/UN6.KEP/EC/2025). Written informed consent was obtained from all participants, and parental consent was secured for students under 18 years of age. The consent process included permission for the publication of anonymized findings and direct quotes. Confidentiality and anonymity were maintained throughout the study, and all data were stored securely with access restricted to the research team.

## Results

### Participant Characteristics

A total of 13 participants took part in this study, comprising students, teachers, and counselors. They varied in age, gender, role, and educational background, with the majority being senior high school students. Detailed sociodemographic characteristics are presented in [Table 1](#).

**Table 1** Socio-Demographic Characteristics of Participants (n = 13)

Groups	Classification	n	%
Gender	Male	3	23.1
	Female	10	76.9
Age (Years)	10-19	7	53.8
	20-29	1	7.7
	30-39	3	23.1
	40-49	1	7.7
	50-59	1	7.7
Role	Student	7	53.8
	Teacher	4	30.8
	Counselor	2	15.4
Highest Education	Senior High School	7	53.8
	Bachelor's degree	4	30.8
	Master's degree	2	15.4

## Overview of Qualitative Findings

The qualitative analysis in this study successfully mapped the essential needs for an effective drug prevention module for adolescents. Analysis of 13 interview transcripts and the national module document generated 22 initial codes, which were organized into 2 overarching themes and 10 categories. The findings reveal that an approach centered on strengthening life skills and mental health is the key. This framework begins with building self-awareness, followed by the development of social competencies, such as effective communication and emotional regulation, to build self-resilience. In addition to the content, the findings strongly emphasize that participatory delivery methods (including reflection and role-playing) and a module design that is relevant and engaging for adolescents are critical elements for successful implementation. A conceptual map illustrating the relationships among these components is presented in [Figure 1](#).

### Essential Life Skills for Prevention

Analysis of participant interviews identified five essential life skills required by adolescents to prevent drug abuse:

#### 1. Self-Awareness

Participants emphasized self-awareness as a fundamental foundation for adolescents to build personal resilience against negative influences. This skill encompasses self-understanding, strong personal values, self-confidence, clear life goals, and self-love. Developing these aspects helps adolescents recognize their strengths and limitations, make responsible decisions, and stay committed to positive behaviors even in challenging environments.

If we have principles, even if we socialize with people who come from deviant backgrounds... we will not be influenced. (R1)

Like, who am I? What kind of person am I emotionally and psychologically? If I understand that, I can control myself better. (G1)

Knowing yourself, who you are and what you want, helps build your identity and resistance to bad influences. (G2)

If we have principles, even if our environment is negative, we won't be easily influenced. (R1)

Confidence makes teenagers less likely to follow their peers into risky behaviors. (G4)

Loving yourself means living healthily and knowing what's good for you. (P2)

#### 2. Effective Communication

Participants emphasized effective communication as an essential life skill for adolescents, highlighting assertive communication as a particularly critical component. Assertiveness enables adolescents to express their opinions clearly, refuse risky invitations, and maintain healthy social relationships while respecting others.

If we can't say no, we will definitely fall into drugs, it's easy to get influenced, easy to be persuaded. (R3)

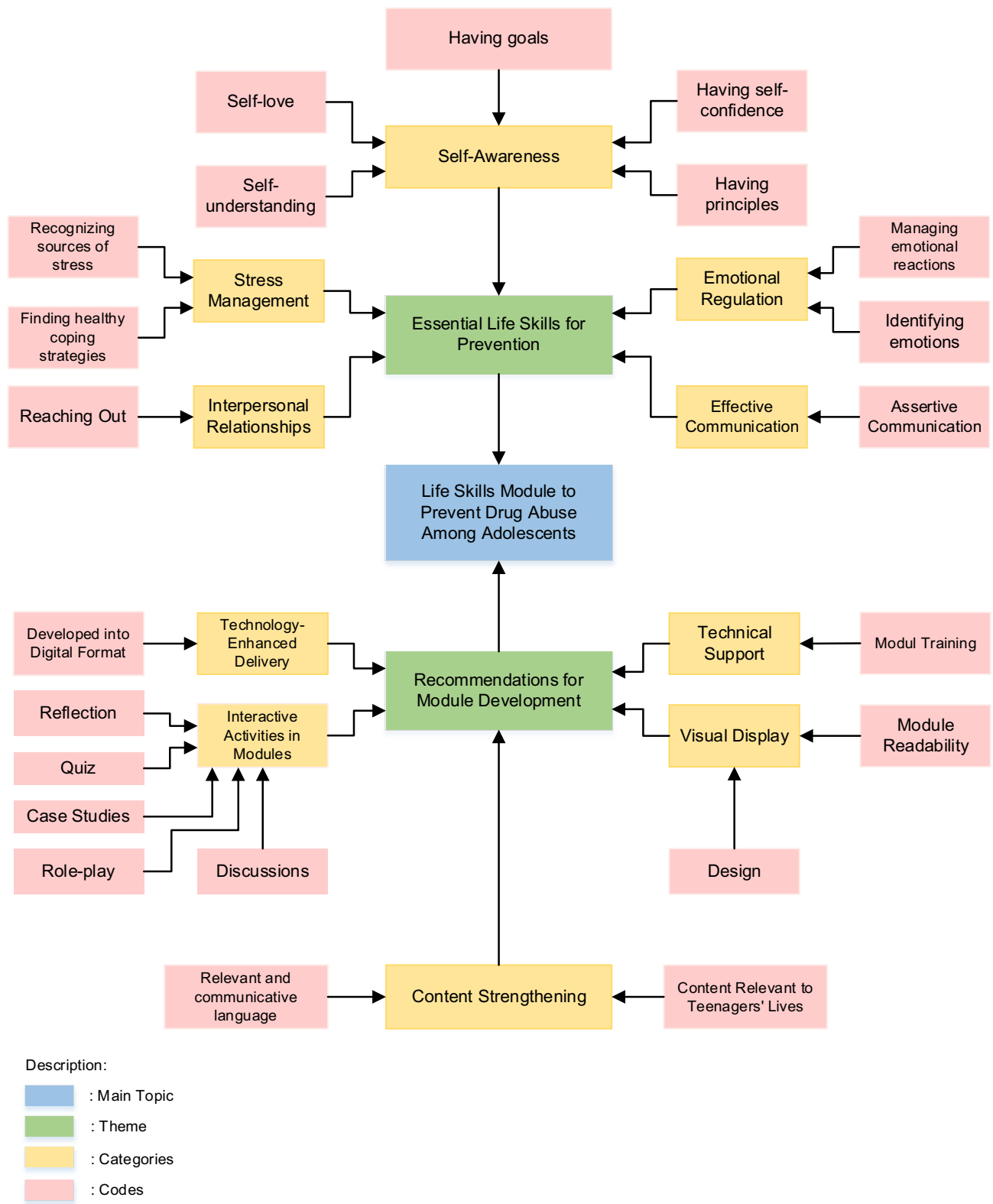
As a life skill, they must have the ability to say no... to be firm with their friends. (G1)

#### 3. Stress Management

The ability to manage stress was perceived as helping adolescents find healthy ways to cope with pressure and prevent them from turning to destructive outlets such as drug use, smoking, or other risky behaviors.

Nowadays there's a lot of pressure, from parents, academics, and friendships. What I hear is that many people use drugs because they are stressed, so it's very important for us as teenagers to know how to manage stress. (R7)

The second life skill is stress management, so when teenagers are in difficulty or under stress, they know what to do and not return to harmful things. (G1)



**Figure 1** Conceptual Map of Identified Life Skills for Adolescent Drug Abuse Prevention.

#### 4. Emotional Regulation

Emotional regulation was considered important so that adolescents can respond appropriately to situations that trigger anger or pressure. This skill helps prevent negative outlets such as drug use or aggressive behavior, and supports more assertive communication.

In my opinion, teenagers really need to express their emotions. But many do it in the wrong way, like using drugs or smoking, or trying to escape from reality. (R3)

If we can't control our emotions, it may lead to aggressive communication, like shouting or using harsh words, which is unpleasant for the people we interact with. (R6)

#### 5. Building Interpersonal Relationships

Building healthy interpersonal relationships, particularly the ability to “reach out” for help, was identified as a crucial skill. This refers to the initiative to contact parents, close friends, teachers, or other trusted people for support, advice, or protection when facing risky situations.

If I were invited to use drugs, I would firmly say no. Even if they insisted, I would immediately leave and report it to my parents. (R7)

If someone invited me, I would first talk to my parents or close friends to find a solution, and then I would avoid that drug-related environment. (R3)

### Recommendations for Module Development

Beyond identifying essential life skills, the second major theme captured concrete recommendations from all participant groups for translating these skills into an effective educational tool. Adolescents, teachers, and counselors provided detailed input on the module's content, delivery, and design to ensure it would be practical, engaging, and culturally relevant for the target audience.

#### 1. Content Strengthening

Participants emphasized that the module should feature content more relevant to adolescents' daily lives, using simple and communicative language.

I think it should be more related to real life... like school or hangout places, because those are very influential. (R2)

With teenagers, the language has to match their world. If it's too high-level or monotonous, they get bored quickly. (P2)

#### 3. Technology-Enhanced Delivery

Participants strongly advocated shifting from a static print module to a dynamic, technology-enhanced learning tool.

Insert a video link to explain drugs, not just in writing, but in full, in a video. (G4)

Perhaps if the image isn't included directly, it could be like scanning a barcode, so it could be done on a cellphone. (R7)

#### 3. Interactive Activities in Modules

There was a clear preference for active learning strategies over passive lectures. Suggested methods included role-plays, group discussions, case studies, reflection sessions, and quizzes.

So, it's like the material can be explained and then there's practice, for example, role play or maybe group discussions. (R6)

Besides summarizing for myself, I want to measure whether I actually understand this material or not. After reading, I usually like quizzes. (R1)

The first insertion is a case study. For example, if the audience is high school students, then a news story about students who become addicted to or involved in drug trafficking could be presented. This case study can serve as a reference source and discussion material. (P1)

#### 4. Visual Display

Participants emphasized that an attractive and clear visual layout is crucial for adolescent engagement. Recommendations included using relevant illustrations and ensuring a clean, uncluttered layout to enhance readability.

If possible, please add more pictures, for example, there are examples of illustrations, there are steps, for example, how to refuse drug abuse, ask friends how to do the tutorial. (R4)

But there are elements that overlap with the text, so it's not very clear. (R6)

#### 5. Technical Support

To ensure successful implementation, participants highlighted the need for preliminary training for teachers or facilitators.

There has to be an introduction first, a briefing first to make things clear. The training takes one day, with one day of explanation, one day of presentation, and the next day of modules. That's usually how we do it. (G2)

## Overview of the Developed Module

Based on the identified life skills and adolescents' expressed needs, a draft life skills module was developed for school-based drug abuse prevention. The module consists of six structured learning units, each designed for delivery in 65–80 minutes to allow flexible integration into school schedules. It is delivered through facilitator-led interactive group sessions, supported by a participant workbook. The content is organized into six interconnected units: (1) Understanding the Dangers of Drugs, which establishes foundational knowledge; (2) Self-Awareness and Identity Building; (3) Emotional Regulation and Stress Management; (4) Assertive Communication; and (5 and 6) Resisting Peer Pressure (Parts 1 and 2), which provide graduated practice in refusal skills.

Across all units, experiential learning methods, including role-playing, group discussions, case studies, reflection exercises, and quizzes, are employed to promote observational learning, modeling, and self-efficacy in line with Social Cognitive Theory. These activities provide adolescents with opportunities to practice life skills in safe, simulated contexts before applying them in real-life situations. This complete draft module, encompassing its content, structure, duration, and delivery methods, was submitted for expert validation.

## Expert Validation Results

Expert validation assessed the module across five key criteria: psychological suitability, educational/pedagogical alignment, drug prevention content validity, language and readability, and media and design quality. As shown in [Table 2](#), the module received an overall feasibility score of 82%, indicating it is suitable for implementation with minor revisions. The strongest dimension was educational suitability (92%), confirming the module's sound pedagogical foundation. The area requiring the most attention was language and readability (68%), underscoring the need for simplification and consistency in text. Scores for psychological suitability (80%), content validity (83%), and media design (88%) were all in the good to very good range, reflecting balanced strengths across theoretical, content, and visual aspects of the module.

**Table 2** Expert Validation Results Based on a Five-Point Likert Scale Assessment

Validation Criteria	No. of Items	Mean Score (1–5)	Percentage Score (%)	Key Expert Feedback for Improvement
Psychological Suitability	6	4	80%	Deepen content on self-concept; enhance reflection activities.
Educational/Pedagogical Suitability	5	4.6	92%	Consider digital/interactive format (e-book, video).
Drug Prevention Content Validity	6	4.2	83%	Strengthen the role of adolescents as active agents of change.
Language & Readability	5	3.4	68%	Simplify sentence structures; ensure consistency.
Media & Design Quality	5	4.4	88%	Add more illustrations; adjust dense layout.
<b>Overall Mean/Score</b>	<b>27</b>	<b>4.1</b>	<b>82%</b>	<b>The module is feasible with minor revisions.</b>

## Discussion

This study identified five core life skills and developed a draft SCT-based module for drug abuse prevention among adolescents in West Bandung, Indonesia. The findings demonstrate that adolescents in this high-risk area possess awareness of both internal and external challenges and recognize life skills as essential protective tools. This convergence between adolescent perspectives and SCT constructs reinforces the theoretical foundation and contextual validity of the module initiation.

## Life Skills as Foundational Protective Factors

The five life skills identified, which include self-awareness, emotional regulation, stress management, assertive communication, and interpersonal relationship building, form a cohesive framework that addresses the complex challenges of adolescence. While the life skills identified in this study align with established core components of global prevention programs, their confirmation through a local needs assessment is vital. This study underscores that these skills are not only universally recognized but also specifically demanded within the Indonesian adolescent context, reinforcing their role as the essential backbone of any tailored prevention strategy. Among these, self-awareness emerged as the foundational skill. It encompasses understanding oneself, holding personal principles, building confidence, setting life goals, and practicing self-love. Adolescents who understand their values and identity tend to demonstrate stronger resilience against negative social influences.<sup>29</sup> This finding aligns with Bandura's concept of self-efficacy, in which belief in one's ability to act effectively influences goal attainment and behavioral outcomes.<sup>24</sup> Thus, self-awareness not only shapes identity but also fosters confidence in managing social pressure and making healthy decisions.<sup>24,29</sup>

Closely related to self-awareness, emotional regulation and stress management equip adolescents to respond to life pressures in constructive ways. Emotional regulation helps them recognize and control emotional reactions, while stress management provides positive coping mechanisms such as engaging in physical activities or seeking social support.<sup>30,31</sup> These findings highlight that unresolved emotional distress often drives adolescents toward maladaptive behaviors, including substance use.<sup>32</sup> Therefore, strengthening these skills forms a vital foundation for adolescents' psychological resilience in high-risk situations.<sup>30,31</sup>

In addition, effective communication, particularly assertive communication, is vital for expressing opinions, refusing peer pressure, and maintaining healthy relationships. The ability to say "no" assertively enables adolescents to resist risky invitations while preserving social harmony. Previous studies show that assertiveness training reduces drug use tendencies and improves mental well-being.<sup>33,34</sup> This reinforces assertive communication as a protective social skill that enhances self-efficacy and the ability to make decisions.

Finally, interpersonal relationship building, which includes the ability to reach out for support, completes this protective framework. Adolescents who seek help from parents, teachers, or trusted peers show greater resilience to

negative influences.<sup>35</sup> This reframes help-seeking as an adaptive and proactive behavior, emphasizing its importance for emotional safety and long-term well-being.

## A Contextually Grounded and Theory-Driven Module

Expert validation, with scores ranging from 68% to 92%, provides strong evidence of the module's feasibility. The lower score from the language expert, indicating the need for improved readability, aligns with adolescents' expressed preference for simple and relatable language, offering a clear direction for refinement. In contrast, high ratings in the educational and media aspects confirm that the module's pedagogical design and interactive elements are well aligned with adolescent learning needs.

This module represents a foundational step toward improving school-based drug prevention efforts in Indonesia. In contrast to traditional top-down and standardized approaches, it was co-developed through local insights, ensuring that its content and interactive delivery methods, such as role-playing and case studies, are not only theoretically grounded but also contextually resonant.<sup>36,37</sup> This participatory development process directly addresses key limitations of previous modules, including BNN's SIGAB 2.0, which lacked systematic life skills integration and broad accessibility.<sup>18</sup> Furthermore, by embedding core SCT principles, such as observational learning and modeling, into these activities, the module offers a structured platform for adolescents to practice, internalize, and strengthen essential skills within a supportive environment before transferring them to real-world situations.<sup>20</sup>

## Strength and Limitations

The main strength of this study lies in its comprehensive and theory-driven approach to initiating the development of a life skills module for adolescent drug abuse prevention. By integrating SCT with a rigorous qualitative needs assessment and structured expert validation, the study ensures that the module is both theoretically grounded and contextually relevant. Credibility was strengthened through methodological triangulation involving adolescents, teachers, and counselors, allowing the module design to accurately reflect the needs of a high-risk population. However, as this study focused on the development and validation phases, some limitations should be acknowledged. First, the qualitative sample size, particularly the number of adolescent participants (n=7), while sufficient to reach informational saturation for the purposes of this module development study, may limit the generalizability of the findings to all Indonesian adolescent contexts. Second, this study did not screen participants for personal drug use history, which may influence their perspectives on prevention needs. Future studies could stratify sampling to capture the perspectives of both adolescents without a history of drug use and those identified as being at risk. Third, the qualitative sample was predominantly female (76.9%), resulting in an underrepresentation of male adolescent perspectives. This imbalance, arising from voluntary participation where more female students were available, may limit the transferability of the identified life skills needs specifically to male adolescents. While it provides valuable insights from a female perspective, future studies should ensure balanced gender representation to explore potential gender-specific nuances in prevention. Fourth, the module's practical effectiveness in real-life school settings has not yet been tested. Future research should include pilot implementation and experimental evaluation to measure its impact on adolescents' knowledge, self-efficacy, and behavioral outcomes, and would benefit from larger and more diverse samples to further validate the identified life skills.

## Conclusion

This study developed a feasible and theory-driven approach by identifying essential life skills and constructing a draft SCT-based module for adolescent drug abuse prevention. The module emphasizes experiential learning through interactive methods. Validation outcomes demonstrated strong content validity and feasibility. These findings indicate that the module is a promising intervention ready for the next essential step: pilot implementation and rigorous evaluation to assess its effectiveness in real-world school settings. Beyond its immediate contribution, this study provides an evidence-based framework for future module refinement and large-scale evaluation, representing a significant step toward strengthening school-based drug prevention strategies in Indonesia.

## Acknowledgments

We thank all participants for their invaluable contributions to this study. We also gratefully acknowledge the support from Universitas Padjadjaran, Indonesia, which funded the article processing charge (APC) for this publication.

## Disclosure

The authors report no conflicts of interest in this work.

## References

1. UNODC. World drug report 2025. Vienna: United Nations Office on Drugs and Crime; 2025.
2. Nath A, Choudhari SG, Dakhode SU, Rannaware A, Gaidhane AM. Substance abuse amongst adolescents: an issue of public health significance. *Cureus*. 2022;14(11):e31193. doi:10.7759/cureus.31193
3. Haug S, Castro RP, Wenger A, Schaub MP. Efficacy of a mobile phone-based life-skills training program for substance use prevention among adolescents: study protocol of a cluster-randomised controlled trial. *BMC Public Health*. 2018;18:1102. doi:10.1186/s12889-018-5969-5
4. Badan Narkotika Nasional. Indonesia drug report 2024. Jakarta: BNN; 2024.
5. Badan Narkotika Nasional. Indonesia drug report 2025. Jakarta: BNN; 2025.
6. Badan Pusat Statistik. *Kabupaten Bandung Barat Dalam Angka 2025*. Bandung Barat: BPS; 2025.
7. Roy S, Chowdhury IR. Intoxication in the city: investigating spatial patterns and determinants of drugs and alcohol-related illegal activities in India's geostrategic corridor. *Appl Geogr*. 2024;171:103386. doi:10.1016/j.apgeog.2024.103386
8. Oh S, Salas-Wright CP, Vaughn M, Werneckinck UK. Trends in substance use and prevention education involvement among US adolescents receiving public assistance: new evidence. *Ann Epidemiol*. 2021;64:1–7. doi:10.1016/j.annepidem.2021.08.016
9. Solehati T, Putri AM, Ratnasari N, et al. Promosi kesehatan pencegahan TRIAD kesehatan reproduksi remaja (TRIAD KRR) dalam meningkatkan pengetahuan dan sikap remaja Kota Bandung. *Holistik J Kesehatan*. 2023;17(4):269–276. doi:10.33024/hjk.v17i4.11235
10. Lukman GA, Alifah AP, Divarianti A, Humaedi S. Kasus narkoba di Indonesia dan upaya pencegahannya di kalangan remaja. *Jurnal Penelitian Dan Pengabdian Kepada Masyarakat*. 2021;2(3):405–417. doi:10.24198/jppm.v2i3.36796
11. Akça SÖ, Turan AP. Substance abuse and its prevention in adolescents. *Addicta Turk J Addict*. 2023;10(1):86–92. doi:10.5152/ADDICTA.2023.22084
12. Lopez-Mayan C, Nicodemo C. If my buddies use drugs, will I? Peer effects on substance consumption among teenagers. *Econ Hum Biol*. 2023;50:101246. doi:10.1016/j.ehb.2023.101246
13. Ayers SL, Kulis SS, Marsiglia FF, Campos AP, Medina-Mora ME. Keepin' it REAL—mantente REAL in Mexico: longitudinal examination of youth drug resistance strategies and substance use among early adolescents. *J Adolesc Health*. 2023;73:412–420. doi:10.1016/j.jadohealth.2023.05.009
14. Nicholas J, Mills B, Hansen S, et al. Developing an alcohol and other drug serious game for adolescents: considerations for improving student engagement. *Aust N Z J Public Health*. 2022;46:682–688. doi:10.1111/1753-6405.13287
15. Fischer NR. School-based harm reduction with adolescents: a pilot study. *Subst Abuse Treat Prev Policy*. 2022;17:79. doi:10.1186/s13011-022-00502-1
16. Shrestha S, Velayudhan B, Khattri JB. Effectiveness of school-based substance abuse prevention programme (SSPP) on awareness, attitude, peer pressure, and life skills among adolescents in selected public schools of Pokhara, Nepal – a cluster randomized trial. *Ment Health Prev*. 2024;34:200342. doi:10.1016/j.mhp.2024.200342
17. Ramamurthy D, Manjunath S, Sarvar R, et al. Prevention starts here: effectiveness of substance abuse prevention module among adolescent students in Bengaluru - A quasi experimental study. *Int J Adolesc Med Health*. 2024;36(1):79–84. doi:10.1515/ijamh-2023-0191
18. Badan Narkotika Nasional. *SIGAB: Siaga Lawan Narkoba*. Jakarta: BNN; 2021.
19. Suchland CE, Carbonaro S. Connecting high impact practices (HIPs) and student self-efficacy: social cognitive theory as a window into student growth. *Intersect J Assmt Learn*. 2021;2(2):1–15.
20. Glanz K, Rimer BK, Viswanath K. *Health Behavior: Theory, Research and Practice*. 5th ed. San Francisco: Jossey-Bass; 2015.
21. Mujahidah N, Yurdiana A. Application of Albert Bandura's social-cognitive theories in teaching and learning. *Edukasi Islam J Pendidik Islam*. 2023;12(2):2131–2146. doi:10.30868/ei.v12i02.4585
22. Creswell JW, Creswell JD. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 5th ed. Los Angeles: Sage Publications; 2018.
23. Tracy SJ. *Qualitative Research Methods: Collecting Evidence, Crafting Analysis, Communicating Impact*. 2nd ed. Hoboken: Wiley Blackwell; 2020.
24. Islam KF, Awal A, Mazumder H, et al. Social cognitive theory-based health promotion in primary care practice: a scoping review. *Heliyon*. 2023;9(e14889). doi:10.1016/j.heliyon.2023.e14889
25. Miles MB, Huberman AM, Saldana J. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Thousand Oaks, CA: SAGE Publications; 2014.
26. Riduwan. *Skala Pengukuran Variabel-Variabel Penelitian*. Bandung: Alfabeta; 2013.
27. Naem M, Ozuem W, Howell K, Ranfagni S. A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. *Int J Qual Methods*. 2023;22:1–18. doi:10.1177/16094069231205789
28. Korstjens I, Moser A. Series: practical guidance to qualitative research. part 4: trustworthiness and publishing. *Eur J Gen Pract*. 2018;24(1):120–124. doi:10.1080/13814788.2017.1375092
29. Dastgerdi ZF, Eslami AA, Ghofranipour F, Mostafavi F. Psychometric properties of coping and self-efficacy scales related to substance use in a sample of Iranian adolescents. *Drugs Educ Prev Policy*. 2015;1–6. doi:10.3109/09687637.2015.1028897
30. González-Roz A, Castaño Y, Krotter A, Salazar-Cedillo A, Gervilla E. Emotional dysregulation in relation to substance use and behavioral addictions: findings from five separate meta-analyses. *Int J Clin Health Psychol*. 2024;24:100502. doi:10.1016/j.ijchp.2024.100502

31. Stellern J, Bin XK, Grennell E, Sanches M, Gowin JL, Sloan ME. Emotion regulation in substance use disorders: a systematic review and meta-analysis. *Addiction*. 2023;118:30–47. doi:10.1111/add.16001
32. Bahrebar S, Ahadi H, Aghayousefi A. The effectiveness of emotional regulation and coping therapy training on lifestyle of adolescents at risk of drug abuse. *Iran J Health Psychol*. 2019;2(1):79–94.
33. Ganji F, Khani F, Karimi Z, Rabiei L. Effect of assertiveness program on the drug use tendency, mental health, and quality of life in clinical students of Shahrekord University of Medical Sciences. *J Educ Health Promot*. 2022;11:48. doi:10.4103/jehp.jehp\_107\_21
34. Oghouanu E. Influence of self-confidence and assertiveness skills on secondary school adolescents' resistance to peer pressure in Delta State. *DELSU J Educ Res Dev*. 2025;22(1):446–455. doi:10.61448/djerd22140
35. Badan Narkotika Nasional. *Modul Soft Skills Ketahanan Diri Anti Narkoba*. Jakarta: BNN; 2021.
36. Maina G, Li Y, Fang Y, et al. Exploring arts-based interventions for youth substance use prevention: a scoping review. *BMC Public Health*. 2022;22:2281. doi:10.1186/s12889-022-14714-4
37. Karatay G, Baş NG. Effects of role-playing scenarios on the self-efficacy of students in resisting against substance addiction: a pilot study. *Int J Health Care Organ Provides Finance*. 2017;54:1–6. doi:10.1177/0046958017720624

Journal of Multidisciplinary Healthcare

Publish your work in this journal

The Journal of Multidisciplinary Healthcare is an international, peer-reviewed open-access journal that aims to represent and publish research in healthcare areas delivered by practitioners of different disciplines. This includes studies and reviews conducted by multidisciplinary teams as well as research which evaluates the results or conduct of such teams or healthcare processes in general. The journal covers a very wide range of areas and welcomes submissions from practitioners at all levels, from all over the world. The manuscript management system is completely online and includes a very quick and fair peer-review system. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/journal-of-multidisciplinary-healthcare-journal>

**Dovepress**  
Taylor & Francis Group