

Analysis of the Role of Youth Integrated Service Posts in Preventing Risk Behaviours Related to Drug Abuse

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ABSTRACT

OBJECTIVE: To analyze the relationship between the role of the Youth Integrated Service Post and preventive behaviors against drug abuse among adolescents within the framework of community-based adolescent health programs in Indonesia.

METHODOLOGY: A mixed-method, sequential, explanatory design was conducted in Pulo Brayon Subdistrict, Medan City, Indonesia, from August to September 2025. The quantitative phase included 75 purposively selected adolescents (aged 12–18 years) who had been active in the Youth Integrated Service Post for at least six months. Data collected from structured questionnaires were analyzed using the Chi-square test ($p < 0.05$) with SPSS version 26. The qualitative phase involved in-depth interviews and FGDs with adolescents and cadres, which were analyzed thematically to complement findings and explore collaboration with BNN.

RESULTS: The quantitative analysis revealed a significant relationship between the Youth Integrated Service Post's role (knowledge ($p = 0.012$), attitude ($p = 0.021$), cadre support ($p = 0.008$) and adolescents' preventive behaviors toward drug abuse ($p < 0.05$). Qualitative findings revealed increased adolescent confidence in refusing drugs and highlighted the importance of collaboration with schools and BNN.

CONCLUSION: The findings indicate a significant association between the Youth Integrated Service Post (knowledge, attitude, and cadre support) and adolescents' preventive behaviors toward drug abuse. The Youth Integrated Service Post effectively promotes youth drug-prevention efforts. Strengthening cadre capacity, peer education, and cross-sector collaboration with schools and BNN are key to sustaining effective community-based prevention programs.

KEYWORDS: Adolescent, Community Health Services, Health Knowledge, Attitudes, Practice, Substance-Related Disorders, Youth Integrated Service Post

INTRODUCTION

Drug abuse among adolescents is a rising global and national public health issue. According to the UNODC World Drug Report 2023, around 296 million people worldwide use drugs, with 39 million suffering from drug use disorders. Youth aged 15–24 are the most vulnerable group due to psychosocial development, peer pressure, and limited life skills for making healthy decisions¹.

Data from the National Narcotics Agency (BNN) in 2022 show that teenage drug abuse in Indonesia has reached 1.95% and is rising, with North Sumatra among the top five provinces, largely driven by junior high, high school, and university students². This situation indicates that prevention efforts among adolescents must be strengthened because

adolescence is a vulnerable transition period, during which they are forming their identity and independence and are susceptible to the influence of their social environment³.

According to Erikson, adolescents are in the stage of identity versus role confusion, making them vulnerable to risky behaviors such as drug abuse. This vulnerability is influenced by internal factors (poor self-control, emotional stress, curiosity) and external factors (family environment, peers, social media, and drug availability)⁴.

Drug abuse not only affects physical health but also mental health, academic achievement, productivity, and ultimately leads to social problems and criminality. Young people who are caught up in drugs will lose their long-term potential to contribute productively to the development of the nation⁵.

Drug abuse prevention in Indonesia has relied on school education, media campaigns, and BNN interventions, but their impact is limited due to top-down approaches. A community-based strategy is needed to engage youth more directly and sustainably⁶.

The Youth Integrated Service Post, a community-based health service adapted for adolescents, provides not only basic healthcare but also education, counseling, life skills development, and social network

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doi: 10.22442/jlumhs.2026.01545



support, making it highly relevant to adolescent needs⁷.

Various studies show that community interventions involving peer educators are more effective in changing risky behavior among adolescents than formal approaches alone. In line with the previous findings, their research shows that empowering Youth Health Cadres through peer training and seminars increases adolescents' knowledge about the dangers of drugs, alcohol, and tobacco⁸.

Based on previous studies, increasing knowledge and fostering positive attitudes are essential foundations for behavioral change in drug abuse prevention. For example, the use of video media as an educational tool has been shown to significantly improve adolescents' knowledge and attitudes toward drug abuse prevention⁹.

Furthermore, the involvement of peer cadres or peer support plays a vital role in building adolescents' confidence and motivation to refuse drugs. Another study emphasized that the active role of cadres as mentors and participatory facilitators enhances the effectiveness of drug prevention programs by strengthening social support among adolescents¹⁰. In addition, a study published revealed a strong relationship between knowledge, attitude, and cadre support with the success of drug abuse prevention programs among students, highlighting the importance of cooperation among these three aspects in shaping effective preventive behaviors¹¹.

The knowledge adolescents gain from the Youth Integrated Service Post contributes to the formation of positive attitudes and increased self-confidence in rejecting drugs. The support of cadres as mentors, motivators, and role models provides a conducive environment for adolescents to develop sustainable preventive behaviors. These results confirm that the Youth Integrated Service Post, through its knowledge, attitudes, and cadre support, synergistically plays a significant role in encouraging drug abuse prevention behaviors among adolescents.

METHODOLOGY

Study Design

This study used a mixed-methods design with a sequential explanatory approach, consisting of an initial quantitative phase followed by a qualitative phase to explore further and clarify the quantitative findings. The study aimed to analyze the relationship between the role of the Youth Integrated Service Post and preventive behaviors against drug abuse among adolescents. The research was conducted in the Pulo Brayan Subdistrict, Medan City, Indonesia, from August to September 2025.

Population and Sample

The study population consisted of adolescents aged 12-18 years who actively participated in Youth Integrated Service Post activities. A total of 75 adolescents were selected using purposive sampling

based on the following inclusion criteria:

Active participation in at least three Youth Integrated Service Post activities within the last six months and willingness to participate as respondents.

Exclusion criteria included: adolescents who were not present during data collection or had dropped out of Integrated Service Post activities; adolescents with a history of chronic illness or psychological disorders that could interfere with participation; and adolescents with incomplete or invalid questionnaire responses.

In this study, the term cadre refers to trained Youth Integrated Service Post volunteers who assist in organizing health education sessions, mentoring adolescents, and coordinating with community health workers.

For the qualitative phase, participants were purposively selected from the quantitative sample to ensure variation in age, gender, and level of participation. 10 adolescents and 5 Youth Integrated Service Post cadres were selected to be involved in the qualitative phase of this study.

Data Collection Method

The quantitative data were collected using a structured questionnaire consisting of three components of the Youth Integrated Service Post role (knowledge, attitude, and cadre support) and adolescent drug prevention behavior. Validity and reliability were tested for this questionnaire. The validity of the questionnaire was tested using Pearson's correlation ($r > 0.3$), and reliability was confirmed with Cronbach's alpha ($\alpha = 0.82$), indicating good internal consistency. The Cronbach's alpha coefficients for each domain were 0.82 for knowledge, 0.80 for attitude, and 0.83 for cadre support. The questionnaire was self-administered and completed face-to-face at the Youth Integrated Service Post. Respondents filled out the questionnaire independently in a supervised room to ensure privacy and prevent discussion among participants. Researchers were present only to clarify procedural questions without influencing responses.

For the qualitative phase, two focus group discussions (FGDs) were conducted, each with 10 adolescents and 5 Youth Integrated Service Post cadres, lasting 60-90 minutes. In-depth interviews were also conducted with 10 adolescents and 5 cadres to obtain detailed insights into the program's role in drug prevention. All discussions were held face-to-face at the community health center in a private meeting room and were audio-recorded with participants' consent.

The qualitative data were collected using semi-structured interviews and focus group discussion (FGD) guides that included exploratory questions on participants' experiences in Youth Integrated Service Post activities, their perceptions of drug use, and the support provided by cadres. All FGDs and interviews were audio-recorded with participants' consent, and field notes were taken to capture non-verbal cues and contextual details during the discussions. The FGD

was conducted once, and the average interview lasted 15 minutes. Repeat interviews were not necessary, but if any answers needed clarification, they were conducted again. The researcher conducted the interviews together with the enumerator.

Data Analysis

Quantitative data were analyzed using the Chi-square test with a significance level of $p < 0.05$ in SPSS version 26. Qualitative data were analyzed using thematic analysis, which involved coding, categorization, and theme extraction to identify and interpret key patterns in participants' experiences. Data saturation was achieved when no new information or themes emerged from the interviews and FGDs, indicating that the collected data were sufficient to address the research objectives.

Ethical Statement

This research obtained ethical approval from the Health Research Ethics Committee of the Faculty of Nursing with approval number 2795/VIII/SP/2025. All participants were provided with clear information about the study's objectives and procedures and gave their informed consent before participation. Written informed consent was obtained from all adolescent participants and their parents or guardians after the researchers explained the study's objectives, procedures, confidentiality, and voluntary participation. Participants were informed that they could withdraw from the study at any time.

RESULTS

Respondent Characteristics

The majority of respondents were aged 15–17 years (68%), female (55%), and active in school activities. Most attended the Youth Integrated Service Post at least once a month. (Table I)

Quantitative Analysis

The majority of adolescents have high knowledge (66.7%), positive attitudes (61.3%), and receive good support from cadres (64.0%). This shows that most respondents have a strong foundation for drug prevention behavior, although there are still groups with low knowledge, attitudes, and support that require further attention. (Table II)

Characteristics of Drug Prevention Behavior

Most adolescents demonstrated good drug prevention behavior, with 60% categorized as good, 26.7% as adequate, and 13.3% as poor. This suggests that while many adolescents practice effective prevention, some still need increased awareness to avoid the risks of drug abuse consistently. (Table III)

Relationship between the Role of Integrated Service Post and Drug Prevention Behavior

Chi-square test results indicate a significant relationship among knowledge, attitude, cadre support and drug prevention behaviour. Higher knowledge ($p=0.012$) and positive attitudes ($p=0.021$) are associated with better prevention efforts, underscoring their importance in reducing the risk of drug abuse. Cadre support is strongly linked to drug prevention

behavior ($p=0.008$), highlighting the important role of cadres as mentors and motivators in helping adolescents reject drugs and maintain preventive actions. (Table IV)

Qualitative Analysis

The qualitative analysis shows positive changes in adolescents after joining the drug prevention program, especially increased confidence in refusing drugs. They feel more assured in saying "no" because they understand the risks and negative effects, as reflected in a participant's statement expressing greater confidence in refusing drug offers.

In addition, adolescents greatly appreciate the role of cadres. Cadres are not only considered mentors, but also role models and motivators, providing real examples and encouragement in protecting themselves from the dangers of drugs. The presence of cadres is an important factor in developing positive attitudes and behaviors among adolescents. Other findings highlight the importance of collaboration with schools and the National Narcotics Agency (BNN). This collaboration is intended to expand the reach of prevention programs and ensure that educational information and activities extend beyond the community into formal education and government agencies authorized to prevent drug use among teenagers. (Table V)

Table I: Frequency Distribution of Respondent Characteristics (n=75)

Respondent Characteristics	F	%
Age		
12–14 years old	24	32
15–17 years old	51	68
Gender		
Male	34	45
Female	41	55
Attendance		
<1x/month	18	24
≥1x/month	57	76

Table II: Frequency Distribution of the Role of Youth Integrated Service Post (Knowledge, Attitudes, and Cadre Support) (n = 75)

Variable	F	(%)
Knowledge		
High	50	66.7%
Low	25	33.3%
Attitudes		
Positive	46	61.3%
Negative	29	38.7%
Cadre Support		
Good	48	64.0%
Poor	27	36.0%

Table III: Frequency Distribution of Drug Prevention Behavior

Prevention Behavior Category	F	(%)
Good (38–50)	45	60,0%
Fair (25–37)	20	26,7%
Poor (<25)	10	13,3%
Total	75	100%

Table IV: Relationship between the Role of Integrated Service Post and Drug Prevention Behavior

Variable	Good Behavior n (%)	Poor Behavior n (%)	p-value
Knowledge			
High	40 (80)	10 (20)	0.012
Low	8 (38)	13 (62)	
Attitude			
Positive	36 (78)	10 (22)	0.021
Negative	12 (44)	15 (56)	
Cadre Support			
Good	38 (83)	8 (17)	0.008
Poor	10 (37)	17 (63)	

Table V: Interview and FGD Results

Theme	Subtheme	Participant Quote	Interpretation
Empowerment through Participation	Increased confidence in refusing drugs	"I feel more confident in saying no when offered drugs because now I understand the risks." (A3)	Youth Integrated Service Post helps adolescents build courage and confidence to refuse drugs.
	Safe environment for learning & discussion	"At the Youth Integrated Service Post I can ask questions freely without fear of being judged." (A1)	Youth Integrated Service Post provides a safe space for education and positive interaction.
Improving Understanding and Awareness of Drug Risks	Understanding risks & harmful effects	"Now I know that drugs can damage health and the future." (A4)	Adolescents are increasingly aware of the dangers of drugs and motivated to avoid them.
	Awareness of safeguarding the future	"I want to focus on school and my future, not follow others into drugs." (A2)	New knowledge fosters a long-term orientation toward healthy living.
Cadres' role of empowerment	Mentor and role model	"The youth cadre gives real examples, so we feel motivated." (A6)	Cadres are seen as role models in drug prevention.
	Motivator	"Cadres always encourage us to participate in positive activities." (A5)	The presence of cadres helps shape positive attitudes and behaviors among adolescents.
Cross-Sector Collaboration	Expanding the reach of education	"If there are activities with schools and the BNN, the information becomes clearer." (A9)	Collaboration with schools and BNN strengthens program effectiveness.
	Integration into formal education & agencies	"It's good if there's cooperation with teachers so that anti-drug messages are heard more often." (A10)	Cross-sector collaboration makes the program more sustainable and widespread.

DISCUSSION

The analysis shows that most adolescents have a strong foundation for preventing drug abuse. The majority had high knowledge (66.7%), positive attitudes (61.3%), and good support from cadres

(64.0%). These findings highlight the important role of the Youth Integrated Service Post in strengthening adolescents' cognitive, affective, and social support capacities. However, there are still groups of adolescents with low knowledge (33.3%), negative attitudes (38.7%), and limited cadre support (36.0%). This group is at higher risk of negative environmental influences and therefore requires more intensive intervention.

Most adolescents demonstrate good drug prevention behaviours, with 45 respondents (60.0%) in the good category, 20 (26.7%) in the fair category, and 10 (13.3%) in the poor category. These findings indicate that the majority are aware of the importance of avoiding drugs and strive to protect themselves from the risk of abuse. Some adolescents remain inconsistent in drug prevention due to limited knowledge, attitudes, and support. Sustainable programs, cross-sector collaboration, and stronger cadre roles are needed.

This study found a significant link among adolescents' knowledge, attitudes, cadre support, and drug prevention behaviour, aligning with previous findings on the effectiveness of school-based education and awareness campaigns¹². Another study found that drug prevention counseling fosters positive peer relationships, promotes healthy lifestyles, and helps students avoid drugs¹³.

The increase in adolescent knowledge through Youth Health Centre activities aligns with Earlier research, which shows that school-based education and videos improve knowledge, attitudes, and drug refusal behaviours, highlighting the need for continuous educational interventions¹⁴.

Another study found that adolescents' rejecting attitude reduces drug abuse, and stronger beliefs about its harms boost avoidance. This study confirms that protective attitudes can be built through regular peer counseling at the Youth Integrated Service Post¹⁵.

Cadre support is the strongest factor in promoting drug prevention. Previous findings showed that trained cadres enhance youth health roles⁸. Another study found that attitudes toward drug dangers reduce usage intention. Interventions involving health workers and peer groups effectively create a supportive environment for adolescents to reject drugs¹⁵.

Beyond cadre factors, cross-sector collaboration is crucial. The WHO recommends integrated efforts among health services, schools, and the government¹⁶. This study highlights the need for cooperation between Youth Integrated Service Post, schools, and BNN to expand program reach.

Community-based programs enhance adolescents' knowledge, skills, and positive attitudes, strengthening their resistance to peer pressure. Earlier research found that BNN's program in Baubau improved awareness, self-regulation, and assertiveness, and encouraged youth cadres to serve as role models through creative activities. Such interventions effectively build resilience against drug-related peer pressure¹⁷.

Family support is vital in strengthening prevention programs. Previous studies highlight that active parental involvement fosters a safe, open environment and, through guidance and counseling, helps reduce adolescents' risk of drug abuse¹⁸.

Digital interventions are a rising trend. Another study found social media to be effective in increasing adolescents' knowledge about drugs, alcohol, and other psychoactive substances due to its accessibility and wide reach¹⁹.

The results of the integration of quantitative and qualitative analyses show that knowledge is key to drug prevention behavior. Most respondents had high knowledge (66.7%) and demonstrated good prevention behaviours (80%), compared with those with low knowledge (38%), with a significant relationship ($p = 0.012$).

Interviews and FGDs revealed that knowledge from the Youth Integrated Service Post improved adolescents' attitudes and confidence in refusing drugs. One participant said, "I feel more confident in saying no when offered drugs because now I understand the risks." This highlights that knowledge lays the foundation for beliefs and the courage to make healthy decisions. These findings confirm that knowledge from the Youth Integrated Service Post builds health literacy, fostering awareness, a preventive mindset, and resilience, making it an effective strategy to reduce the risk of drug abuse.

The results of the quantitative and qualitative integration indicate that positive attitudes play an important role in shaping adolescents' drug prevention

behaviour. Quantitative analysis shows that 61.3% of adolescents have positive attitudes toward prevention; 78% with positive attitudes showed good behaviour, versus 44% with negative attitudes, confirming attitudes as a key factor.

Qualitative findings show that adolescents' awareness of protecting their future has increased. One participant stated: "I want to focus on school and my future, not get involved with drugs." This shows that a positive attitude includes long-term goals such as pursuing education, achieving success, and living a productive life.

These findings show that positive attitudes developed through education and counselling at the Youth Integrated Service Post build long-term commitment to avoid drugs, strengthen motivation and resilience to peer pressure, and foster a future-oriented preventive mindset.

The results of the quantitative and qualitative integration indicate that cadre support is the dominant factor in shaping adolescents' drug prevention behaviour. 64% of adolescents received strong cadre support; 83% of them showed good prevention behaviour, compared with 37% with weaker support, confirming the strong influence of cadres.

Qualitative results show that adolescents see cadres as mentors, role models, and motivators, rather than just as information providers. Several FGD participants said: "The cadre members set a real example, so we are motivated to follow," and "The cadre members always encourage us to participate in positive activities." These statements show that adolescents view cadres as approachable figures who provide relevant guidance and emotional support to stay away from drugs.

These findings confirm that cadre support includes guidance, role modeling, and ongoing motivation, creating a supportive environment. Youth Integrated Service Post cadres act as strategic agents of change, promoting drug prevention and strengthening adolescents' resilience.

Although not quantified, qualitative findings indicate that collaboration among Youth Integrated Service Post, schools, and BNN expands educational reach and strengthens drug prevention messages. One participant said, "When there are joint activities with schools and the BNN, the information becomes clearer." Another participant added, "It's good to have cooperation with teachers so that the anti-drug message is heard more often."

This integration demonstrates that program success relies on Youth Integrated Service Posts and external support from schools and the government, enabling the dissemination, trust, and embedding of prevention messages in adolescents' lives^{6,16,17}.

Cross-sector collaboration expands reach and ensures sustainability¹⁶. Schools integrate prevention education into routine activities, while BNN strengthens legitimacy and provides resources, making Youth Integrated Service Post interventions

wider and more sustainable¹⁷.

Thus, this study reinforces the evidence that the Youth Integrated Service Post is an effective community-based preventive strategy^{16,17}. However, improvements in cadre capacity, cross-sector support, family involvement, and digital innovation are needed to optimize the program^{18,19}.

The causal mechanisms behind the impact of Youth Integrated Service Post activities on changing behaviors related to drug abuse prevention in adolescents can be explained through several main pathways. First, educational and outreach activities conducted at Youth Integrated Service Post increase adolescents' knowledge about the dangers of drugs and their health, social, and legal impacts. This increased knowledge fosters greater awareness and risk perception, encouraging adolescents to avoid exposure to hazardous substances²⁰.

Second, this increased knowledge has a direct impact on the development of positive attitudes toward drug abuse prevention. Adolescents with a better understanding are more likely to develop attitudes of rejection and avoid risky behavior because they understand the negative consequences. Previous research has shown that increased knowledge and positive attitudes lay the initial foundation for sustainable preventive behaviour change²¹.

Third, peer support (or cadre support) plays a crucial role as a social mechanism in changing behavior. Cadres serve as role models, motivators, and facilitators, providing social reinforcement and creating a positive environment for adolescents. Regular interactions with community health workers and group activities at the Integrated Health Post increase adolescents' self-efficacy in refusing drug offers and strengthen their ability to make healthy decisions^{22,23}.

Thus, the combination of increased knowledge, positive attitude development, and social support from community health workers creates a comprehensive behavioural change pathway across cognitive, affective, and social aspects. This aligns with social learning theory, which holds that behavioural change occurs through observation, modelling, and positive reinforcement from the social environment²³. The results of this study are consistent with international systematic reviews showing that peer- and community-based interventions can significantly reduce the risk of substance use among adolescents^{20,21}.

This study has several limitations that should be acknowledged. The relatively small sample size of 75 adolescents, drawn from a single subdistrict, limits the generalizability of the findings to broader populations. Additionally, the cross-sectional design restricts the ability to establish a direct causal relationship between the Youth Integrated Service Post's role and preventive behaviors. Future studies are recommended to employ longitudinal or quasi-experimental designs with larger, more diverse samples to strengthen causal inferences and assess long-term behavioural outcomes.

CONCLUSION

This study demonstrated a significant relationship between the role of the Youth Integrated Service Post (specifically the aspects of knowledge, attitude, and cadre support) and adolescents' preventive behaviors toward drug abuse. The findings reveal that increased knowledge and positive attitudes foster confidence and awareness among adolescents to reject drugs. At the same time, continuous cadre support strengthens motivation and resilience through social modeling and mentoring. The integration of educational, psychosocial, and community-based approaches at the Youth Integrated Service Post effectively promotes behavioral change by addressing cognitive, affective, and social dimensions of prevention. Strengthening cadre training, enhancing collaboration with schools and the National Narcotics Agency (BNN), and incorporating family and digital-based interventions are essential to sustain and expand the impact of this community-based strategy. Future research with larger, multi-site samples and longitudinal designs is recommended to validate causal mechanisms further and assess the long-term outcomes of adolescent drug prevention initiatives.

Acknowledgment

The authors would like to express their sincere gratitude to the Faculty of Nursing, University of North Sumatra, for providing ethical approval and academic support for this study. We also extend our appreciation to the Youth Integrated Service Post cadres and the adolescents in Medan City who participated in the research and generously shared their experiences and insights. Special thanks are given to the local health authorities and the National Narcotics Agency (BNN) of Medan for their cooperation and facilitation during data collection. Finally, the authors acknowledge the invaluable assistance of colleagues and peers who provided constructive feedback throughout the study.

Ethical permission: Faculty of Nursing, Universitas Sumatera Utara, Indonesia, ERC approval letter No. 2795/VIII/SP/2025.

Conflict of interest: Authors declare no competing interests in the study.

Financial Disclosure / Grant Approval: This study had no external funding.

Data Sharing Statement: The corresponding author can provide the data proving the findings of this study on request. Privacy or ethical restrictions bound us from sharing the data publicly.

AUTHOR CONTRIBUTION

Lufthiani: Conceived the research idea, designed the study protocol, and led the overall project.

Badaruddin: Contributed to data collection, coordinated field activities, and managed participant recruitment.

Achmad N: Performed statistical analysis and

contributed to the interpretation of quantitative data. Zulfendri: Conducted qualitative interviews and focus group discussions, and contributed to thematic data analysis.

Nasution SZ: Critically reviewed and revised the manuscript, provided expert input, and ensured the final approval of the version to be published.

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