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Healthy Education for Teens: Enhancing Reproductive Health Awareness in Padang

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ABSTRACT

Adolescence is a phase of life marked by physical, social, psychological, and intellectual changes. These changes often cause confusion among adolescents, leaving them in need of guidance. A lack of knowledge and guidance can lead to various problems, particularly deviations in sexual behavior, which can negatively impact reproductive health. This counseling aimed to enhance the understanding of SMK SMAK Padang students regarding reproductive health, including adolescent growth and development, adolescent nutrition, adolescent psychology, sexuality, gender based violence, reproductive tract infections (RTIs), HIV/AIDS, the future impact of adolescent sexual behavior, and other youth related issues. The methods used in this activity included counseling sessions supported by media such as PowerPoint presentations, posters, and leaflets, alongside pre-tests and post-tests consisting of 40 questions. A T-test revealed a significant difference between the pre-test and post-test results. Furthermore, the N-Gain score reached 69.8, indicating a moderate level of effectiveness. These findings demonstrate that reproductive health counseling had a positive impact on increasing adolescents' knowledge.

Keywords: adolescent, education, reproductive health, sexual behavior

INTRODUCTION

Adolescence is the transitional phase from childhood to adulthood, marked by significant physical, social, psychological, and intellectual changes (Suryana et al., 2022). Adolescence is a unique stage of human development, and it is crucial to establish a strong foundation for health during this time (Alwi, 2023). In Indonesia, adolescents are defined as individuals aged 10 to 18 years and are considered vulnerable to environmental and social influences (Prima Mulya & Mutia Kosassy, 2024).

Physically, adolescents experience rapid growth, such as breast development and menstruation in females, and voice changes and increased muscle mass in males (Tasya Alifia Izzani et al., 2024). Psychologically, adolescents often face emotional fluctuations, stress, and identity formation challenges (Hamzah B & Hamzah, 2020). These changes may cause confusion and require proper guidance to avoid negative consequences (Andi Fitri Farwati et al., 2023).

During adolescence, reproductive organs mature, making reproductive health knowledge essential. However, adolescents face risks such as infections, sexually transmitted diseases (STDs), and unwanted pregnancies (Galbinur et al., 2021) (Jusuf et al., 2023). Reproductive health encompasses complete physical, mental, and social well-being regarding the reproductive system (Armayanti et al., 2022). A significant barrier to reproductive health education among Indonesian adolescents is the lack of information (Mareti & Nurasa, 2022). A lack of knowledge and guidance on reproductive health and sexual behavior can harm adolescents and their families (Subekti et al., 2020).

Inadequate knowledge and preparation can lead to risky sexual behaviors, including cybersex and premarital sex, which are increasingly common among adolescents (Purnama et al., 2020; Aprianti et al., 2020).

There are various types of sexual behavior among adolescents in Indonesia, including dating, physical intimacy, and sexual intercourse. Premarital sex, the spread of STDs, and unwanted pregnancies are forms of sexual deviation that have become prevalent (Yarza et al., 2019). Cybersex, defined as online sexual activities such as chatting and viewing explicit content, has detrimental effects on adolescents' mental health and may trigger anxiety and addiction (Harmaini & Novitriani, 2019; Huwaidah et al., 2020). Premarital sexual behavior also raises concerns for adolescent reproductive health and social well-being (Permatadewa & Ode, 2023).

Global data indicates that 150,000 adolescents aged 10-19 were infected with sexually transmitted diseases in 2020. Among adolescents aged 15-19, approximately 10 million cases of unwanted pregnancies were reported, and 5.6 million abortions were performed annually (Mahmud et al., 2023). According to the 2013 Basic Health Survey (SDKI), 6.2% of adolescent girls and 29.5% of adolescent boys had engaged in physical contact and arousal with a partner, while 29.3% of adolescent girls and 48.1% of adolescent boys had kissed (Alwi, 2023). Data from the 2020-2021 Indonesian Reproductive Health Survey (SKRI) showed that 2.4% of adolescents aged 10-19 and 8.6% of adolescents aged 20-24 who were unmarried had engaged in premarital sex (Aima & Erwandi, 2024).

STDs, HIV/AIDS, unwanted pregnancies, and the disruption of adolescents' futures are significant consequences of risky sexual behaviors. These behaviors can be attributed to various factors, including limited knowledge about reproductive health. Research conducted by Mahmud et al. (2023) found that only 19.6% of adolescents in Padang had high exposure to reproductive health information, while 80.4% had low exposure. Data from the 2018 Riskesdas survey indicated that only 25.1% of Indonesian adolescents received reproductive health counseling (Amalia et al., 2022).

Interviews with counseling teachers at SMK SMAK Padang indicated that dating and lack of reproductive health education are major issues affecting students, potentially impacting academic performance and increasing risks of violence (Nursal et al., 2023). Therefore, increasing adolescents' knowledge on reproductive health is urgent and essential to prepare future generations for healthy adulthood (Wardani & Pratiwi, 2022; Muharrina et al., 2023).

To address the issues at SMK SMAK Padang, students from the Public Health program at Andalas University, in collaboration with the Limau Manis Subdistrict and SMK SMAK Padang, organized a reproductive health counseling session for adolescents. Due to adolescents' vulnerability to risky sexual behaviors and limited reproductive health knowledge, this intervention was urgent to improve their well-being and support national demographic targets. The counseling aimed to increase students' knowledge on adolescent growth and development, nutrition, reproductive health, adolescent psychology, sexuality, gender-based violence, reproductive tract infections (RTIs), HIV/AIDS, and the risks of sexual behaviors including cybersex, cyberbullying, and premarital sex. It is hypothesized

that this counseling will significantly enhance students' reproductive health knowledge and foster responsible attitudes and behaviors, thereby preventing sexually transmitted infections and contributing to the achievement of the demographic bonus by 2030.

METHOD

The method employed in this activity is the counseling method. The counseling was conducted in November 2024, providing sexual education to adolescents. This activity aims to increase adolescents' knowledge about reproductive health to foster a generation that is more concerned with their health and to prevent them from engaging in deviant sexual behaviors. The participants in this activity were 85 students from SMK SMAK Padang, consisting of 29 students from grade 10, 27 from grade 11, and 29 from grade 12. During the counseling, the media used included PowerPoint presentations, leaflets, and posters. Partners in this activity included Universitas Andalas and SMK SMAK Padang.

The steps undertaken in the implementation of this activity are as follows:

1. Conduct a problem analysis and relate it to the needs of the partner.
2. Prepare and organize materials for counseling, such as media.
3. Coordinate with the school authorities.
4. Assess the participants' initial knowledge about adolescent sexual behavior through a pre-test.
5. Provide materials through lectures, where each group member explains the topic using PowerPoint media and intersperses it with direct discussions with the participants.
6. Conduct a final assessment through a post-test to evaluate the knowledge gained by the participants after the counseling.

The knowledge questionnaire consisted of 40 items covering adolescent growth and development, nutrition, reproductive health, sexual behavior, gender-based violence, reproductive tract infections (RTIs), HIV/AIDS, and digital risks like cybersex and cyberbullying. The questionnaire was validated through expert review and pilot testing, yielding item-total correlations between 0.35 and 0.68, demonstrating acceptable validity. Reliability analysis showed a Cronbach's alpha of 0.82, indicating good internal consistency. Knowledge improvement was assessed using normalized gain (N-Gain) scores, which quantify the increase in knowledge by comparing pre-test and post-test results.

RESULTS AND DISCUSSION

The program "Increasing Knowledge of Reproductive Health Through Healthy Education Among Adolescents" was conducted at SMK SMAK Padang. Preparations for the activity began in August 2023 and were held on Saturday, November 16, 2024, targeting students from grade 10, 11, and 12. A total of 85 participants attended, aged between 13 and 17 years. The educational material was delivered alternately by four group members. The content covered adolescence, adolescent growth and development, nutrition, reproductive health, adolescent psychology, sexual behavior, gender-based violence, reproductive tract infections, HIV/AIDS, reproductive health across age groups, cybersex, and cyberbullying.

The event began with an opening by the host, the supervising lecturer, and a representative from the school. This was followed by pre-test completion, delivery of the material, and concluded with post-test completion. During the educational activity, the participants exhibited high enthusiasm and actively engaged in the discussion session. They raised questions about the material that they had not fully understood. The material

was delivered in a relaxed manner, without being rigid, and frequent questions were posed to the participants, making the information easy to grasp. This was the core factor and key to the success of this activity.

Figure 1 shows the opening remarks from the supervising lecturer, while Figure 2 presents a group photo. Figure 3 captures students completing the pre-test, and Figure 4 shows the presentation session in progress.



Figure 1. Opening remarks from the supervising lecturer



Figure 2. Group photo



Figure 3. Pre-test



Figure 4. Material presentation

To assess knowledge improvement, pre-test and post-test scores were analyzed using a paired sample t-test. As shown in Table 1, the test results indicate a statistically significant difference between the pre-test and post-test scores.

Table 1. Paired Sample T-Test Results for Pre-test and Post-test Scores

	n	t count	t table	P-Value	Criteria
<i>Pre-test- Post test</i>	85	28.806	1.989	0.005	H0 rejected

The p-value of 0.005 is lower than the standard significance level of 0.05, and the t-value (28.806) exceeds the t-table value (1.989), indicating that the intervention significantly improved participants' knowledge.

In addition, an N-Gain test was conducted to evaluate the effectiveness of the intervention. As presented in Table 2, the average score increased from 25.74 (pre-test) to 35.86 (post-test), resulting in an N-Gain of 69.8, which is categorized as moderately effective.

Table 2. Results of the N-Gain Test

	Average		N-Gain	Criteria
	<i>Pre Test</i>	<i>Post Test</i>		
SMA	25,74	35,86	69,8	Moderately Effective

activ
ity was

Figure 5 displays a comparative diagram of individual pre-test and post-test scores for all 85 respondents. Each blue bar represents a participant's pre-test score, while the orange line corresponds to their post-test score. Visually, the post-test scores are consistently higher than the pre-test scores for almost all participants. The pre-test scores ranged approximately from 17 to 32, while the post-test scores ranged from 28 to 39. This consistent upward shift reflects a general improvement in participants' understanding following the educational intervention.

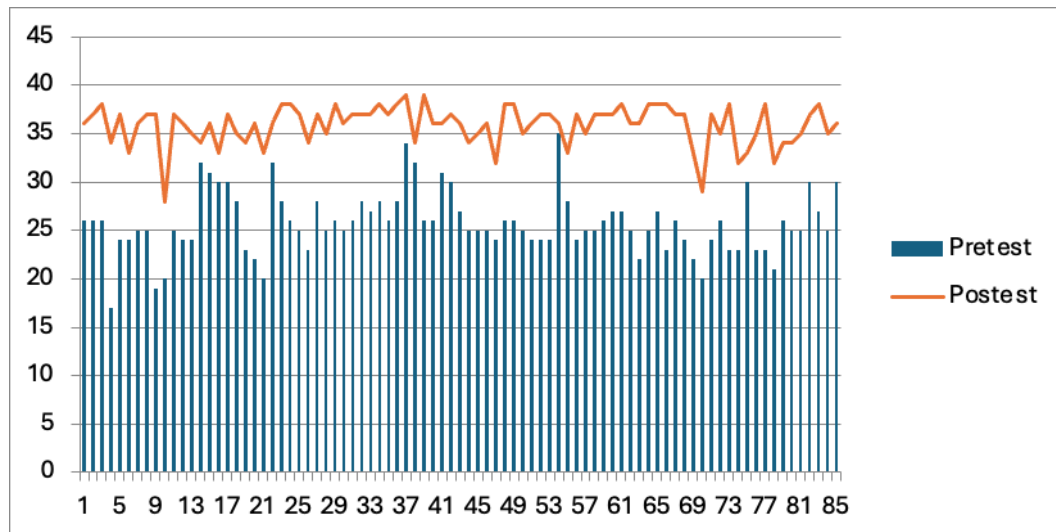


Figure 5. Diagram of the difference in pre-test and post-test results of respondents

DISCUSSION

The findings of this study demonstrate a statistically significant improvement in students' knowledge of reproductive health following the educational intervention, as indicated by the increase in post-test scores ($p = 0.005$, $t = 28.806$) and a moderate N-Gain score of 69.8. This indicates that the counseling was effective in enhancing adolescents' understanding of reproductive health.

Sustaining such educational efforts within schools is crucial to provide a continuous learning platform on reproductive health. Schools should offer comprehensive counseling services that address adolescent issues and reproductive health needs in a focused manner for all students. Students with higher motivation levels are more likely to acquire essential knowledge and protect themselves from risky behaviors that could negatively impact their future. Peer counseling activities also represent a promising approach to improving adolescent knowledge, as adolescents tend to feel more comfortable and understood when discussing sensitive topics with their peers (Nursal et al., 2024). Mahmud et al. (2023) and Amalia et al. (2022) report that many Indonesian adolescents still face significant barriers in obtaining adequate reproductive health information and services. This underscores the urgent need to expand such educational interventions and support systems.

The Indonesian Ministry of Health Regulation No. 2 of 2025 concerning the Implementation of Reproductive Health emphasizes the importance of increasing access to reproductive health services, including education and counseling starting from adolescence. This regulation highlights the necessity for integrated services, especially for handling victims of sexual violence, with standards that include early detection, emergency care, and medical referral. The implementation of the Adolescent Reproductive Health Program (PKPR) in schools and community health centers (puskesmas) is a critical step to ensure the continuity of reproductive health education and youth friendly health services. PKPR serves as an effective platform to improve adolescent knowledge while providing access to standardized, adolescent-friendly reproductive health care in accordance with Ministry of Health guidelines.

This study underscores the importance of continuous, comprehensive reproductive health education and counseling in schools to address the reproductive health challenges faced by Indonesian adolescents. Strengthening these programs will support healthier adolescent development and help prevent the negative consequences of risky sexual behaviors.

CONCLUSION

The community service program "Understand Your Body and Know Your Rights" conducted at SMK SMAK Padang effectively improved students' knowledge of reproductive health, with a moderate N-Gain of 69.8%. The session was well-received, showing that educational interventions can enhance adolescent understanding of puberty, risky behaviors, and sexual health. This aligns with the Ministry of Health Regulation No. 2 of 2025 and supports PKPR initiatives by emphasizing the importance of early, continuous, and youth-friendly reproductive health education. Practical implications:

1. Teachers should be equipped to deliver reproductive health education and guide students through sensitive topics.
2. Parents need to be involved to reinforce learning at home and improve communication.
3. Schools should collaborate with PKPR services and integrate reproductive health topics into the curriculum, including through digital platforms.

This program is recommended for replication in other schools to expand its positive impact on adolescent health and support national demographic goals.

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REFERENCES

- Aima, S., & Erwandi, D. (2024). Determinants of sexual behavior in adolescents in Indonesia: A systematic review. *Muhammadiyah Journal of Midwifery*, 4(2), 85. <https://doi.org/10.24853/myjm.4.2.85-93>
- Alwi, A. (2023). Sexual behavior of adolescents in Indonesia: A literature review. *Healthy Tadulako Journal (Jurnal Kesehatan Tadulako)*, 9(1), 94-99. <https://doi.org/10.22487/htj.v9i1.660>
- Amalia, A., Sari, A., Sari, N. R. D., Fadillah, R., & Pratiwi, S. T. (2022). Adolescent reproductive health education in addressing the demographic bonus. *Jurnal Pengabdian Masyarakat*, 1(3), 81-84. <https://journals.sagamediaindo.org/index.php/jpmsk/article/view/28%0Ahttps://journals.sagamediaindo.org/index.php/jpmsk/article/download/28/26>
- Andi Fitri Farwati, M., Ikhtiar, M., & Mahmud, N. U. (2023). Factors related to sexual behavior in adolescents at SMAN 2, Bone Regency. *Window of Public Health Journal*, 4(3), 449-461. <https://doi.org/10.33096/woph.v4i3.788>

- Aprianti, N., Nursal, D. G. A., & Pradipta, Y. (2020). Reinforcing factors of adolescent premarital sex behavior at a favorite senior high school in Padang. *Media Kesehatan Masyarakat Indonesia*, 16(2), 171–182. <https://doi.org/10.30597/mkmi.v16i2.9046>
- Armeyanti, L. Y., Tangkas, N. M. K. S., Megaputri, P. S. M., & Dwijayanti, L. A. D. (2022). Increasing adolescent understanding of the importance of reproductive health in preventing sexually transmitted infections in Mengening Village. *Jurnal Abdimas ITEKES Bali*, 1(2), 81–86. <https://doi.org/10.37294/jai.v1i2.376>
- Galbinur, E., Defitra, M. A., & Venny. (2021). The importance of reproductive health knowledge for adolescents. *Prosiding SEMNAS BIO*, 221–228. [PDF file] <file:///C:/Users/A409FJ/Downloads/26.+SMN0184-ELFI+GALBINUR+-+Elfi+Galbinur.pdf>
- Hamzah, B., & Hamzah, S. R. (2020). Determinants of premarital sexual behavior in adolescents (Case study at SMAN 1 Kotamobagu). *Bina Generasi; Jurnal Kesehatan*, 11(2), [page number]. <https://ejurnal.biges.ac.id/kesehatan/article/view/147>
- Harmaini, H., & Novitriani, S. A. (2019). Differences in cybersex behavior in adolescents based on age and gender in Pekanbaru. *Psikoislamika: Jurnal Psikologi Dan Psikologi Islam*, 16(1), 42. <https://doi.org/10.18860/psi.v16i1.5047>
- Huwaidah, R., Rokhmah, D., & Ririanty, M. (2020). Causes of cybersex behavior and its impact on student behavior (Qualitative study in Jember Regency). *Insight: Jurnal Pemikiran Dan Penelitian Psikologi*, 16(2), 347–362. <https://doi.org/10.32528/ins.v16i2.1981>
- Jusuf, E. C., Aman, A., Syahrir, S., Idrus, A., Mappaware, N. A., Chalid, M. T., & Azizah, N. (2023). Efforts to increase adolescent reproductive health knowledge. *Jurnal Dinamika Pengabdian*, 8(2), 293–300. <https://journal.unhas.ac.id/index.php/jdp/article/view/19735/9787>
- Mahmud, S., Nurafriani, & Darmawan, S. (2023). The effect of reproductive health education on adolescent attitudes towards premarital sex. *JIMPK: Jurnal Ilmiah Mahasiswa & Penelitian Keperawatan*, 3(5), 12–17. <https://jurnal.stikesnh.ac.id/index.php/jimpk/article/view/954/910>
- Mareti, S., & Nurasa, I. (2022). Adolescent knowledge on reproductive health in Pangkalpinang City. *Jurnal Keperawatan Sriwijaya*, 9(2), 25–32. <https://doi.org/10.32539/jks.v9i2.154>
- Muharrina, C. R., Yustendi, D., Sarah, S., Herika, L., & Ramadhan, F. (2023). Reproductive health. *Jurnal Pengabdian Masyarakat Kebidanan*, 5(1), 26–29. <https://jurnal.unimus.ac.id/index.php/JPMK/article/view/11507>
- Nursal, D. G. A., Afrila, G., Mutia, Nasitoh, S., & Baretta, M. S. (2024). Cybersex behavior in Indonesian adolescents: Factors, impacts, and strategies for reproductive health preservation in a digital age. *KnE Social Sciences*, 2024, 14–26. <https://doi.org/10.18502/kss.v9i23.16636>
- Nursal, D. G. A., Rahmadhanti, D., Putri, I. Y. P., Laulaa, L. N., Darman, S. Y., & Basmir, R. (2023). Education on sexual behavior, gender, and HIV/AIDS for students at SMA Negeri 6 Padang and the community. *Warta Pengabdian Andalas*, 30(3), 480–491. <http://wartaandalas.lppm.unand.ac.id/index.php/jwa/article/view/943>
- Permatadewa, E., & Ode, T. A. (2023). The relationship between cybersex and premarital sexual behavior in students at SMP Negeri X in Banyuwangi Regency. *Ikesma: Jurnal*

- Ilmu Kesehatan Masyarakat, 19(2), 80–91.
<https://doi.org/10.19184/ikesma.v19i2.38849>
- Prima Mulya, A., & Mutia Kosassy, S. (2024). Adolescent sexual behavior in senior high schools in Padang City. *Jurnal Keperawatan*, 16(4), 1347–1354.
<http://journal.stikeskendal.ac.id/index.php/Keperawatan>
- Purnama, L. C., Sriati, A., & Maulana, I. (2020). Overview of adolescent sexual behavior. *Holistik Jurnal Kesehatan*, 14(2), 301–309. <https://doi.org/10.33024/hjk.v14i2.2761>
- Subekti, N. M., Prasetyanti, D. K., & Nikmah, A. N. (2020). Factors influencing preparedness in facing puberty in adolescents. *Jurnal Mahasiswa Kesehatan*, 1(2), 159–165. [PDF file] <file:///C:/Users/A409FJ/Downloads/ojsunik,+Journal+manager,+NYAINDAH.pdf>
- Suryana, E., Hasdikurniati, A. I., Harmayanti, A. A., & Harto, K. (2022). Early, middle adolescence, and its implications on education. *Jurnal Ilmiah Mandala Education*, 8(3), 1917–1928. <https://doi.org/10.58258/jime.v8i3.3494>
- Tasya Alifia Izzani, S., Octaria, S., & Linda, L. (2024). Adolescent development. *JISPENDIORA Jurnal Ilmu Sosial Pendidikan Dan Humaniora*, 3(2), 259–273.
<https://doi.org/10.56910/jispendiora.v3i2.1578>
- Wardani, D. W., & Pratiwi, A. I. (2022). Reproductive health education and creating clean and healthy lifestyles in the COVID-19 pandemic era. *Jurnal Kreativitas Pengabdian Kepada Masyarakat (Pkm)*, 5(7), 2160–2169.
<https://doi.org/10.33024/jkpm.v5i7.6252>
- Yarza, H. N., Maesaroh, & Kartikawati, E. (2019). Adolescent reproductive health knowledge in preventing sexual deviations. *Sarwahita*, 16(01), 75–79.
<https://doi.org/10.21009/sarwahita.16.01.11>

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