

Adolescent Reproductive Health Education as an Effort to Increase Reproductive Health Knowledge and Marriage Readiness in Mancasan Kleben Village

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Abstract Adolescents in Yogyakarta encounter social disputes, *klitih*, cyberbullying, and reproductive health challenges, which have an impact on early marriage rates. Guidance from parents, communities, and the government is critical in minimizing juvenile criminality. To address issues such as unwanted pregnancies, unsafe abortions, and maternal mortality concerns, reproductive health education is critical. The Postgraduate Student Association of Universitas Gadjah Mada implemented the community engagement to educate teenagers in Mancasan Kleben Village, Pandowoharjo, Sleman Regency, Yogyakarta, about the importance of information on reproductive health in order to prevent early marriage and the transmission of sexual infections. The educational activity is conducted by giving lectures, pretest and post-test questionnaires, and discussion methods. The questionnaire's results were analyzed using the t-test method. The result of the effect of education on reproductive health knowledge ($76.25 \pm 7.621; 80.61 \pm 3.047$), and the impact of counseling on reproductive health knowledge is evident ($12.80 \pm 2.28; 21.27 \pm 1.71$), and the effect on adolescent attitudes ($58.20 \pm 4.38; 65.73 \pm 7.51$). Education about reproductive health and juvenile delinquency substantially impacts young people's knowledge in Mancasan Kleben. The Postgraduate Student Association of Universitas Gadjah Mada activity was successfully implemented although the results were not statistically significant. Larger-scale service operations must be sustained to ensure that these outcomes give broader advantages.

1. INTRODUCTION

Adolescence is a growth and development phase between childhood and maturity, during which significant physical and mental changes occur. The World Health Organization (WHO) defines adolescence as the period between the ages

of 10 and 19 years (Shorey et al., 2022). Physical growth proceeds rapidly in primary and secondary sex signs, but some teenagers are not cognitively mature enough to be able to deal with the changes. Adolescents explore the changes

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that occur, learning to live freely and live for a lengthy period, including those linked to sex and romance.

The number of adolescents in the Special Region of Yogyakarta (DIY) Province in 2023 aged 10 to 19 years is 535,000 (BPS DIY, 2022). Several adolescent problems that occur in Yogyakarta, such as social conflicts, *klitih* (a form of juvenile delinquency by fighting, throwing stones, and injuring or killing the victims), cyberbullying, and reproductive health, last of which seems to have affected the prevalence of early marriage. The role of parents, the local community, and the government in providing education and guidance to teenagers is critical in reducing juvenile delinquency.

Knowledge of reproductive health is required to lower the number of school-aged children who become pregnant outside of marriage or early marriage. Prior studies on reproductive health awareness in Gamping, Sleman revealed that 64% of respondents lacked adequate knowledge before implementing knowledge-sharing efforts (Ilmi et al., 2021). In 2017, there were 219 recorded childbirths in Sleman, and in 2018, there were 47 marriage dispensation agreements (Sari & Dahlia, 2021). Menstrual cycle education, the rise in the number of undesired pregnancies, sexually transmitted infections, unsafe abortions, and the risk of maternal mortality owing to non-ideal pregnancies are all critical. Reproductive health is one of the worldwide challenges in the pursuit of sustainable development goals relating to the health of women, children, and adolescents. Low knowledge regarding reproductive health can hinder the development of a small area and play a crucial role in achieving the long-term *Indonesia Emas* (Golden Indonesia) in 2045 goal of producing a superior generation (Yarza et al., 2019).

The solution offered, according to the National Population and Family Planning Board (BKKBN), is that adolescents need to understand reproductive health in order to know their reproductive organs and bodies, learn about organ development and function, understand the changes that occur to them, protect them from risks that threaten their health and safety, prepare for the future more maturely, and form responsible attitudes and behaviors in the reproductive process (Kistiana et al., 2023).

Based on the facts mentioned, the Postgraduate Student Association of Universitas Gadjah Mada conducts community service as a form of realization of the *Tri Dharma Perguruan Tinggi* (Three Pillars/Duties of Higher Education). The service is in the form of reproductive health counseling for adolescents to realize solutions from The National Population and Family Planning Board (BKKBN). The implementation of reproductive health counseling for adolescents starts on a small scale and is implemented within the scope of potential villages in the DIY region.

Mancasan Kleben Village in Pandowoharjo, Sleman Regency, was chosen as the site for community service due to its untapped potential in various sectors such as agriculture, fisheries, tourism, and culture. With a population of 765 people, including adults, adolescents,

and children, this community presents an opportunity for impactful interventions (Permatasari et al., 2021). The selection of Mancasan Kleben was also influenced by its strategic location, situated 2.5 km from the center of Sleman Regency and 9.5 km from the Gadjah Mada University campus, facilitating accessibility for community service activities and regular monitoring.

The aim of the community engagement is to make adolescents in Mancasan Kleben Village, Pandowoharjo, Sleman Regency well-informed about the importance of reproductive health to prevent early marriage and the spread of sexual illnesses. This project also aims to stimulate the advancement of small-scale regions, which directly contribute to the overall development of Indonesia.

2. METHOD

The initial step involved contacting local officials to collaborate between Mancasan Kleben village and the Postgraduate Student Association of Universitas Gadjah Mada. This reproductive health education initiative targeted local adolescents who are the Karang Taruna Mancasan Kleben group members. The selection criteria for participants included individuals of both female and male genders, unmarried, and aged between 10 and 24 years old.

The implementation stage of this community service utilized paper-based research instruments for the pre-test and computer-based tools for the post-test. Data collection was conducted using both qualitative and quantitative methods. Participants must fill out a pre-test and post-test questionnaire to measure their understanding before and after participating in this health promotion activity.

The initial assessment tool (pre-test) and evaluation (post-test) utilized a reproductive health knowledge questionnaire and an adolescent attitude questionnaire regarding reproductive health, both of which had been assessed for validity and reliability by Novianto et al. (2016). The reproductive health knowledge questionnaire comprised questions assessing both favorable and unfavorable aspects. The overall interpretation of the reproductive health knowledge questionnaire includes three categories: poor (scores 0-9), fair (scores 10-18), and good (scores 19-27). Similarly, the adolescent attitude questionnaire concerning reproductive health consisted of questions covering favorable and unfavorable perspectives. The final interpretation of the adolescent attitude questionnaire on reproductive health entails two categories: positive (scores 51-100) and negative (scores 0-50). This community service was carried out with 15 participants from Karang Taruna in Mancasan Kleben Village. The small number of participants is due to the small number of Karang Taruna Mancasan Kleben Village members.

This educational project was organized through a lecture, a question-and-answer session, and discussions. The speakers in this activity were doctors from the Kulon Progo Community Health Center who discussed reproductive health issues such as unwanted pregnancies

and their risks, sexually transmitted diseases, and readiness for marriage. Things that must be done to maintain reproductive health, recognize the characteristics of puberty, recognize the limits of body privacy, and readiness for marriage. The data analyses were carried out using the Mann-Whitney test reproductive health education and the T-test for the other indicators such as puberty, HIV, sex education, drugs, cigarettes, and abortions.

This health education activity was carried out offline on June 18, 2023, at 09.00 - 12.00 WIB. The pre-test was conducted 30 minutes before the speaker presented the material. Material delivery was carried out for 60 minutes and continued with a 45-minute discussion. The post-test was conducted 30 minutes after the discussion session.

3. RESULT AND DISCUSSION

Following the result and analysis of data collected during this community engagement, we present an extensive overview of our findings. As described below, the community engagement achieved two sets of results: characteristics of the respondents and the effect of education on adolescents' reproductive health knowledge.

3.1 Demographic characteristics of respondents

According to the quantitative data collected, this counseling session engaged a total of 15 participants. Among them, six individuals were in the middle adolescence stage (aged 14-17 years), while nine individuals were in the late adolescence stage (aged 18-22 years) (Hashmi & Fayyaz, 2022). The majority of participants were male, accounting for 11 individuals (73.3%), whereas four individuals (26.7%) were female. Furthermore, the majority of participants had completed their education up to high school or vocational school, totaling nine individuals (60%). The characteristics of the participants in the counseling session are summarised in Table 1.

According to Table 1, adolescents in Mancasan Kleben fall into the category of productive adolescents, with males being the dominant gender. During this developmental stage, adolescents are typically interested in social, academic, and psychological growth (Hashmi & Fayyaz, 2022; McDougall & Vaillancourt, 2015). Furthermore, the educational attainment of adolescents in Mancasan Kleben meets the national target in Indonesia, which mandates a minimum of 12 years of compulsory schooling or completion of Senior High School (SMA)/Vocational High School (SMK) education (Margiyanti & Maulia, 2023). These characteristics suggest that Mancasan Kleben possesses the potential for a skilled human resource (HR) pool, capable of contributing to local development and

indirectly supporting national progress (Sulisworo, 2016; Torar & Wahono, 2016).

Table 1. Characteristics of participants age, gender, and latest education (n=15)

Characteristic	Total (n)	Percentage (%)
Age		
Mid adolescents (14-17 years)	6	40%
Late adolescents (18-22 years)	9	60%
Gender		
Male	11	73.3%
Female	4	26.7%
Latest Education		
Elementary School	1	6.67%
Junior High School	5	33.33%
Senior/Vocational High School	9	60%

3.2 The effect of education on reproductive health knowledge

Based on Table 2, Adolescents in Mancasan Kleben village have knowledge of more than $76.25 \pm 7.621\%$ about the basics of reproduction, sexually transmitted illnesses, and sexual deviant activity. The recapitulation results with the percentage of questionnaires with a value of less than 56 are categorized as insufficient, the value between 56-75 is categorized as sufficient, and >75 is categorized as good (Ilmi et al., 2021). The results obtained show that adolescents' knowledge about reproductive health before counseling falls into the sufficient category.

The results of knowledge after education and post-test showed a value of more than 80.61 ± 3.047 , so the knowledge of the adolescents about reproductive health before counseling was in the Fair category. This indicates that adolescent literacy and reproductive health awareness are reasonably good. The analysis of the pre-test and post-test about reproductive health education indicated that there are similarities, but the score still increased.

According to the findings of the study, the reproductive health knowledge of adolescents who took the pre-test was fairly excellent, with an average score of $76.25 \pm 7.621\%$ (Table 2). The range of information obtained via the internet and social media supports this number. This is in line with the belief that recent changes have resulted in a broader and more flexible search for knowledge, with people actively seeking information (Fitria & Prajawinanti, 2022). The availability of abundant knowledge has been observed to have a beneficial influence on adolescents. However, it is essential to note that the combination of their inherent curiosity and uncontrolled access to electronic devices can lead to several adverse consequences.

Table 2. Mancasan Kleben's adolescents' general perspectives on reproductive health

Reproductive health knowledge	Pre-test (mean±SD)%	Post-test (mean±SD)%
The basics of reproduction	83.81±10.078	82.86±17.994
Knowledge of sexually transmitted infections	68.57±11.665	77.14±13.736
Sexually deviant activity	76.36±17.220	81.82±9.460
Average	76.25±7.621*	80.61±3.047*

*The mean difference is significant at the 0.05 level

Table 3 . The effect of counseling in adolescent Mancasan Kleben

Effect of counselling	Variable	Mean	Std. Deviation	Std. Error
In reproductive health knowledge	Pre-test knowledge score	12.80*	2.28	0.59
	Post-test knowledge score	21.27*	1.71	0.45
In adolescents' attitude toward reproductive health	Pre-test knowledge score	58.20*	4.38	1.13
	Post-test knowledge score	65.73*	7.51	1.94

*The mean difference is significant at the 0.05 level

The counseling provided to adolescents in Mancasan Kleben led to noticeable improvements in both their knowledge of reproductive health and their attitudes toward it (refer to Table 3). The impact of counseling on reproductive health knowledge is evident from the pre-test score of 12.80 ± 2.28 , increasing to 21.27 ± 1.71 in the post-test. Similarly, the effect on adolescent attitudes is reflected in the pre-test score of 58.20 ± 4.38 , rising to 65.73 ± 7.51 in the post-test. These findings suggest that the two-hour counseling session resulted in enhanced knowledge of reproductive health and a more positive attitude toward it, although the changes were not statistically significant ($p > 0.05$). This lack of significance could potentially be attributed to the insufficient duration of the counseling materials. Kurle et al. (2018) stated that the standard duration of counseling that is able to provide significant changes is 45 minutes and pauses every 20 minutes, and extra time is also not recommended. In addition, the continuity of counseling should also be increased for a minimum of 3 weeks in a routine schedule (Kurle et al., 2018). However, the counseling conducted can still be said to be successful due to changes in knowledge of the target of counseling.

According to Idrizi et al. (2021), the learning process can be successful when participants develop valuable practical skills, such as problem-solving, quick information analysis, and conclusion forming. In this counseling, participants also learn about how to work and play an active role in learning groups, thus developing the youth's ability to prepare them for a collaborative work environment (Figure 1).



Figure 1 . Reproduction health education: (a) Mancasan Kleben adolescents receive counseling materials; (b) The resource person delivers the materials

Gadgets significantly impact children's psychological development, particularly in relation to emotional growth and moral development. Children who become involved with electronic devices during their teenage years may experience emotional challenges, such as increased crankiness, an increased capacity for disobedience, a

tendency to mimic behaviors observed on these devices, and a proclivity for engaging in self-directed conversations while using those gadgets. In the field of moral development, the consequences are evident as discipline is compromised. Children tend to lack energy to carry out tasks, ignore their religious responsibilities, and curtail their study time due to excessive indulgence in gaming and frequent consumption of YouTube content (Syifa et al., 2019).

3.3 Adolescent perceptions of reproductive diseases and the consequences of juvenile delinquency

The findings from the post-test revealed that the mean (Figure 2) indicated that education regarding puberty, drugs, cigarettes, unrestricted sex, HIV, and abortion has no significant impact on the knowledge of adolescents in the village of Mancasan Kleben. A comprehensive understanding of teenage reproductive health is derived through educational programs. This is also one of the benefits of the internet, as adolescents can readily find educational information and communicate with others of similar age (Akdag & Cingi, 2014). However, adolescents also require guidance on using the internet and using social media responsibly. Teenagers can become deviant social media users if they have access to uncontrolled or poorly managed information. Due to the fact that scams, kidnappings, and mutual arguments that wind up in prison have occurred so frequently on social media that good manners no longer have any value, children who are prohibited from using social media tend to develop uncontrolled morals (Nasution et al., 2023). Knowledge about adolescent reproductive health influences behavior and the associated risks (Dungga & Ihsan, 2023). Safeguarding the well-being and conduct of adolescents is vital, as the nation's future viability depends on how adults presently attend to their concerns (Winarni et al., 2020).

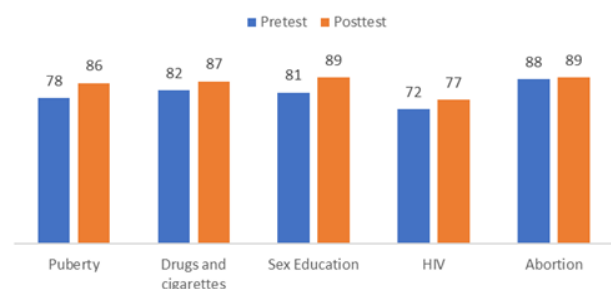


Figure 2 . The levels of pre-test and post-test assessments of adolescent perceptions regarding reproductive diseases and the consequences of juvenile delinquency ($p > 0.05$)

4. CONCLUSION

The outcomes of this community service activity revealed an improvement in knowledge about reproductive health and a good attitude toward reproductive health among adolescents. They already have basic knowledge about reproductive health, but related to health, sexually transmitted diseases, and reproductive maturity, they still need guidance. The Postgraduate Student Association of Universitas Gadjah Mada activity was successfully implemented and on target, although the results were not statistically significant. Based on the results, Mancasan Kleben's human resources remain in good shape. Larger-scale service operations must be sustained to ensure that these outcomes give broader advantages.

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CONFLICT OF INTERESTS

The authors clearly state that they do not have any affiliations or involvement with any organization or entity that has a financial interest or non-financial interest in the subject matter or materials discussed in this manuscript. This includes monetary interests such as honoraria, educational grants, participation in speakers' bureaus, membership, employment, consultancies, stock ownership, equity interests, expert testimony, or patent-licensing arrangements. It also includes non-financial interests such as personal or professional relationships, affiliations, knowledge, or beliefs.

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