

## EFFECTIVENESS OF LECTURE METHOD IN INCREASING KNOWLEDGE RELATED TO ADOLESCENT HEALTH

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### Abstract

Adolescence is a transition period towards adulthood. Adolescence is a very important part of Indonesia, which is currently experiencing a demographic bonus. This phase must be utilized optimally by ensuring that the adolescent population as a productive population must be ready in terms of education, skills, character, and health. Adolescent health education is a strategic program aimed at enhancing adolescents understanding of various health-related issues. The purpose of this study was to evaluate the effectiveness of the lecture method in improving adolescents knowledge related to their health. This study used a quantitative analytical method with a quasi-experimental study design with one group pre-test and post-test design. The research sample consisted of 74 male and female students from 2 high schools in Bogor City. The sampling technique used the accidental sampling method. The results of the study showed an increase in student knowledge scores between before and after being given education using the lecture method ( $p\text{-value} = 0.001$ ). The conclusion of this study is that the adolescent education method with lectures is effective in increasing student knowledge related to adolescent health.

**Keywords:** Adolescent Health, Effectiveness, Knowledge, Lecture

### Introduction

Adolescence is a transition period from childhood to adulthood. During this period, several physical, psychological, and psychosocial changes occur in a person<sup>(1)(2)(3)</sup>. WHO defines adolescents as residents with an age range of 10-19 years with numerous classifications including, early adolescence (ages 10-12), middle adolescence (ages 13-15), and late adolescence ages (16-19)<sup>(1)</sup>. According to the National Population and Family Planning Agency (BKKBN), adolescents are residents aged 12-24 years and have never been married<sup>(1)</sup>. In Indonesia, the number of adolescent population is very large. UNICEF Indonesia in its 2021 adolescent profile stated that 17% of the total population of Indonesia is the adolescent population, including 48% female adolescents and 52% male adolescents, as many as 51% of adolescents aged 10-14 years and 49% of adolescents aged 15-19 years. West Java Province is the province with the largest adolescent population, which is around 18%<sup>(4)</sup>.

Indonesia as a developing country that is currently experiencing a demographic bonus must prepare a quality productive age population in order to take full advantage of this opportunity<sup>(5)</sup>. Teenagers are the next generation of the nation who will soon enter productive age, therefore teenagers must be prepared to be the driving force of the nation in this demographic bonus period. Several aspects that need to be considered in the development of teenagers in facing the demographic bonus are in the aspects of education, health and skills<sup>(6)(7)</sup>. Teenage health is part of the development of human resource quality. Increasing adolescent awareness of the importance of health is expected to help them in forming a healthy lifestyle. Several behaviors that include adolescent health that are at risk of causing disease

are alcohol and soda consumption, consumption of illegal drugs, unhealthy diet, sleep patterns, sanitation or personal hygiene, reproductive health, mental health and physical activity<sup>(8)(1)(9)</sup>.

Adolescents, most of whom are students at schools, have the opportunity to obtain more information regarding health and risky lifestyle behavior for adolescents<sup>(10)</sup>. According to Law Number 36 of 2009, Article 79 on health, "School Health" programs are implemented to enhance students ability to live healthily in a healthy environment, enabling them to learn, grow and develop harmoniously and to their fullest potential, with the aim of becoming quality human resources<sup>(10,11)</sup>.

Health education in schools plays an important role in building healthy behavior in adolescents. Health education in schools includes several things including increasing knowledge, behavior, attitudes, and skills for a clean and healthy life. There are several ways to build healthy behavior in adolescents, one of which is by increasing knowledge<sup>(1,5)</sup>. Research conducted by Zahid et al. in 2020 showed that the method of using mobile applications and lecture methods had the same level of effectiveness in increasing adolescent knowledge and attitudes towards their oral health<sup>(12)</sup>. Bahari et al. in 2021 found that education related to puberty had an effect on increasing female students' knowledge regarding reproductive health ( $p$  value  $<0.05$ )<sup>(13)</sup>. Knowledge is one of the factors that shape a person's behavior. The lecture method is still considered a conventional method that can be well accepted by targets from various levels of education that can increase a person's knowledge of a topic. Therefore, it is necessary to conduct research on the effectiveness of the lecture method in increasing students' knowledge regarding adolescent health<sup>(14)(15)</sup>. The purpose of this study was to determine the effect of the lecture method on increasing adolescent knowledge at SMA Bosowa Bina Insani and SMK Bogor Muhiddin regarding adolescent health.

## Method

This study uses an analytical quantitative method with a quasi-experimental study design with a one-group pre-test and post-test design. This study was conducted in 2 high schools, namely SMA Bosowa Bina Insani and SMK Bogor Muhiddin School, in October 2024. The population in this study was all grade X students, namely 180 students, consisting of 93 grade X students of SMA Bosowa Bina Insani and 87 grade X students of SMK Bogor Muhiddin. The research sample consisted of 74 students taken by accidental sampling (46 from SMA Bosowa Bina Insani and 28 from SMK Bogor Muhiddin).

Data collection process was conducted in multiple phases, beginning with the administration of a pre-test questionnaire to assess respondents knowledge on adolescent health topics, including Clean and Healthy Living Behavior (PHBS), adolescents Anemia, balanced nutrition (Isi Piringku), and issues related to sexual harassment and premarital sex. The second stage is to provide a post-test questionnaire after being given education regarding adolescent health using the counseling/lecture method. Data processing using statistical data processing software using univariate and bivariate analysis (Wilcoxon test).

## Results

**Table 1. Frequency distribution of respondents based on the school**

School	n (%)	Mean (Pre-test)	Mean (Post-test)
SMA Bosowa Bina Insani	46 (62%)	75.2	85.8
SMK Bogor Muhiddin School	28 (38%)	81.2	89

Table 1 indicates that the distribution of respondents by school consisted of 46 individual (62%) from SMA Bosowa Bina Insani and 28 individual (38%) from SMK Bogor Muhiddin School. The results of the average score of knowledge related to adolescent health of respondents from SMA Bosowa Bina Insani showed an average score of 75.2 increasing to 85.8 after education. SMK Bogor Muhiddin also showed an increase in the average score of knowledge after being given education, from 81.2 to 89.

**Table 2. Effectiveness of lecture method in increasing adolescent knowledge (n=74)**

Knowledge Score	Mean	Min-Max	SD	P-Value
Before Education (Pre-test)	77.5	25-95	13.5	0.001
After Education (Post-test)	87	60-95	8.6	

According to Table 2, there is a difference in students' understanding of adolescents' health, as demonstrated by the increase in the average knowledge score before being given education with the lecture technique, namely 77.5 to 87 after being given education. The results of the statistical test showed a p-value of 0.001, which means that there was a significant increase in knowledge scores between before and after being given education with the lecture method.

## Discussion

The study findings revealed an increase in the average score of students' knowledge of adolescents' health before and after lecture-based education (77.5 to 87). Statistical analysis confirmed that the increase in knowledge was significant, with a p-value of 0.001. In line with research conducted by Guspita in 2016 regarding the effectiveness of health promotion with adolescent knowledge about HIV/AIDS using the lecture method, it showed that there was a difference in adolescent knowledge before and after education which was statistically significant with a p value of 0.001 in the intervention group<sup>(16)</sup>. The outcomes of this research align with the study carried out by Handayani et al. in 2024 which also demonstrated the effectiveness of the lecture method in enhancing adolescent knowledge of reproductive and sexual health with a p-value of 0.001<sup>(3)</sup>. Kurniasari, et al. in 2021 in their research regarding the effectiveness of the lecture method and e-booklet media, found that providing nutrition education to adolescents using the lecture method and e-booklet media effectively increased adolescent knowledge by 4.9 times (p value 0.000) compared to the lecture method alone, which is 2.2 times more effective (p value 0.003)<sup>(17)</sup>. This contradicts Ramadhani's 2020 research, which indicated that the lecture technique had no effect on raising adolescents understanding about sexually transmitted illness in adolescents<sup>(18)</sup>.

One of the efforts to increase adolescent knowledge and awareness in improving their health is to promote a healthy lifestyle, one of the methods used is to provide education in the form of lectures or counseling with interactive media. The lecture method or preaching method is a technique for delivering learning materials orally to a group of listeners with the aim of achieving certain learning

outcomes, especially when the number of participants is quite large. The main advantage of this method is its economical and practical nature. It is called economical because it does not require a lot of equipment or preparation like other learning methods. While practical, because it only relies on the teacher's voice without requiring complicated tools or planning<sup>(11)</sup>. Counseling/lectures are still an effective method in efforts to increase awareness and motivate adolescents to be able to implement healthy living habits that can support their physical, mental, and social health<sup>(15)</sup>. Based on the results of this study, it can be seen that the lecture method is still one of the effective methods in increasing adolescent knowledge, especially knowledge related to adolescent health. The existence of consistent activities carried out in increasing adolescent knowledge carried out by the lecture method plus other methods and media by schools, health workers and other related parties is expected to have an impact on their knowledge and attitudes towards their own health.

## Conclusion

The mean knowledge score of respondents showed an improvement from 77.5 prior to the health education intervention to 87 following the intervention. Statistical analysis indicated that the lecture method significantly enhanced adolescent's knowledge of adolescent health, as evidenced by a p-value of 0.001.

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