

## Strengthening Triad KRR Cadres to Enhance Adolescents' Self-Efficacy in Reproductive Health Behaviors

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### Abstract

This community service program aims to strengthen the capacity of Triad Adolescent Reproductive Health (KRR) cadres in enhancing adolescents' self-efficacy related to positive reproductive health behaviors. The low level of knowledge and confidence among adolescents in maintaining their reproductive health remains a challenge that requires the presence of competent and well-trained cadres as facilitators. The implementation methods included intensive training for cadres through participatory approaches, interactive lectures, focus group discussions, case simulations, and practical sessions on educational communication with adolescents. Cadres were equipped with Triad KRR materials—sexuality, HIV/AIDS, and drugs—as well as basic counseling techniques, self-efficacy enhancement strategies, and peer education methods. Evaluation was carried out through pre- and post-tests, observation of practice sessions, and participant feedback. The results showed a significant improvement in cadres' knowledge, communication skills, and ability to deliver reproductive health education. Cadres also demonstrated increased confidence in identifying adolescent problems and effectively conveying Triad KRR messages. In addition, adolescent participation in cadre-facilitated educational activities increased. The program recommends ongoing mentoring for cadres to ensure continuity of education, the provision of standardized Triad KRR modules, and stronger collaboration with schools and community health centers to expand the reach of adolescent reproductive health education.

**Keywords:** adolescent reproductive health; health cadres; community empowerment; self-efficacy;; health education; Triad KRR

### Introduction

Adolescents represent an age group that is highly vulnerable to various reproductive health problems, including premarital sexual behavior, substance abuse, and the risk of HIV/AIDS transmission. These three issues, known as the Adolescent Reproductive Health TRIAD (TRIAD KRR), constitute major challenges in efforts to improve the quality of life and future well-being of the younger generation (Yusefni et al., 2022). During this stage, adolescents undergo significant physical, psychological, and social changes. Consequently, they are highly vulnerable to various reproductive health issues such as unintended pregnancy, sexually transmitted infections (STIs), HIV/AIDS, and even sexual violence. These problems often arise from adolescents' low level of knowledge about reproductive health and their limited access to accurate information and youth-friendly services (Kementerian Kesehatan Republik Indonesia, 2020). Issues related to adolescent reproductive health (ARH), commonly referred to as the TRIAD KRR—which includes sexuality, HIV/AIDS, and substance abuse—are highly

relevant and critical concerns today. These issues require serious attention from all sectors of society. If left unaddressed, they will not only threaten the future of adolescents but may also jeopardize the well-being of families and the nation as a whole (Kustin, Yuhbaba, et al., 2023).

The TRIAD KRR approach—which involves parents, adolescents, and healthcare providers serves as an effective strategy for addressing these issues. TRIAD KRR functions as a collaborative platform to strengthen comprehensive education and reproductive health services for adolescents. As community-level change agents, cadres play a strategic role in implementing this approach. However, the capacity of cadres in the field is often not optimal due to limited training, insufficient information, and a lack of effective methods for engaging both adolescents and parents (Handayani, L. & Pratiwi, 2022). Data indicate that education on the TRIAD KRR can improve adolescents' knowledge and attitudes regarding reproductive health. For example, an assistance program conducted at SMAN 1 Nunukan demonstrated a significant increase in students' understanding of the TRIAD KRR following the implementation of an educational intervention (Farahdiba et al., 2024). Similarly, health promotion activities on the TRIAD KRR in Bandung City successfully improved adolescents' knowledge and attitudes significantly (Solehati et al., 2023).

One of the efforts to improve reproductive health behaviors among adolescents is the establishment of adolescent health peer educators (youth health cadres) (Kustin & Handayani, 2024). The establishment and mentoring of school-based cadres serve to optimize adolescents' understanding of health education in a continuous and appropriate manner (Kustin, 2021). School cadres can also serve as mediators or providers of basic assistance when students have difficulties understanding issues related to adolescent health, particularly reproductive health (Yuliani et al., 2022). This is consistent with previous research, which found that the establishment of Adolescent Health Cadres is highly effective in improving Adolescent Reproductive Health Service (PKPR) behaviors (Kustin, 2021). Adolescent health cadres play a strategic role in delivering information and education to their peers. However, their effectiveness largely depends on having adequate capacity and understanding of reproductive health issues. Therefore, strengthening the capacity of adolescent health cadres through the TRIAD KRR approach is an essential step in fostering positive reproductive health behaviors among adolescents (Solehati et al., 2023). Therefore, enhancing the capacity of cadres in implementing the TRIAD KRR approach is crucial for improving the effectiveness of

reproductive health education and advocacy for adolescents. Through structured and evidence-based training, cadres are expected to become facilitators who can bridge communication between adolescents, parents, and healthcare providers, as well as help create a supportive environment for adolescents' healthy physical, mental, and social development (Amutah et al., 2021).

This community service activity is a continuation of a previous program aimed at enhancing cadre competencies through the TRIAD KRR approach. Through structured training and mentoring, cadres are expected to become active agents of change who can deliver impactful education to their peers. Therefore, mentoring in reproductive health education is carried out by the adolescent cadres themselves, as they are the closest individuals within the school environment. This approach is expected to sustainably improve adolescents' reproductive health behaviors (Kustin, 2021). This sustainable improvement in adolescent health behavior, particularly related to reproductive health, is ultimately expected to prevent or reduce undesirable outcomes such as unintended pregnancy, early marriage, sexually transmitted diseases, and other related issues (Kustin, Dermawan, et al., 2023). In addition, it is expected that adolescents will be able to independently and responsibly improve their health and maintain vigilance regarding reproductive health problems that may arise during adolescence. This community service activity was carried out at SMK dr. Soebandi Jember, where the female students live in a school dormitory away from their families and are supervised only by dormitory staff. Considering this situation, health cadres were established to improve the students' health status, and their capacity needs to be continuously strengthened.

### **Identification of Problems**

The strengthening program for Triad KRR cadres continues to face several challenges, including limited cadre knowledge regarding the aspects of Sexuality, Drugs, and HIV/AIDS, as well as low self-efficacy in delivering reproductive health education to adolescents. In addition, cadres still lack adequate communication and counseling skills, and the use of engaging educational media that aligns with adolescents' characteristics remains minimal. Support from schools and the broader community for program implementation is also not yet optimal, while adolescents are increasingly exposed to misleading information about sexuality through social media. These issues are further compounded by the absence of standardized and sustainable training programs for cadres, resulting in insufficient capacity to deliver effective health education.

## **Implementation Methodology**

This activity was carried out over a period of three months, from July 1 to September 30, 2025. The location and implementation of the program took place at SMK dr. Soebandi Jember. The participants in this community service activity consisted of 50 students who had been selected as adolescent health cadres. The activity was implemented through five stages, beginning with:

### 1. The first stage: Needs Assessment

The activity began with identifying the needs of the cadres and adolescents through brief interviews, a basic knowledge survey, and field observations to determine the focus of the TRIAD KRR materials and the skills that needed to be strengthened.

### 2. The second stage: Training Materials

The team developed a TRIAD KRR–based training module that includes: Seksualitas sehat

- HIV/AIDS prevention
- Prevention of substance abuse
- Educational communication techniques
- Basics of adolescent counseling
- Strategies for enhancing adolescents' self-efficacy

The materials were developed to be concise, applicable, and aligned with the local context.

### 3. The third stage: Cadre Training

The training was conducted using a participatory approach through several methods:

- Interactive lectures to strengthen understanding of the TRIAD KRR concepts
- Focus Group Discussions (FGDs) to explore field challenges
- Case simulations (role play) to practice communication and counseling skills
- Peer education practice to build cadres' skills in interacting with adolescents

The training was conducted over one week and involved cadres from various target areas..

### 4. The fourth stage: Mentoring and Field Practice

The cadres were mentored in delivering direct education to adolescents through

- TRIAD KRR education classes
- Individual or small-group adolescent counseling
- Thematic discussions related to adolescents' experiences

The mentoring aimed to ensure that the cadres applied their skills correctly and consistently.

### 5. The fifth stage: Monitoring and Evaluation

The evaluation was conducted through:

- Pre-test and post-test to measure the improvement in cadres' knowledge
- Field practice observations to assess communication and counseling skills
- Feedback from cadres and adolescents to assess the effectiveness of the program
- Assessment of the program's impact on improving adolescents' self-efficacy regarding reproductive health behaviors

The evaluation data were used to determine the program's success and to formulate recommendations for its sustainability.

In more detail, the process is illustrated as follows:

### Flowchart of Community Service Implementation

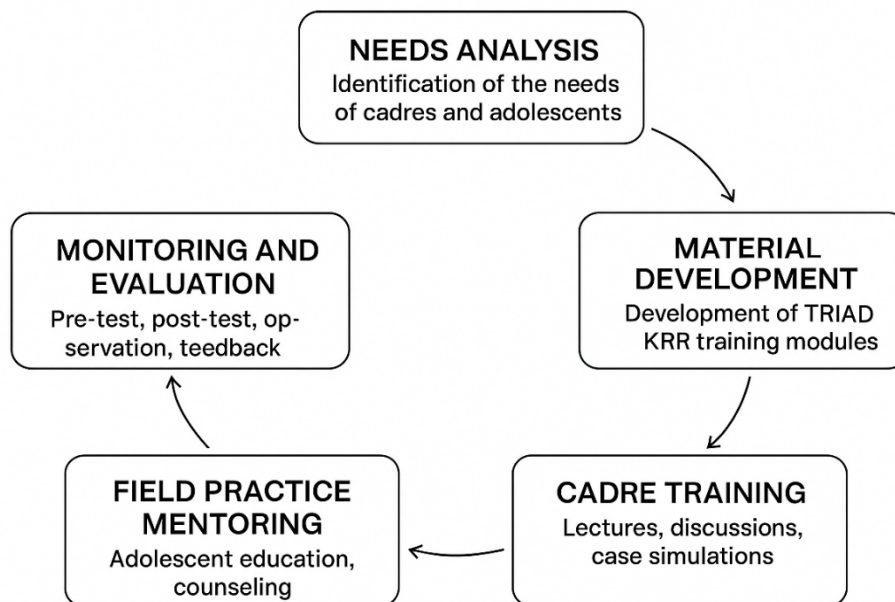


Figure 1. Stages of the Community Service Activities.

## Results and Discussion

### Results

The target of this community service activity consisted of 50 male and female students of SMK dr. Soebandi who had previously been selected as health cadres. The results of the activity are as follows:

Table 1. Respondent Characteristics

Category	Sub- Category	f	%
Age	16	17	34
	17	25	50
	18	8	16
<b>Total</b>		<b>50</b>	<b>100</b>
Sex	Male	21	42
	Female	29	58
<b>Total</b>		<b>50</b>	<b>100</b>

The results of the activity showed that most respondents were 17 years old, accounting for 50% (25 respondents). Meanwhile, the majority of the established cadres were female, comprising 58% (29 respondents).



Figure 1. Distribution of Questionnaires and Activity Discussions

Table 1. Pre-Test and Post-Test Results of Students (n = 50)

Measured Components	Pre-Test (Average)	Post-Test (Average)	Increase
Knowledge of TRIAD KRR	60	88	28
Awareness of Sexual Risk	58	84	26
Self-Efficacy for Healthy Reproductive Health Behaviors	55	82	27
Overall Average	57,6	84.6	27

The results of the community service activity showed that the knowledge component increased by 28 points, from an average pre-test score of 60 to a post-test score of 88. The component of sexual risk awareness also increased by 26 points, from an average pre-test score of 58 to a post-test score of 84. Meanwhile, self-efficacy for healthy reproductive health behaviors increased by 27 points, from an average pre-test score of 55 to a post-test score of 82. Overall, the average score increased by 27 points, from 57.6 in the pre-test to 84.6 in the post-test. In addition to these findings, the results of the community service activities also showed an increase in student participation and responsiveness. Throughout the implementation of the program, students demonstrated active participation. Here is the English translation with polished academic phrasing:

1. 80% of students actively asked questions, particularly regarding bodily changes during puberty, the risks of premarital sexual activity, and ways to prevent HIV/AIDS.
2. 76% of students felt confident sharing personal experiences and opinions, indicating increased self-confidence.
3. 82% of students reported feeling more prepared to face peer pressure related to risky sexual behaviors.

This high level of participation is closely related to the interactive implementation methods used, such as group discussions, educational games, and case simulations. The results of the community service activity regarding Strengthening the Role of Cadres showed the following outcomes. The cadres who had been previously trained were proven able to:

1. Deliver the material in a simple and easily understandable manner.
2. Serve as role models for students when discussing sensitive issues.
3. Provide a safe space for adolescents to engage in open discussion.

The cadre-based intervention proved effective because students felt more comfortable learning from facilitators who were emotionally and socially closer to them compared with formal counseling sessions.



Figure 2. Strengthening the Role of Cadres

## Discussion

The community service activity focusing on Strengthening Adolescent Reproductive Health (KRR) TRIAD Cadres was implemented as a strategic effort to address the various challenges faced by adolescents in maintaining reproductive health in the digital era. Increased exposure to uncontrolled information, shifts in social interaction patterns, and adolescents' limited ability to make informed health decisions highlight the importance of strengthening cadre capacity as a key approach. Adolescent cadres hold a strategic position as peer educators who can provide education, support, and serve as role models for healthy behavior among their peers (Kustin & Handayani, 2025). Through this program, capacity strengthening was carried out by enhancing knowledge, communication skills, and understanding of the TRIAD KRR concepts, which include sexuality, HIV/AIDS, and substance abuse. In addition, this intervention was designed to improve the self-efficacy of adolescent cadres so that they become more confident in providing education and promoting reproductive health within their environment. Strong self-efficacy enables cadres to better identify risks, deliver accurate information, make informed decisions, and influence healthy behaviors among their peers. The training effectively improved the cadres' understanding of sexuality, HIV/AIDS, and the dangers of drug abuse. This improvement aligns with international literature indicating that comprehensive education enhances adolescents' competence in preventing sexual risks and substance misuse. The cadres were able to develop a deeper understanding of biological concepts, associated risks, and prevention strategies. (Barriuso-ortega & Fern, 2024). The social closeness between the cadres and the targeted adolescents increases the acceptability of the messages, making the transfer of knowledge and motivation to change more effective and faster compared to traditional approaches without peer involvement (Adilanisa et al., 2022).

The increase in self-efficacy observed in this community service program is most likely explained by mechanisms described in Social Cognitive Theory (Bandura), namely: (1) mastery experiences gained during practice or role-play sessions, (2) vicarious experiences achieved by observing peers succeed, (3) verbal persuasion provided by the facilitators, and (4) regulation of affective states that reduces anxiety. Recent empirical studies indicate that variations in these sources account for a substantial proportion of self-efficacy differences among adolescents. The findings of this program reflected in improved practical performance and enhanced confidence among the cadres are consistent with these mechanistic explanations (Kleppang et al., 2023). Meanwhile, the improvement in empathetic communication skills and basic counseling competencies supports existing evidence showing that training modules emphasizing active learning approaches such as role-play, simulation, and supervised practice—are far more effective in enhancing practical abilities than lecture-based methods alone. Program evaluations of health worker capacity-building and volunteer training similarly demonstrate improved adolescent service performance when intervention packages include hands-on practice and ongoing coaching components. Therefore, the practical components incorporated in this program were likely key contributors to the increase in self-efficacy and the cadres' ability to deliver Triad KRR educational materials effectively (Mafuta et al., 2025). The results of this community service program are also consistent with several recent field studies in the Indonesian context (2022–2025), which reported similar outcomes: peer educator or youth cadre training interventions were shown to improve HIV/AIDS knowledge, healthy sexual behaviors, and adolescents' perceived ability to conduct peer counseling. These findings strengthen the external validity of the current program within local school and community cultures. This indicates that the intervention design—combining Triad KRR materials, basic counseling techniques, and peer-education methods—has strong potential for replication across similar educational and community settings (Nurmala et al., 2024). Although the results of this community service program demonstrate improvements, several limitations and implementation challenges were identified, indicating important areas for attention. These include heterogeneity in training quality, limited post-training mentoring, cultural resistance toward comprehensive sexuality education, and the need for standardized educational materials. Studies examining the implementation of Comprehensive Sexuality Education (CSE) highlight the importance of standardized curricula, engagement of key stakeholders (schools, primary health centers, and parents), and continuous monitoring to ensure long-term impact. Therefore, program recommendations should incorporate mechanisms for ongoing

supervision, standardized training modules, and strengthened collaborative networks across institutions (Kurnaesih et al., 2025).

## **Conclusion**

The Triad KRR cadre-strengthening program proved effective in enhancing the capacity of adolescent peer educators as facilitators of reproductive health education. Through training that included Triad KRR materials sexuality, HIV/AIDS, and drug abuse along with basic counseling techniques, empathetic communication, and peer-education methods, there was a significant improvement in the cadres' knowledge, skills, and self-efficacy. Evaluation results indicated that the trained cadres became more confident in delivering educational content, identifying adolescents' problems, and providing accurate and responsive health information. Moreover, adolescent participation in educational activities increased, reflecting the effectiveness of cadres as agents of change. Overall, this program successfully strengthened the cadres' ability to support the prevention of reproductive health risks among adolescents and highlighted the importance of structured training and continuous mentoring to ensure the sustainability of Triad KRR educational initiatives within the community.

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