

The Effectiveness of Self-Help Group (SHG) Therapy in Preventing Drug Use Among Adolescents: A Cluster Randomized Controlled Trial

Sri Jumiati¹, Teuku Tahlil^{*2}, Marthoenis³

¹Master of Nursing Program, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia,

²Department of Community Nursing, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia,

³Department of Psychiatric and Mental Health Nursing, Faculty of Nursing,
Universitas Syiah Kuala, Banda Aceh

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Abstract

Objective: This study explores the effectiveness of Self-Help Group (SHG) therapy in preventing drug abuse among adolescents.

Methods: A cluster randomized controlled trial was conducted with 80 junior high school students in Aceh, Indonesia. Participants were divided into intervention and control groups. The intervention group underwent a six-week Self-Help Group (SHG) therapy program. Outcomes including knowledge, attitudes, desire to use drugs, social support, and self-efficacy were assessed via self-report questionnaires.

Results: The intervention group showed significant improvements in knowledge ($p = 0.001$), attitudes ($p = 0.001$), and a reduced desire to use drugs ($p = 0.001$). There was no significant change in social support ($p = 0.139$), but a significant decrease in self-efficacy ($p = 0.007$).

Conclusion: Self-Help Group (SHG) therapy is effective for enhancing knowledge and attitudes and reducing drug-use intentions among adolescents. Additional strategies are needed to strengthen social support and self-efficacy.

Keywords: Self-Help Group (SHG), Attitude, Knowledge, Drug Abuse, Self-Efficacy

Introduction

Drug abuse is a growing concern in Indonesia, especially among adolescents. Misuse of narcotics, psychotropics, and addictive substances can impair brain function and lead to addiction¹. Adolescents

are particularly vulnerable due to peer pressure, emotional instability, and limited awareness about the dangers of drug use².

Adolescents are usually under pressure to follow the norms and expectations of the group.

Corresponding Author: Teuku Tahlil, Department of Community Health Nursing, Faculty of Nursing, Universitas Syiah Kuala, 23111, Banda Aceh, Indonesia.

Tel/Fax: +62-651-8053041; **E-mails:** ttahlil@usk.ac.id

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If teens can't do their job well, they tend to think life is miserable and unpleasant, and they tend to do things like self-harm, abandon life and family, take part in promiscuity, consume alcohol, drugs, psychotropics, and other addictive substances³.

Studies indicate that adolescent drug abuse is linked to decreased academic performance, mental health issues, and social problems. Effective prevention requires not only legal action but also early education and psychosocial support. Despite the government's rehabilitation programs, many adolescents lack access to effective counseling and preventive education³.

Group therapy is a promising non-pharmacological approach to drug prevention. Among various models, Self-Help Groups (SHG) have shown effectiveness in fostering emotional support and promoting behavioral change. Self-Help Group (SHG) encourages participants to share experiences, set goals, and develop coping strategies together⁴.

Self-help groups (SHG) seek to change unconscious thoughts, feelings, behaviors, and processes and acquire new skills. The process of Self-Help Group (SHG) intervention includes sharing experiences between members, setting goals, analyzing problems, setting short- and long-term goals, creating treatment plans, executing plans, and evaluation and termination⁵. Previous studies have shown its success in reducing depression and improving resilience among at-risk individuals⁶.

In the context of school-based interventions, Self-Help Group (SHG) is particularly relevant due to its low cost, peer-driven structure, and adaptability to different cultural settings. Adolescents can benefit from a structured environment that promotes self-expression, empathy, and mutual support—qualities often lacking in traditional education systems. Integrating Self-Help Group (SHG) into school programs may therefore serve as an effective strategy to curb early experimentation and habitual drug use.

Given Indonesia's high rates of adolescent drug use, lack of evidence of the use of Self-Help Group (SHG) in drug abuse prevention, and limited access to

preventive drug abuse education, this study aims to evaluate the effectiveness of Self-Help Group (SHG) therapy in preventing drug use among adolescents in Aceh Besar, Indonesia.

Materials and Methods

Study Design and Setting

This study employed a cluster randomized controlled trial (cRCT) with a pretest-posttest control group design. The research was conducted in two public junior high schools, located in Aceh Besar District, Aceh Province, Indonesia. The Flow of the research process is summarized in Figure 1.

Participants and Sampling

The sampling technique in this study employed a cluster random sampling method within the framework of a cluster randomized controlled trial (cRCT). The target population consisted of adolescents aged 15–18 years enrolled in junior high schools in Aceh Besar District, Indonesia. Two public junior high schools were selected as research clusters, and all eligible students within these schools were included as participants. A total of 80 students were recruited and subsequently randomized into two groups. The intervention group, comprising 40 students, participated in six sessions of Self-Help Group (SHG) therapy, while the control group, also consisting of 40 students, did not receive any intervention during the study period. This sampling approach ensured that all students within the selected clusters had an equal opportunity to participate, while randomization allowed for a fair and unbiased allocation between the intervention and control groups.

Inclusion and Exclusion Criteria

The inclusion criteria for the sample in this study were adolescents aged 15–18 years who were actively enrolled as students in the selected junior high schools in Aceh Besar. Participants were required to provide informed consent, with parental or guardian approval, and be willing to attend all six sessions of the intervention. Students who met these conditions were considered eligible to participate.

The exclusion criteria included students who were absent from more than one intervention session, those

with a history of severe mental disorders or chronic illnesses that could interfere with participation, and those who did not provide consent or whose parents or guardians declined to permit their involvement in the study.

Intervention Procedure

Neither the intervention nor the control group had been exposed to Self-Help Group (SHG) therapy prior to this study. At baseline, the majority of students (78.8%) reported that they had never received any formal education or counseling related to drug prevention, indicating limited prior exposure to structured preventive programs. Thus, the SHG therapy provided in this study represented the participants' first experience with such an intervention. During the trial, the intervention group exclusively received six sessions of SHG therapy, while the control group did not receive any intervention throughout the study period. This ensured that the outcomes observed could be attributed solely to the SHG intervention.

Participants in the intervention group participated in a structured Self-Help Group (SHG) therapy program over six weekly sessions. Each session lasted approximately 120 minutes and was administered in class.

The intervention program covered educational, interactive, and reflective activities related to drug prevention. Session I and II (Week 1 and 2) provided participants with information about the concept of Drugs. Session III (Week 3) showed participants videos related to the dangers of narcotics and psychotropic substances abuse. Session IV and V (Week 4 and 5) provided role play about the dangers of narcotics and psychotropic substances. Session VI (Week 6) conducted an evaluation of the Self-Help Group (SHG) activities and materials that had been provided to participants.

There was no intervention provided to participants in the control group during the study period.

Instruments and Outcome Measures

Data collection utilized a self-report questionnaire. Demographic characteristics assessed participants'

age, gender, class, ethnicity, language, living arrangements, physical activity, school attendance, academic performance, and exposure to drug education. Knowledge about drugs was assessed through 14 multiple-choice questions, while attitudes toward drug prevention were evaluated using 29 Likert-scale statements. The desire to try drugs was measured with 9 multiple-choice items designed to reflect curiosity and intention. These three questions (knowledge, attitude, and the desire to try drugs) were developed by researchers. The development of the questionnaires has been published elsewhere⁷. Perceived social support was evaluated using the 12-item Multidimensional Scale of Perceived Social Support (MSPSS)⁸, and self-efficacy was assessed using the 10-item General Self-Efficacy Scale⁸. Scoring adhered to the guidelines of the respective instruments, with higher scores representing greater knowledge, more favorable attitudes, lower desire to use drugs, stronger social support, and higher self-efficacy.

Data Collection and Analysis

Pretests were administered one week before the intervention began, and posttests were conducted one week after the final session. The same schedule was followed for both groups.

Data analysis was completed using SPSS version 20. Univariate analysis was used to calculate the frequency and percentage of the categorical variable. Inferential statistics were used to identify the mean differences between groups.

Results

Demographic Characteristics

The demographic profile of study participants is summarized in Table 1. Of the 80 respondents, 41.3% were male and 58.8% were female. The vast majority were over 12 years of age (97.5%), and the distribution between 8th and 9th grade students was equal. Most participants identified as Acehnese (96.3%), with 63.7% speaking Acehnese at home. The majority lived with their parents (91.3%), engaged in physical activity one to two times per week (70.0%), and attended school regularly (56.3%). In terms of academic self-assessment,

Table 1: Demographic Characteristics of Respondents

Characteristic	Frequency	Percentage
Sex		
Male	33	41.3
Female	47	58.8
Age (years)		
10	1	1.3
12	1	1.3
>12	78	97.5
Class		
8	40	50.0
9	40	50.0
Ethnicity		
Aceh	77	96.3
Batak	2	2.5
Others	1	1.3
Language Used at Home		
Acehese	51	63.7
Indonesia	2	2.5
Acehese and Indonesia	26	32.5
Others	1	1.3
Living arrangement		
With parents	73	91.3
With relatives	1	1.3
In dormitory/shelter	6	7.5
Physical activity		
Almost every day	12	15.0
One or two times a week	56	70.0
Several times a month	9	11.3
Several times a year	1	1.3
Never	2	2.5
School Attendance		
Always go to school	45	56.3
Absent One day	15	18.8
Absent Two days	8	10.0
Absent Three days	6	7.5
Absent more than three days	6	7.5

Characteristic	Frequency	Percentage
Academic Performance (Self-rate)		
Very smart	14	17.5
Smart	25	31.3
Average	31	38.8
Below average	1	1.3
Don't know	9	11.3
Drug Education Experience		
Once	17	21.3
Never	63	78.8

38.8% rated themselves as average students, while 78.8% reported never having received any drug education or counseling.

Effectiveness of Self-Help Group (SHG) Therapy in the Intervention Group

As shown in Table 2, Self-Help Group (SHG) therapy had a statistically significant effect on several outcomes among participants in the intervention

group. Mean score of knowledge test about drug use increased significantly from a pretest score of 38.15 to a posttest score of 65.58 ($p=0.001$). Attitudes toward drug prevention also improved significantly from 64.85 to 110.95 ($p=0.001$), and the intention to try drugs decreased significantly from 53.25 to 37.03 ($p=0.001$). While self-efficacy scores declined from 41.90 to 37.30 ($p=0.007$), there was no significant change in perceived social support ($p=0.14$).

Table 2: Pre-and Post-Test Results in the Intervention Group

Variable	Test	Mean	SD	Min-Max	P-Value
Knowledge	<i>Pre test</i>	38.15	11.751	14-57	0.001
	<i>Post test</i>	65.58	8.003	43-78	
Attitude	<i>Pre test</i>	64.85	20.70	43-148	0.001
	<i>Post tes</i>	110.95	25.32	61-145	
Desire to Try Drugs	<i>Pre test</i>	53.25	23.901	29-122	0.001
	<i>Post tes</i>	37.03	5.659	26-45	

Table 3: Pre- and Post-Test Results in the Control Group

Variable	Test	Mean	SD	Min-Max	P-Value
Knowledge	<i>Pre test</i>	37.88	15.022	14-78	0.001
	<i>Post test</i>	50.75	13.307	28-78	
Attitude	<i>Pre test</i>	72.95	32.781	29-145	0.239
	<i>Post tes</i>	66.00	22.022	39-110	
Desire to Try Drugs	<i>Pre test</i>	34.40	9.397	20-45	0.003
	<i>Post tes</i>	40.80	6.840	27-45	

Control Group Outcomes

The results for the control group are presented in Table 2. Mean score of knowledge showed a modest but significant increase from 37.88 to 50.75 ($p=0.001$). However, attitudes did not significantly change ($p=0.24$), and the desire to try drugs increased unexpectedly from 34.40 to 40.80 ($p=0.003$). Perceived social support improved significantly ($p=0.001$), and self-efficacy remained stable ($p=0.95$). These findings highlight the effectiveness of Self-Help Group (SHG) therapy in improving adolescents' knowledge and attitudes toward drug use and reducing their desire to engage in drug use. However, the intervention had limited impact on self-efficacy and perceived social support, suggesting the need for supplementary strategies to reinforce these aspects.

Discussion

The results of this study demonstrate that Self-Help Group (SHG) therapy is an effective intervention for improving drug-related knowledge, fostering positive attitudes, and reducing the desire to use drugs among adolescents. These findings are consistent with previous research highlighting the benefits of peer-led group interventions in enhancing adolescent health outcomes⁶. The significant increase in knowledge scores in the intervention group reflects the impact of structured educational content delivered through Self-Help Group (SHG). By engaging in interactive sessions and group discussions, adolescents not only received information but also had opportunities to process and internalize it collectively. Peer education can be a promising strategy for positive health behavior changes.

Similarly, the improved attitudes toward drug prevention observed among the intervention group suggest a shift in mindset, likely influenced by peer modeling and emotional reinforcement. In contrast, the control group showed a decline in attitude scores, indicating the potential for deterioration in perceptions when no structured support is provided. This further validates the role of Self-Help Group (SHG) in reinforcing prosocial norms and perspectives in adolescent populations. Education can improve attitudes toward drug use.

A particularly meaningful finding is the significant reduction in the intention to try drugs among the intervention group. This outcome emphasizes the impact of Self-Help Group (SHG) in reducing behavioral intentions related to drug experimentation through peer accountability, emotional reinforcement, and increased self-awareness. Meanwhile, the increase in intention to try drugs observed in the control group further underscores the importance of preventive programming in adolescent populations.

Despite these positive results, Self-Help Group (SHG) therapy did not significantly improve perceived social support and was associated with a slight decrease in self-efficacy. These findings may be explained by several factors. First, the limited six-week duration of the intervention may not have been sufficient to strengthen broader support networks beyond the group context. Second, the Self-Help Group (SHG) activities were conducted exclusively in school environments without direct engagement from family members or the community. Prior literature indicates that robust social support typically requires consistent interaction across multiple life domains.

The decrease in self-efficacy, although statistically significant, may be attributed to adolescents' increased awareness of their vulnerabilities and the challenges associated with resisting peer pressure. While knowledge empowers decision-making, it can also expose individuals to new anxieties or doubts if not accompanied by practical coping strategies. Therefore, future Self-Help Group (SHG) interventions should incorporate skill-based components to enhance self-efficacy, such as role-playing, decision-making simulations, and problem-solving exercises.

Interestingly, the control group experienced improvements in perceived social support and maintained stable self-efficacy levels. These effects may stem from unmeasured external factors, including family encouragement, teacher interactions, or informal peer discussions during the study period. This observation reflects the complex and dynamic influences surrounding adolescent behavior and highlights the importance of comprehensive approaches in drug prevention efforts.

Overall, while Self-Help Group (SHG) therapy provided measurable cognitive and attitudinal benefits, its effects on emotional resilience and perceived capability were limited. To strengthen the intervention's impact, future implementations should consider integrating Self-Help Group (SHG) with broader psychosocial supports, including parental involvement, school counselor engagement, and community partnerships.

These findings offer meaningful contributions to school-based health promotion initiatives, especially in resource-limited settings. Self-Help Group (SHG) can serve as a practical, scalable model for engaging youth in preventive education and building a culture of mutual support and accountability.

This study has several limitations. First, the relatively short intervention period (six weeks) may not have been sufficient to observe long-term effects on social support and self-efficacy. Second, the intervention was confined to the school setting and did not involve external stakeholders such as parents or community members, which may have limited its broader impact. Third, exposure to external information or informal support outside the intervention could not be controlled, potentially influencing the control group's results. Lastly, the use of self-reported questionnaires may have introduced response biases, particularly in measuring sensitive behaviors and intentions. Future research should consider longitudinal designs with extended follow-up periods and incorporate multi-component interventions involving families and community actors to strengthen the sustainability and generalizability of the outcomes.

Conclusion

This study concludes that Self-Help Group (SHG) therapy is an effective intervention for preventing drug use among adolescents. It significantly improved participants' knowledge and attitudes toward drug prevention and reduced their desire to try drugs. However, the therapy did not show a significant effect on perceived social support and was associated with a decrease in self-efficacy. These findings suggest that while Self-Help Group (SHG) is a promising model for adolescent health promotion, it should be complemented with additional strategies

aimed at enhancing emotional resilience and supportive environments. Future implementations of Self-Help Group (SHG) could benefit from longer intervention periods and greater involvement from families, schools, and communities to optimize outcomes across all domains.

List of Abbreviations

SHG: Self-Help Group

CRCT: Cluster Randomized Controlled Trial

SPSS: Statistical Package for the Social Sciences

DRTPM: Directorate of Research and Community Service

Ethics Approval: The study received ethical approval from the Research Ethics Committee of the Faculty of Nursing, Universitas Syiah Kuala, under approval number 112026120724. Informed consent was obtained from all participants and their guardians prior to data collection.

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Availability Data

Data supporting article's results is available from the corresponding author [T.T.] on reasonable request.

Authors' Contribution

SJ: Study concept, designing, data collection and manuscript drafting

TT: Study designing, critical review and revision of the initial and final draft

MN: Data analysis and interpretation, critical review and revision of the final draft

All the authors have read and approved the final manuscript.

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