



ADOLESCENTS' PERCEPTIONS OF THE USE OF ARTIFICIAL INTELLIGENCE AS A MEDIA FOR REPRODUCTIVE HEALTH EDUCATION

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ABSTRACT

The use of Artificial Intelligence (AI) has the potential to become an alternative medium for reproductive health education, although its acceptance among adolescents still needs further exploration. Reproductive health is often considered a sensitive topic, making adolescents feel embarrassed to discuss it directly with parents, teachers, or health professionals. In addition, limited access to reproductive health counseling services—due to a shortage of qualified personnel and restricted availability—remains a challenge in educational settings. As a result, many adolescents address reproductive health issues independently without proper guidance. Advances in AI offer promising opportunities to provide reproductive health education that is accessible, interactive, and private. However, the success of AI-based education depends greatly on adolescents' perceptions. This study aimed to assess adolescents' perceptions of AI as a medium for reproductive health education at Wahana Husada Midwifery Academy, Bandar Jaya, Central Lampung. A descriptive quantitative study with a cross-sectional design was conducted in January 2026 involving 22 female students selected through total sampling. Data were collected using an online questionnaire (Google Form) and analyzed using univariate statistics. The findings revealed that 63.64% of respondents had moderate perceptions, while 18.18% showed positive perceptions and 18.18% negative perceptions toward AI use. These results suggest that although AI is seen as a useful tool, its acceptance among adolescents is still not optimal. In conclusion, strategies are needed to improve adolescents' understanding, trust, and engagement with AI-based reproductive health education to enhance its effectiveness and ensure responsible use.

Keywords: Artificial Intelligence; Adolescents' Perception; Reproductive Health Education; Digital Health; Health Promotion

Introduction

Adolescent reproductive health refers to a state of well-being related to the reproductive system, its functions, and processes among adolescents (1). Reproductive health problems caused by premarital sexual behavior may increase the risk of sexually transmitted infections such as HIV/AIDS, as well as unintended pregnancies, which may lead to abortion among adolescents (2).

The main issues in adolescent reproductive health in Indonesia include limited access to accurate reproductive health information, shifts in adolescent sexual behavior, and suboptimal reproductive health services (3). Lack of understanding regarding sexual behavior during adolescence can have negative impacts not only on adolescents themselves but also on their families and social environment (4). Adolescents undergo cognitive, emotional, social, and sexual development between the ages of 12 and 20 years (5).

Data indicate that approximately 80% of male adolescents and 70% of female adolescents have engaged in sexual intercourse during puberty, with 20% of them having more than one partner (6). In addition, around 53% of females aged 15–19 years have reported engaging in sexual intercourse, while the figure for male adolescents is reported to be twice as high (6).

The use of Artificial Intelligence (AI) has the potential to serve as an alternative medium for reproductive health education; however, its acceptance among adolescents still requires further investigation (7). On the other hand, discussions about reproductive health are still considered sensitive topics, causing adolescents to feel embarrassed or reluctant to ask questions directly to parents, educators, or health professionals (3).

Limited access to reproductive health counseling services also remains a problem in schools and higher education institutions (8). Not all educational institutions have competent counselors or health professionals, and limitations in service hours, along with the imbalance between the number of health workers and students, result in suboptimal counseling services (8).

The development of digital technology, particularly Artificial Intelligence, provides new opportunities for delivering reproductive health education to adolescents (7). AI enables the delivery of information that is interactive, easily accessible, and personal as well as private. Therefore, the use of AI as a medium for reproductive health education represents a promising alternative.

However, the acceptance and effectiveness of AI-based educational media are highly influenced by users' perceptions (9). To date, studies examining adolescents' perceptions of the use of AI as a medium for reproductive health education remain limited, particularly in health education settings.

Methods

This study employed a quantitative design with a cross-sectional approach. The research was conducted to objectively describe adolescents' perceptions of the use of Artificial Intelligence (AI) as a medium for reproductive health education using numerical data, without applying any specific treatment or intervention. This research was conducted at the Wahana Husada Midwifery Academy, Bandar Jaya, Central Lampung in January 2026.

The research population consisted of 22 female students at AKBID Wahana Husada Bandar Jaya, Central Lampung with an age range of 12–21 years using a total sample. Data collection was carried out online using Google Forms. Data was

collected at one time where all respondents who were sampled could fill out the questionnaire via the shared link

The analysis in this study uses univariate analysis with the aim of explaining and describing the characteristics of each research variable. This study has obtained ethical approval from the Ethics Committee of Wahana Husada Midwifery Academy with ethical clearance number: 018/D/AKBID/WH/I/2026.

Results and Discussion

This study was conducted at the Midwifery Academy of Wahana Husada, Bandar Jaya, Central Lampung, in January 2026, involving 22 adolescent respondents. The study used a quantitative descriptive design with a cross-sectional approach to describe adolescents' perceptions of the use of Artificial Intelligence (AI) as a medium for reproductive health education.

Based on the respondents' answers, the data were calculated using the class interval formula. The results indicated that perceptions were categorized as good if the total score ranged from 68–80, moderate if the total score ranged from 54–67, and poor if the total score ranged from 40–55.

The following is the frequency distribution table of adolescents' perceptions regarding the use of AI as a medium for reproductive health education at the Midwifery Academy of Wahana Husada, Bandar Jaya, Central Lampung, in 2026. From 22 respondents, the results of the univariate analysis showed that the majority had a moderate level of perception regarding the use of AI as a medium for reproductive health education, totaling 14 respondents (63.64%). Respondents with a good perception amounted to 4 (18.18%), and respondents with a poor perception also amounted to 4 (18.18%).

The results of the study show that adolescents' perceptions of the use of AI as

a medium for reproductive health education are predominantly in the moderate category. This perception reflects that AI is viewed as a useful source of reproductive health information; however, there are still limitations in understanding, trust, and its optimal utilization.

According Notoatmodjo perception is influenced by an individual's experience, knowledge, and environment. In the context of this study, the moderate level of perception may be attributed to variations in adolescents' digital literacy levels as well as limitations in their understanding of the validity of reproductive health information delivered through AI technology (10).

The results of this study are consistent with the findings of Sihaloho and Napitupulu (2023), which state that the use of AI in the field of education in Indonesia has great potential to improve access to and the speed of obtaining information. However, it still requires guidance to ensure that users are able to assess the accuracy and relevance of the information obtained (11).

Another study reported that interactive digital educational media can increase adolescents' interest in reproductive health materials; however, its effectiveness is influenced by the clarity of information, appropriateness of language, and credibility of the source (12). This is consistent with the findings of the present study, in which some respondents still had a poor level of perception.; however, its effectiveness is strongly influenced by the clarity of the information, the appropriateness of the language, and the credibility of the source. This is consistent with the findings of the present study, in which some respondents still had a poor level of perception.

In addition, security and privacy aspects are important factors in the acceptance of AI technology. In addition, security and privacy aspects are important factors in the acceptance of AI technology.

Concerns regarding personal data protection have been shown to influence adolescents' trust in digital technologies and AI-based systems (13,14). This finding explains why some respondents in the present study still demonstrated a poor perception of the use of AI as a medium for reproductive health education.

Respondents who had a good perception indicated that AI is considered an alternative educational medium that is flexible, easily accessible, and capable of helping adolescents obtain reproductive health information independently. Concerns about personal data protection can reduce adolescents' level of trust in technology-based digital media. This finding explains why some respondents still demonstrated a poor perception of the use of AI as a medium for reproductive health education. However, respondents who had a good perception indicated that AI is considered an alternative educational medium that is flexible, easily accessible, and capable of helping adolescents obtain reproductive health information independently.

This is supported by Utami and Lestari (2022), who stated that AI-based technology can enhance adolescents' learning independence and motivation in understanding health issues.

Overall, the results of this study confirm that the use of AI as a medium for reproductive health education has significant potential; however, it needs to be supported by improved digital literacy, content monitoring, and the integration of the roles of educators and healthcare professionals to ensure that the information received by adolescents is more accurate and trustworthy.

Conclusion

Based on the results of the study on adolescents' perceptions of the use of Artificial Intelligence (AI) as a medium for reproductive health education among 22

respondents, it can be concluded that the majority of respondents had a moderate level of perception, totaling 14 respondents (63.64%). Meanwhile, respondents with a good perception amounted to 4 (18.18%), and those with a poor perception also amounted to 4 (18.18%).

These results indicate that most adolescents are already familiar with and have used AI technology, and generally understand its benefits as a medium for reproductive health education. However, this understanding is not yet fully optimal, particularly in terms of information clarity, ease of use, and the level of trust in reproductive health information delivered through AI.

Overall, adolescents' perceptions of the use of AI as a medium for reproductive health education remain in the moderate category. Therefore, further efforts are needed to improve adolescents' understanding and foster more positive attitudes so that AI can be utilized optimally, safely, and responsibly.

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