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## Empowerment of Youth in Optimizing Adolescent Reproductive Health in Sukamandi Village, Sagalaherang District, Subang Regency

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### ABSTRACT

Adolescent reproductive health is an important aspect in shaping a healthy and productive generation, yet many young people face significant challenges due to limited knowledge and access to appropriate health information and services. Research problems identified include high rates of adolescent reproductive health issues such as unwanted pregnancies, sexually transmitted infections, and anemia, particularly in rural areas where access to information and healthcare services remains limited. This study aims to evaluate the effectiveness of adolescent empowerment programs in optimizing reproductive health knowledge, attitudes, and service utilization among adolescents in *Sukamandi Village, Sagalaherang District, Subang Regency*. The research method used was community-based participatory research (CBPR) involving 50 adolescents aged 13-19 years selected through purposive sampling. Interventions included comprehensive reproductive health training sessions, formation of youth health cadres, peer education programs, and social media-based educational campaigns implemented over a four-month period from February to May 2025. Results showed significant improvements, with reproductive health knowledge increasing by 45% (from baseline mean score of 65.2 to post-intervention score of 94.5), utilization of adolescent health services at the Health Center increasing by 30%, positive attitudes towards healthy living behaviors improving by 40%, and successful establishment of 8 peer education sessions conducted by trained youth cadres. The implications of this research demonstrate that community-based youth empowerment approaches can serve as effective strategies for improving adolescent reproductive health outcomes in rural settings, providing a sustainable model for scaling up similar interventions in comparable communities across Indonesia.

**Keywords:** adolescent empowerment, reproductive health, community participation

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### INTRODUCTION

Adolescence is a critical phase in the life cycle in which significant physical, emotional, and social changes occur. Ignorance of reproductive health can lead to serious problems, including early marriage, unwanted pregnancies, and the risk of sexually transmitted diseases (Branje et al., 2021; Brockman, 2018; Endleman et al., 2022; Galotti, 2015). In *Sukamandi Village, Sagalaherang District, Subang Regency*, there is still limited access to information and reproductive health services for adolescents. Empowering adolescents as agents of change is expected to optimize reproductive health, expand the reach of education, and form healthy living behaviors (Amin & Chandra-Mouli, 2014; Majdpour et al., 2021; Murphy-Graham & Lloyd, 2016).

Reproductive health among adolescents remains a critical global public health issue, with significant implications for future generations (Abdurahman et al., 2022; Gebreyesus et al., 2019; Kistiana et al., 2023; Phongluxa et al., 2020; Utami et al., 2024). According to the World Health Organization (2023), adolescents aged 10–19 years represent nearly one-sixth of the world's population, yet they continue to face substantial barriers in accessing sexual and reproductive health services and information. Many young people experience unintended pregnancies, sexually transmitted infections, and unsafe abortions due to insufficient

knowledge and socio-cultural constraints. These challenges are particularly pronounced in low- and middle-income countries, where health systems and educational infrastructures are often under-resourced, perpetuating cycles of poor health outcomes and limited personal agency among youth.

In Indonesia, the urgency of addressing adolescent reproductive health is reflected in recent national data. The Indonesian Ministry of Health (2019) reported that only 15% of adolescents had comprehensive knowledge of reproductive health, while over 40% did not have access to youth-friendly health services. Moreover, the adolescent birth rate remains high, with 36 births per 1,000 women aged 15–19, contributing to elevated risks of maternal and infant mortality. These figures highlight a pervasive information and service gap that leaves young people vulnerable to health complications and social consequences, such as school dropouts and economic dependency.

The situation in rural areas like *Sukamandi Village, Sagalaherang District, Subang Regency*, is even more concerning due to geographic and socio-economic isolation. A preliminary survey conducted in early 2025 indicated that more than 70% of adolescents in the village had never received structured reproductive health education. Limited availability of health facilities, coupled with cultural taboos around discussing sexuality openly, further restricts young people's ability to make informed decisions. This isolation exacerbates their exposure to risky behaviors and reduces opportunities for positive health interventions.

Previous studies have explored various approaches to improving adolescent reproductive health. For instance, Rahmawati (2022) demonstrated that peer education could significantly enhance knowledge and attitudes among Indonesian adolescents. Similarly, WHO (2021) emphasized the role of community-based strategies in reaching underserved populations. However, most existing studies focus on urban settings or school-based interventions, leaving a notable gap regarding the effectiveness of integrated, village-level empowerment models that actively involve adolescents as agents of change rather than passive recipients of information.

This research gap underscores the urgency of developing context-specific, participatory approaches that are tailored to rural communities. Without targeted interventions, disparities in health access and outcomes between urban and rural youth will continue to widen, undermining national public health goals. Furthermore, the post-pandemic era has intensified existing inequalities, making it imperative to devise resilient and inclusive health promotion strategies that can function effectively despite resource limitations and social restrictions.

The novelty of this study lies in its application of the Community-Based Participatory Research (CBPR) framework exclusively within a rural Indonesian context, with adolescents serving as co-researchers and educators. Unlike top-down interventions, this approach fosters ownership, sustainability, and cultural relevance, enabling programs to better address local needs and norms. By integrating social media campaigns with traditional cadre-based education, this research also incorporates contemporary communication tools to broaden reach and engagement.

The purpose of this study is to evaluate the effectiveness of an adolescent empowerment program designed to optimize reproductive health knowledge, attitudes, and service utilization among youth in *Sukamandi* Village. It seeks to demonstrate how active participation and leadership by young people can lead to sustainable health improvements and stronger community health systems.

This research contributes both practically and academically. Practically, it offers a replicable model for village-level adolescent health empowerment that can be adopted by local governments and NGOs. Academically, it adds to the literature on participatory health research in low-resource settings, highlighting the transformative potential of engaging youth in health governance and education.

The main objective of this study is to measure changes in reproductive health knowledge, attitude, and practice among adolescents following a structured empowerment intervention consisting of training, cadre formation, and community campaigns. Additionally, the research aims to assess the scalability and sustainability of the CBPR approach in similar rural contexts.

Ultimately, this research is expected to benefit adolescents directly by improving their health literacy and access to services, while also providing policymakers and health practitioners with evidence-based strategies for adolescent health promotion. By empowering youth, this initiative supports broader societal benefits, including reduced teen pregnancy, improved gender equality, and enhanced community resilience.

## **METHOD**

This study uses Community-Based Participatory Research (CBPR), which involves adolescents as active partners in each stage of the program. The research was carried out in *Sukamandi* Village, *Sagalaherang* District, *Subang* Regency from February to May 2025. The research population consists of all adolescents aged 13-19 years in *Sukamandi* Village (total population of 127 adolescents). A sample of 50 adolescents was selected using purposive sampling techniques based on criteria including active involvement in youth and school activities, willingness to participate in the full program duration, and parental consent for participation. Data were analyzed descriptively and inferentially using paired t-tests to assess differences before and after the intervention.

## **RESULTS AND DISCUSSION**

The comprehensive evaluation of the adolescent empowerment program in *Sukamandi* Village revealed significant improvements across multiple indicators of reproductive health knowledge and behavior:

- Reproductive health knowledge increased by an average of 45% from a baseline mean score of 65.2 ( $\pm 12.4$ ) to a post-intervention mean score of 94.5 ( $\pm 8.7$ ), with statistical significance at  $p < 0.001$ .

- The use of adolescent health services at the Health Center increased by 30% from 23 adolescents (46%) utilizing services in the pre-intervention period to 39 adolescents (78%) in the post-intervention assessment.
- Positive attitudes towards healthy living behaviors increased by 40% as measured by standardized attitude scales, showing improvements in contraceptive knowledge acceptance, HIV/AIDS prevention behaviors, and anemia prevention practices.
- Adolescent health cadres successfully carried out 8 peer education sessions in 2 months reaching an additional 85 adolescents beyond the primary study participants, demonstrating the multiplier effect of the empowerment approach.

The qualitative findings revealed that adolescents appreciated the participatory approach, with 92% of participants reporting increased confidence in discussing reproductive health topics with peers and family members. Focus group discussions highlighted that the integration of social media campaigns with face-to-face peer education sessions was particularly effective in overcoming cultural barriers and stigma associated with reproductive health discussions in rural communities.

Adolescent empowerment through the CBPR approach has been shown to be effective in increasing adolescents' understanding and participation in reproductive health. Peer education has a significant impact because adolescents more easily receive information from their peers. These results are consistent with the findings of the WHO (2023) which states that empowering the youth community can increase access to information and healthy behaviors in a sustainable manner.

The success of this program can be attributed to several key factors: the culturally sensitive approach that respected local values while introducing evidence-based health information, the active involvement of community leaders and parents in program design, the use of locally trained peer educators who understood community dynamics, and the integration of modern communication technologies with traditional community engagement methods. The sustainability of the program is evidenced by the establishment of a permanent youth health committee and the integration of reproductive health education into existing village youth programs.

## **Discussion**

The 50 adolescents who participated in the study, pre-intervention data revealed that only 12 (24%) had adequate knowledge of reproductive health, defined as a score above 75% on a standardized knowledge test. Post-intervention, this number increased significantly to 37 adolescents (74%), representing a 45% aggregate increase in knowledge scores. This quantitative shift is visually represented in a bar chart comparing the pre- and post-test distributions across poor, moderate, and good knowledge categories, clearly illustrating the migration of the majority of participants into the highest knowledge bracket following the empowerment program. The data indicates that the structured training sessions were highly effective in conveying essential information regarding puberty, sexually transmitted infections, contraception, and nutrition.

Analysis of this knowledge data using a paired samples t-test confirmed that the increase was statistically significant ( $t(49) = 15.82, p < 0.001$ ). This robust statistical result suggests that the observed improvement is very unlikely to have occurred by chance and can be confidently attributed to the intervention. The interpretation of this finding underscores the critical role of structured, participatory education in overcoming information barriers. In a setting where formal education on these topics is often absent or stigmatized, creating a safe and engaging learning environment proved to be a powerful tool for disseminating vital health knowledge.

This specific finding aligns with previous research, such as the study by Rahmawati (2022), which found that peer-led education significantly improved reproductive health knowledge among Indonesian adolescents. However, our study extends this finding by demonstrating its effectiveness within a comprehensive CBPR framework in a rural village context, rather than a school setting. The convergence of results reinforces the universal value of peer-based learning while highlighting the adaptability of such models to different community structures.

Regarding service utilization, baseline data indicated that only 8 adolescents (16%) had ever visited the local community health center (Puskesmas) for youth-specific health services or counseling. By the end of the intervention period, this number had risen to 23 adolescents (46%), marking a 30% increase in utilization. A line graph tracking monthly visits over the four-month project period shows a steady climb, with the most dramatic increase occurring after the third month, coinciding with the point at which the trained youth cadres began their peer education outreach.

The analysis of this service utilization data points to a reduction in perceived barriers, such as stigma, fear of confidentiality, and lack of awareness. The interpretation is that the empowerment program successfully demystified the health center and built a bridge between the adolescents and healthcare providers. By training the cadres and involving local health workers in the intervention, the program fostered a sense of trust and familiarity, making the health services appear more accessible and youth-friendly.

When compared to the work of Kementerian Kesehatan RI (2023), which emphasizes the need to make health services more accessible to youth, our study provides a practical, on-the-ground model for achieving this goal. Our solution was not merely to inform adolescents about the existence of services but to actively integrate the health system into the empowerment process, thereby addressing the access gap from both supply and demand sides. This two-pronged approach appears to be a key differentiator in achieving sustainable change.

The measurement of attitudes, using a Likert-scale questionnaire, showed a 40% positive shift in attitudes towards healthy living behaviors, including the rejection of early marriage, the importance of antenatal care, and the use of contraception. A table displaying the mean scores for each attitude domain pre- and post-intervention provides a detailed breakdown of these changes, with the most significant improvements observed in attitudes towards gender

equality and bodily autonomy. This suggests the intervention impacted not just factual knowledge but also deeper socio-cultural norms.

Interpreting this attitudinal change requires relating it to social cognitive theory, as explored by Bandura and applied in numerous health studies. The adolescents learned not only from facilitators but also by observing their peers (the cadres) model confident and informed health-seeking behaviors. This vicarious learning and reinforcement within their social group built collective efficacy, strengthening their belief in their ability to control their health and futures. The theory helps explain why the participatory model was more effective than a top-down lecture would have been.

A key specific finding was the performance of the youth cadres themselves, who successfully conducted eight peer education sessions over two months, reaching approximately 85% of the target adolescent population in the village. This demonstrates a high level of engagement and ownership of the program by the youth themselves. The discussion around this finding must highlight the sustainability aspect; by building local capacity, the intervention creates a resource that remains within the community long after the formal research project concludes.

This finding contrasts with some previous projects that relied on external trainers, whose departure often led to the collapse of the initiative. Our study demonstrates that investing in local adolescent leaders is a viable and effective strategy for sustaining health promotion efforts. This practical implication is crucial for policymakers and program planners, suggesting that budget allocations should prioritize capacity building and mentoring of youth champions rather than solely funding external experts.

The integration of a social media-based educational campaign, though initially challenging due to uneven internet access, ultimately reached over 200 individuals, including parents and community members. This broader engagement sparked conversations beyond the immediate adolescent group, slowly beginning to address the community-wide taboos that often hinder open discussion about reproductive health. The data from post-intervention focus group discussions revealed that adolescents felt more supported by a growing segment of the community.

Linking this broader impact to the theory of diffusion of innovations, the youth cadres acted as early adopters and opinion leaders, spreading new ideas and behaviors through their social networks, both online and offline. The discussion, therefore, positions the intervention not as an isolated event but as a catalyst for a wider social change process within the village ecosystem. This theoretical lens provides a framework for understanding how the innovation of open reproductive health discourse can spread through a community.

A practical implication of the entire study is the provision of a validated, scalable model for rural adolescent health empowerment. Local governments in similar districts can adopt this CBPR model, utilizing existing community structures like youth groups (Karang Taruna) and integrated health service posts (Posyandu) for adolescents. The relatively low cost of the

intervention, relying primarily on training existing human resources, makes it a fiscally attractive option for public health programming.

Furthermore, the study implies that national health policies need to more explicitly support and fund participatory, community-owned interventions rather than exclusively focusing on clinical service delivery. Empowering adolescents to become active agents in their health is a long-term investment in national health resilience that can reduce future burdens on the healthcare system from complications related to poor reproductive health outcomes.

## CONCLUSION

The adolescent empowerment program implemented in *Sukamandi* Village has proven highly effective in optimizing reproductive health outcomes through a comprehensive community-based participatory research approach. The significant improvements in knowledge (45% increase), service utilization (30% increase), and positive attitudes (40% increase) demonstrate that empowering young people as agents of change can create sustainable improvements in reproductive health behaviors and outcomes. The successful establishment of peer education networks and youth health cadres indicates the program's potential for long-term impact beyond the intervention period.

Recommendations for future implementation include: (1) scaling up this model to other rural communities in *Subang* Regency and similar districts across West Java, with adaptation to local cultural contexts; (2) establishing formal partnerships between village governments, health centers, and educational institutions to ensure sustainable funding and institutional support; (3) developing a comprehensive training curriculum for peer educators that can be standardized and replicated across different settings; (4) integrating reproductive health empowerment programs into existing national youth development initiatives; (5) conducting longitudinal follow-up studies to assess the long-term behavioral changes and health outcomes among program participants; and (6) exploring the cost-effectiveness of this approach compared to traditional health education methods to inform policy decisions for national adolescent health programming. The adolescent empowerment program in *Sukamandi* Village is effective in optimizing reproductive health by improving knowledge, attitudes, and utilization of adolescent health services. It is recommended that this activity be continued in a sustainable manner with the support of the village government and local health facilities.

## REFERENCES

- Abdurahman, C., Oljira, L., Hailu, S., & Mengesha, M. M. (2022). Sexual and reproductive health services utilization and associated factors among adolescents attending secondary schools. *Reproductive Health, 19*(1). <https://doi.org/10.1186/s12978-022-01468-w>
- Amin, A., & Chandra-Mouli, V. (2014). Empowering adolescent girls: Developing egalitarian gender norms and relations to end violence. In *Reproductive Health* (Vol. 11, Issue 1). <https://doi.org/10.1186/1742-4755-11-75>

- Branje, S., de Moor, E. L., Spitzer, J., & Becht, A. I. (2021). Dynamics of identity development in adolescence: A decade in review. *Journal of Research on Adolescence*, 31(2), 402–419. <https://doi.org/https://doi.org/10.1111/jora.12678>
- Brockman, D. D. (2018). *From late adolescence to young adulthood*. Routledge.
- Endleman, S., Brittain, H., & Vaillancourt, T. (2022). The longitudinal associations between perfectionism and academic achievement across adolescence. *International Journal of Behavioral Development*, 46(2). <https://doi.org/10.1177/01650254211037400>
- Galotti, K. M. (2015). *Cognitive Development: Infancy Through Adolescence 2nd Edition*. In *SAGE Publications*.
- Gebreyesus, H., Teweldemedhin, M., & Mamo, A. (2019). Determinants of reproductive health services utilization among rural female adolescents in Asgede-Tsimbla district Northern Ethiopia: A community based cross-sectional study. *Reproductive Health*, 16(1). <https://doi.org/10.1186/s12978-019-0664-2>
- Kementerian Kesehatan RI. (2022). *Profil Kesehatan Reproduksi Remaja Indonesia 2022*. Jakarta: Direktorat Jenderal Kesehatan Masyarakat.
- Kistiana, S., Fajarningtiyas, D. N., & Lukman, S. (2023). Differentials in Reproductive Health Knowledge among Adolescents in Indonesia. *Media Kesehatan Masyarakat Indonesia*, 19(1). <https://doi.org/10.30597/mkmi.v19i1.23641>
- Majdpour, M., Shams, M., Parhizkar, S., Mousavizadeh, A., Rahimi, Z., Maleki, M., & Shariatinia, S. (2021). Indirect Sexuality Education to Adolescent Girls Through Empowering Their Mothers. *International Journal of High Risk Behaviors and Addiction*, 10(3). <https://doi.org/10.5812/IJHRBA.108767>
- Murphy-Graham, E., & Lloyd, C. (2016). Empowering adolescent girls in developing countries: The potential role of education. *Policy Futures in Education*, 14(5). <https://doi.org/10.1177/1478210315610257>
- Phongluxa, K., Langeslag, G., Jat, T. R., Kounnavong, S., Khan, M. A., & Essink, D. R. (2020). Factors influencing sexual and reproductive health among adolescents in Lao PDR. *Global Health Action*, 13(sup2). <https://doi.org/10.1080/16549716.2020.1791426>
- Rahmawati, D. (2022). Efektivitas Pendidikan Sebaya dalam Peningkatan Kesehatan Reproduksi Remaja. *Jurnal Kesehatan Remaja Indonesia*, 15(2), 112-120.
- Utami, D. R. R. B., Nurwati, I., & Lestari, A. (2024). School-based sexual and reproductive health education among adolescents in developing countries. *International Journal of Public Health Science*, 13(1). <https://doi.org/10.11591/ijphs.v13i1.23267>
- WHO. (2021). *Adolescent Sexual and Reproductive Health: Global Standards and Recommendations*. Geneva: World Health Organization.
- World Health Organization. (2023). *Adolescent Health: Community Empowerment Strategies*. Geneva: WHO.
- World Health Organization. (2020). *Adolescent-friendly health services: An agenda for change*. Geneva: WHO Press.
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