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A DIGITAL APPROACH TO ADOLESCENT REPRODUCTIVE HEALTH EDUCATION: COMMUNITY SERVICE IN THAILAND

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ABSTRACT Adolescent reproductive health is an important aspect of efforts to improve the quality of life and welfare of the younger generation. Lack of understanding of reproductive health can have an impact on the increased risk of unwanted pregnancies and sexually transmitted diseases. Therefore, an effective and easily accessible educational approach is needed. This study aims to evaluate the effectiveness of online counseling in improving students' understanding of reproductive health. The method used was online counseling to 158 students through a digital platform that included interactive materials, educational videos, and discussion sessions. The evaluation was carried out by comparing the results of the pre-test and post-test as well as the participant satisfaction survey. The results showed that there was a significant increase in understanding from 56.3% in the pre-test to 85.7% in the post-test. In addition, 92% of participants stated that the online counseling method helped them understand the material better. These results are in line with previous research that emphasizes the importance of reproductive health education to prevent various health risks. In conclusion, online counseling is an effective method for increasing the understanding of adolescent reproductive health. Although there are several challenges, such as limited internet access and variations in participants' understanding levels, this digital approach can be an alternative solution to the limitations of conventional education. The development of more interactive programs and continuous evaluation is needed to ensure the effectiveness and sustainability of reproductive health education for adolescents.

Keywords: *Adolescent Reproductive Health, Online Counseling, Digital Education, Student Understanding.*

1. INTRODUCTION

Adolescent reproductive health is a key element in global health development, especially in developing countries. Adolescents are an age group that is vulnerable to a variety of reproductive health challenges, including unwanted pregnancies, sexually transmitted infections (STIs), and a

lack of knowledge about reproductive health. In Thailand, despite efforts to increase knowledge on this topic, there is still a significant gap in access to accurate and relevant information, especially for students at the primary and secondary school levels (Blanc & Way, 1998; Starrs et al., 2018).

Reproductive health education often faces various obstacles, including cultural stigma, lack of resources, and ineffective learning approaches. This condition results in a low level of adolescent knowledge about important issues related to reproductive health. Previous studies have shown that a lack of understanding of reproductive health can increase the risk of early pregnancy, unsafe abortion, and other health complications (Bearak et al., 2020; Glasier et al., 2006).

In recent years, digital approaches have emerged as a potential solution to address these challenges. The use of digital technology allows for the delivery of information that is broader, interactive, and easily accessible. It is especially relevant in the post-pandemic era, where online learning is the main method of reaching learners in various locations (Clemente & García-Pereiro, 2020; Howell, 2018).

This community service program is designed to answer this need by providing adolescent reproductive health education through a digital approach. The program focuses on primary and secondary school students in Thailand, who were chosen as the main target group due to the high rate of teenage pregnancy and the low level of health literacy among adolescents in the country (Sedgh et al., 2014; Sunarsih et al., 2020).

The digital approach used in the program includes a variety of interactive learning methods, such as multimedia presentations, group discussions, and knowledge evaluations. This approach aims to create an engaging and meaningful learning experience so that it can improve students' understanding of the material presented (Corchia & Mastroiacovo, 2013; Halliday et al., 2019).

By integrating digital technology into reproductive health education, the program not only improves students' knowledge but also contributes to global efforts to reduce the reproductive health information gap. This service aims to describe the implementation of community service programs by evaluating the results achieved and providing recommendations for implementation in other areas with similar conditions.

2. METHOD

This community service is carried out through an online reproductive health education approach using interactive counseling methods. This activity was attended by 158 elementary school and junior high school students in Thailand. Counseling is carried out through an easily accessible digital platform, namely Zoom meetings facilitated by NGO Sharing.

The implementation of counseling was divided into three main sessions. The first session included an introduction to the basic concepts of reproductive health, the importance of maintaining the cleanliness of the reproductive organs, and an understanding of the physical and psychological changes in adolescence. The second session focused on preventing risky behaviors related to reproductive health, including the dangers of promiscuity, teenage pregnancy, and sexually transmitted diseases. The third session was an interactive discussion and question and answer session, where participants could ask the presenters questions directly.

The counseling material was delivered in the form of interactive presentations accompanied by educational videos, infographics, and case studies to improve student understanding. In addition, a quiz and reflection session were carried out to evaluate the improvement of participants' knowledge of the material provided.

Evaluation instruments in this activity include pre-tests and post-tests given before and after counseling. The results of the pre-test were used to measure the level of initial knowledge of participants, while the results of the post-test were used to assess the effectiveness of counseling in improving students' understanding of reproductive health.

In addition, a participant satisfaction survey was conducted to assess the effectiveness of the methods used and the level of student involvement in the online session. The results of this survey are evaluation material for improving similar activities in the future.

This community service activity involves educators, reproductive health experts, and facilitators who help answer questions and ensure the smooth running of online counseling. It is hoped that through this digital approach, reproductive health education can be delivered effectively and can increase adolescents' awareness of the importance of maintaining reproductive health from an early age.

3. RESULTS AND DISCUSSION

3.1 Result

Community service activities with a digital approach in adolescent reproductive health education have been successfully implemented and attended by 158 elementary and junior high school students in Thailand. Evaluation of participants' understanding before and after counseling showed a significant increase in their level of knowledge about reproductive health.

a. Participant Participation and Interaction

During the activity, the students showed a high level of participation. Of the total 158 participants, more than 90% actively participated in all counseling sessions. The interactions that occurred in the discussion and question and answer sessions showed that participants had a great

interest in the topic of reproductive health, especially regarding biological changes during puberty, how to maintain the cleanliness of the reproductive organs, and the prevention of risky behaviors.

b. **Pre-Test and Post-Test Results**

Pre-tests and post-tests were given to participants to measure the effectiveness of counseling. The results of the pre-test showed that most students had a limited understanding of reproductive health, with an average score of **56.3%.** After participating in the counseling, the results of the post-test showed a significant increase in knowledge, with an average score of **85.7%.** Statistical analysis showed that there was a substantial difference between the pre-test and post-test results, which indicated that the digital counseling method was effective in increasing participants' knowledge.

c. **Participant Satisfaction Survey**

The level of effectiveness of counseling methods can be known through satisfaction surveys, which were given to participants after the activity was completed. As many as **92%** of participants stated that the online counseling method used was very interesting and easy to understand. They also feel that the use of digital media, such as educational videos and infographics, helps them understand the material better. As many **as 88%** of participants stated that the discussion and question and answer sessions were very useful in clarifying their understanding of reproductive health.

d. **Impact and Benefits of Counseling**

From the results of the participants' reflections, it was found that after participating in counseling, they became more aware of the importance of maintaining the cleanliness of the reproductive organs, avoiding risky behaviors, and having a better understanding of the process of physical and emotional changes during puberty. Some participants also stated that they would share the information they obtained with their peers and family members so that the impact of this education could spread more widely.

e. **Challenges and Evaluation of Activities**

Although the counseling went well, several obstacles were faced, such as limited internet access for some participants and variations in the level of student understanding of the material provided. However, with the availability of counseling recordings and digital materials that can be accessed again, this obstacle can be overcome. In the future, improving the quality of counseling can be done by adapting the material according to the age group and using more interactive methods to increase participant engagement.

Overall, this community service activity shows that a digital approach to adolescent reproductive health education can be an effective solution in increasing students' knowledge and awareness about reproductive health. These results are expected to be the basis for the development of broader and more sustainable reproductive health education programs in the future.

Figure 1. Presentation of material that is done online

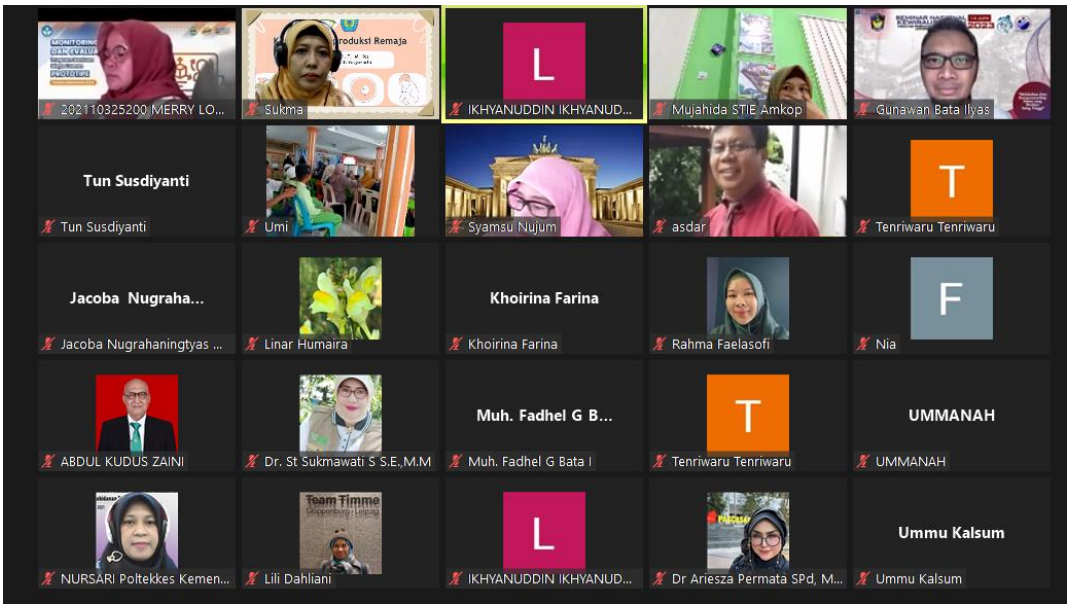

Figure 2. One of the documents of attendance during online presentations

3.2 Discussion

The results of this community service show that the digital approach in adolescent reproductive health education can significantly increase student knowledge. Based on the results of the pre-test and post-test, there was an increase in the comprehension score from **56.3% to 85.7%,** which indicates the effectiveness of the online counseling method. These results are in line with the research of Sunarsih et al. (2020), which emphasized that a digital-based health promotion model can improve adolescents' understanding of reproductive health.

The importance of reproductive health education in adolescents is also emphasized in the WHO report (2007), which reveals that teenage pregnancy is still a global challenge due to the lack of access to accurate information and adequate education. It is reinforced by the Blanc & Way (1998) study, which showed that many adolescents in developing countries have limitations in understanding contraception and sexual health, making them vulnerable to unwanted pregnancies and sexually transmitted diseases. In this context, the results of the service show that the digital approach can be an effective solution in reaching adolescents who have limited access to conventional education.

In addition, a satisfaction survey showing that 92% of participants found counseling methods interesting and easy to understand supported the findings of Clemente & García-Pereiro (2020), which stated that lifestyle and technology-based health promotion can increase health awareness in various age groups. The use of digital media, such as educational videos and infographics, is an important factor in making it easier for adolescents to understand complex materials, as suggested by Langer et al. (2015), who emphasized the role of technology in improving health education among adolescents and women.

This counseling also succeeded in increasing students' awareness of the importance of maintaining reproductive hygiene and avoiding risky behaviors, in line with the research of Sukmawati et al. (2024), which highlighted the need for genital hygiene education for women, especially those who have limited access to health information. On the other hand, the challenges faced in counseling, such as limited internet access and variations in students' understanding levels, indicate the need for more adaptive strategies in reproductive health education. It is supported by Grimes & Schulz (2002), who emphasized that an approach tailored to the characteristics of participants can improve the effectiveness of health interventions.

Furthermore, the impact of this education is not only limited to improving individual understanding but also has the potential to spread to the surrounding environment. A study by Glasier et al. (2006) showed that increased reproductive health knowledge among adolescents can contribute to a decrease in the rate of unwanted pregnancies and improve their overall well-being.

Therefore, digital counseling programs like this can be a model for broader reproductive health education efforts in various regions.

4. CONCLUSION

This community service shows that a digital approach to adolescent reproductive health education can significantly improve students' understanding. The results of the pre-test and post-test prove that there is an increase in the comprehension score from 56.3% to 85.7%, which indicates the effectiveness of the online counseling method in delivering reproductive health materials. In addition, participant satisfaction surveys showed that 92% of students found the counseling methods interesting and easy to understand, reinforcing the evidence that the use of digital media, such as educational videos and infographics, can be helpful in understanding complex information.

These findings are in line with various studies that emphasize the importance of reproductive health education for adolescents in preventing unwanted pregnancies and sexually transmitted diseases and increasing awareness of reproductive organ hygiene. This program also proves that online counseling can be a solution to the limitations of access to conventional education, especially in areas with limited resources and educators.

However, there are several challenges, such as limited internet access and variations in participants' levels of understanding, that need to be considered in the implementation of similar programs in the future. Therefore, it is necessary to develop more adaptive strategies, use more diverse interactive methods, and conduct continuous evaluations to ensure the effectiveness and sustainability of adolescent reproductive health education programs.

Overall, this community service makes a positive contribution to increasing adolescents' awareness and understanding of reproductive health and can be a model for digital-based education programs in the future.

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CONFLICTS OF INTEREST

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REFERENCES

Bearak, J., Popinchalk, A., Ganatra, B., Moller, A.-B., Tunçalp, Ö., Beavin, C., Kwok, L., & Alkema, L. (2020). Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019. *The Lancet Global Health*, *8*(9), e1152–e1161. https://doi.org/10.1016/S2214-109X(20)30315-6

Blanc, A. K., & Way, A. A. (1998). Sexual behavior and contraceptive knowledge and use among adolescents in developing countries. *Studies in Family Planning*, *29*(2), 106–116. http://www.ncbi.nlm.nih.gov/pubmed/9664626

Capatina, E. (2015). Life-cycle effects of health risk. *Journal of Monetary Economics*, *74*, 67–88. https://doi.org/10.1016/j.jmoneco.2015.06.002

Chersich, M. F., Wright, C. Y., Venter, F., Rees, H., Scorgie, F., & Erasmus, B. (2018). Impacts of Climate Change on Health and Well-being in South Africa. *International Journal of Environmental Research and Public Health*, *15*(9), 1884. https://doi.org/10.3390/ijerph15091884

Clemente, C., & García-Pereiro, T. (2020). Health promotion during the life course. Lifestyle determinants of self-declared health status in some European countries. *Italian Journal of Sociology of Education*, *12*(3), 11–39. https://doi.org/10.14658/pupj-ijse-2020-3-2

Corchia, C., & Mastroiacovo, P. (2013). Health promotion for children, mothers, and families: Here's why we should "think about it before conception." *Italian Journal of Pediatrics*, *39*(1), 2–5. https://doi.org/10.1186/1824-7288-39-68

Eds Marge Berer, T. K. S. R. (2000). *Safe Motherhood Initiatives: Critical Issues*. Oxford University Press.

Glasier, A., Gülmezoglu, A. M., Schmid, G. P., Moreno, C. G., & Van Look, P. F. (2006). Sexual and reproductive health: a matter of life and death. *The Lancet*, *368*(9547), 1595–1607. https://doi.org/10.1016/S0140-6736(06)69478-6

Grimes, D. A., & Schulz, K. F. (2002). An overview of clinical research: the lay of the land. *The Lancet*, *359*(9300), 57–61. https://doi.org/10.1016/S0140-6736(02)07283-5

Halliday, T. J., He, H., Ning, L., & Zhang, H. (2019). Health investment over the life-cycle. *Macroeconomic Dynamics*, *23*(1), 178–215. https://doi.org/10.1017/S1365100516001152

Hawkes, S., & Buse, K. (2013). Gender and global health: evidence, policy, and inconvenient truths. *The Lancet*, *381*(9879), 1783–1787. https://doi.org/10.1016/S0140-6736(13)60253-6

Howell, E. A. (2018). Reducing Disparities in Severe Maternal Morbidity and Mortality. *Clinical Obstetrics & Gynecology*, *61*(2), 387–399. https://doi.org/10.1097/GRF.0000000000000349

Langer, A., Meleis, A., Knaul, F. M., Atun, R., Aran, M., Arreola-Ornelas, H., Bhutta, Z. A., Binagwaho, A., Bonita, R., Caglia, J. M., Claeson, M., Davies, J., Donnay, F. A., Gausman, J.

M., Glickman, C., Kearns, A. D., Kendall, T., Lozano, R., Seboni, N., … Frenk, J. (2015). Women and health: the key for sustainable development. *The Lancet*, *386*(9999), 1165–1210. https://doi.org/10.1016/S0140-6736(15)60497-4

Matthews, K. A. (1992). Myths and realities of the menopause. *Psychosomatic Medicine*, *54*(1), 1–9. https://journals.lww.com/psychosomaticmedicine/abstract/1992/01000/myths_and_realities_of_the_menopause_.1.aspx

Sedgh, G., Singh, S., & Hussain, R. (2014). Intended and Unintended Pregnancies Worldwide in 2012 and Recent Trends. *Studies in Family Planning*, *45*(3), 301–314. https://doi.org/10.1111/j.1728-4465.2014.00393.x

Singh, S., Darroch, J. E., & Ashford, L. S. (2014). Adding It Up. Sexual and Reproductive Health. *Guttmacher Institute*.

Starrs, A. M., Ezeh, A. C., Barker, G., Basu, A., Bertrand, J. T., Blum, R., Coll-Seck, A. M., Grover, A., Laski, L., Roa, M., Sathar, Z. A., Say, L., Serour, G. I., Singh, S., Stenberg, K., Temmerman, M., Biddlecom, A., Popinchalk, A., Summers, C., & Ashford, L. S. (2018). Accelerate progress—sexual and reproductive health and rights for all: report of the Guttmacher– Lancet Commission. *The Lancet*, *391*(10140), 2642–2692. https://doi.org/10.1016/S0140-6736(18)30293-9

Sukmawati, Utami, J. N. W., Gustia, H., Haryanto, L. I., & Hakim, I. (2024). The Importance of Genitalia Personal Hygiene Education for Female Migrant Workers in Malaysia. *International Journal of Community Care of Humanity*, *2*(4), 476–483. https://journal.lsmsharing.com/ijcch/article/view/153

Sunarsih, T., Astuti, E. P., Shanti, E. F. A., & Ambarwati, E. R. (2020). Health promotion model for adolescent reproductive health. *Electronic Journal of General Medicine*, *17*(3), 1–7. https://doi.org/10.29333/ejgm/7873

Veena S Raleigh. (2000). *Safe Motherhood Initiatives: Critical Issues*. BMJ Publishing Group. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1118646/

WHO. (2007). *Adolescent pregnancy – unmet needs and undone deeds* (WHO (ed.).