

The effect of health education via Whatsapp on teenagers' knowledge and attitudes toward premarital sex at High School, Medan

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Abstract

Introduction: Indonesian teenagers appear to be more tolerant toward premarital sexual lifestyles or premarital sex. Many factors influence this behavior, one of which is their knowledge and attitudes toward premarital sex. Knowledge and attitudes can be improved through counseling or health education. This study aims to determine the effect of health education on teenagers' knowledge and attitudes toward premarital sex.

Methods: This research was a pre-experimental study using a one-group pre-test post-test design. The sample consisted of 29 students from a high school in Medan, selected using purposive sampling. The research instrument was a questionnaire. Data analysis included univariate and bivariate analysis, using the paired sample t-test.

Results: The results showed an increase in the number of respondents with good knowledge before and after health education, with an average change of 4.65 (± 1.69) and a p-value of <0.001 . There was also an increase in the number of respondents with a positive attitude before and after health education, with an average change of 23.2 (± 11.2) and a p-value of <0.001 .

Conclusion: The results of the study showed that health education affected students' knowledge and attitudes toward premarital sex.

Keywords: Health Education; Knowledge; Attitude; Premarital Sex

1. Introduction

Adolescence is a transitional period from childhood to adulthood, marked by several changes as individuals mature. One of the challenges teenagers face is adjusting to the physiological and psychological changes caused by the activation of reproductive hormones.[1] The increase in reproductive hormones and the emergence of sexual urges in adolescents lead to a strong sexual attraction toward the opposite sex. The intensity of these sexual urges and attractions, when not properly controlled, makes adolescents a vulnerable age group to engage in certain sexual activities, including premarital sex.[2]

According to the World Health Organization, Bangladesh had the highest percentage of female adolescents under 15 years old who had engaged in premarital sexual intercourse, at 60%. Meanwhile, in Asia, particularly in Indonesia, the country ranked fourth, with 20% of female adolescents having engaged in premarital sexual intercourse.[3] According to a survey by the Central Statistics Agency and the United Nations Children's Fund 2020, 1 in 9 girls in Indonesia gets married. In 2018, it was estimated that around 1,220,900 women aged 20–24 had married before the age of 18, placing

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Indonesia among the top 10 countries with the highest rates of child marriage. Over the past 10 years, there has only been a small decrease in child marriage, by about 3.5 percentage points. In 2019, 11.21% of women aged 20–24 were married before turning 18. In Indonesia, about 4.5% of boys and 0.7% of girls aged 15–19 reported having premarital sex. Among teenagers aged 15–19, most started dating between the ages of 15 and 17. Around 33.3% of girls and 34.5% of boys aged 15–19 had already started dating before the age of 15.[4]

Knowledge and attitudes about the prevention of premarital sex are important assets for adolescents to avoid engaging in premarital sex. Adolescents' knowledge and attitudes toward sexuality influence their premarital sexual behavior.[5] Adolescents who lack knowledge about premarital sexual relationships tend to have incorrect attitudes and are more likely to engage in premarital sex. Health education is one of the efforts to improve adolescents' knowledge and attitudes to help prevent premarital sex.[6]

Health education can be delivered through various media, such as print media, board media, and electronic media. Electronic media that can be used include television, radio, videos, films, the internet, teleconferences, and mobile phones.[7] In this study, WhatsApp was used as the media platform, as it is a popular application with the highest number of users worldwide. WhatsApp offers features such as sending messages, images, videos, video calls, and creating discussion groups. It is the most frequently used application with the longest usage duration among smartphone users.[8]

Based on the phenomena described above, the researcher is interested in conducting a study on "The Effect of Health Education Through WhatsApp on the Knowledge and Attitudes of Adolescents Regarding Premarital Sex Among Grade X and XI Students at a Senior High School in Medan."

2. Material and Methods

This study was pre-experimental research using a one-group pretest-posttest design. In this design, an initial test (pretest) is given before the intervention (treatment), followed by a final test (posttest) after the intervention. This design aims to reveal causal relationships by involving a single group of subjects. The group is observed before the intervention and again after the intervention. The subjects in this study are adolescents, specifically Grade X and XI students at a senior high school in Medan. The intervention provided is health education about premarital sex delivered through WhatsApp. The sample in this study consisted of 29 Grade X and XI students at a senior high school in Medan. The sampling method used in this study was purposive sampling. The data analysis used in this study consists of univariate and bivariate analyses. Univariate analysis is used to determine the frequency of each variable studied, namely knowledge and attitudes toward premarital sex among Grade X and XI students at a senior high school in Medan, presented in the form of frequency distributions. Bivariate analysis was conducted to examine the relationship between the health education intervention and adolescents' knowledge and attitudes regarding premarital sex. This analysis aims to assess whether health education delivered through media has an effect on students' knowledge and attitudes regarding premarital sex at the high school in Medan. Before conducting the bivariate test, a normality test was carried out using the Kolmogorov-Smirnov test. If the significance value (p-value) is greater than 0.05, the data are considered to be normally distributed. Bivariate analysis was performed using the parametric Paired Sample T-Test to evaluate the effect of health education delivered through WhatsApp on the knowledge and attitudes of Grade X and XI students regarding premarital sex at the high school in Medan.

3. Results

Table 1 Mean Scores of Knowledges and Attitudes Before and After Health Education Through WhatsApp

Variable	N	Mean	Standard Deviasion	Min	Max
Knowledge					
Before	29	11.7	3.450209	7	17
After	29	16.4	2.383234	12	19
Attitudes					
Before	29	39.3	14.7969	23	66
After	29	62.5	9.171062	44	73

Table 1 shows that before receiving health education through WhatsApp, the average knowledge score was 11.7 (SD = 3.45), with scores ranging from 7 to 17. After the intervention, the average knowledge score increased to 16.4 (SD = 2.38), with scores between 12 and 19. The average attitude score before the intervention was 39.3 (SD = 14.80), ranging from 23 to 66. After receiving health education, the average attitude score rose to 62.5 (SD = 9.17), with scores between 44 and 73, based on 29 samples.

Table 2 shows that the knowledge variable, tested using the Paired Sample T-Test, resulted in a p-value of < 0.001. Similarly, the attitude variable also showed a p-value of < 0.001 using the Paired Sample T-Test. Therefore, the alternative hypothesis (Ha) is accepted, indicating that health education delivered through WhatsApp has a significant effect on adolescents' knowledge and attitudes regarding premarital sex at the senior high school in Medan.

Table 2 The Effect of Health Education Through WhatsApp on Adolescents' Knowledge and Attitudes Regarding Premarital Sex at a Senior High School in Medan

Variable	N	Before		After		Mean Difference	SD Difference	p-value
		Mean	SD	Mean	SD			
Knowledge	29	11.7	3.450209	16.4	2.383234	4.65	1.69	< 0.001
Attitudes	29	39.3	14.7969	62.5	9.171062	23.2	11.2	< 0.001

4. Discussion

The results of this study show that knowledge increased after the intervention, which involved distributing PowerPoint materials about premarital sex through WhatsApp. This study is consistent with the findings of Yunita [9], who reported that the average knowledge score increased from 5.43 before the intervention to 8.90 after the intervention, while the average attitude score increased from 29.40 to 36.93. The results of the Wilcoxon Signed Rank Test showed a p-value of 0.00 (< 0.05), indicating that the use of a WhatsApp group had a significant effect on mothers' knowledge and attitudes regarding Clean and Healthy Living Behavior in the household setting within the working area of the Tais Health Center, Seluma District.

Knowledge is the result of "knowing," which happens after a person senses an object. Sensing occurs through the five senses: sight, hearing, smell, taste, and touch. The process of sensing and forming knowledge is strongly influenced by the level of attention and perception toward the object. Most human knowledge is gained through seeing and hearing.[10] The results of this study indicate that health education through WhatsApp has an impact on adolescents' knowledge and attitudes toward premarital sex at a senior high school in Medan. These findings are consistent with previous research, which states that health education can change an individual's knowledge and attitudes when making decisions. Adolescents' lack of knowledge is one of the causes of harmful behaviors, underscoring the need for health education.[11]

The results of this study show that, out of the 20 knowledge questions, respondents' knowledge scores were still low on question 18, which asked about sexually transmitted diseases (STDs) that can be transmitted through premarital sex. The majority of respondents were unaware of the diseases that can result from premarital sexual activity. The lack of knowledge among adolescents about the consequences of premarital sex leads to an increase in premarital sexual behavior, resulting in a growing number of cases of sexually transmitted infections each year.[12]

The study found that health education led to a positive change in knowledge, shifting students from not knowing to knowing. This knowledge is expected to change their attitudes toward premarital sex. Health education aims to spread messages and instill beliefs, helping individuals not only gain awareness but also take action on health-related recommendations. This knowledge increase comes from the learning process, which helps individuals develop their understanding and skills, and overcome ignorance.[13]

This aligns with the goals of health education, which aims to increase public knowledge of health, achieve behavioral changes in individuals, families, and communities, and promote healthy behaviors and environments. Health education plays an active role in improving overall health and reducing morbidity and mortality, in line with the concept of healthy living. This can be efficiently applied by respondents and their families by avoiding replaceable harmful aspects.[14]

The study on respondents' attitudes at the senior high school in Medan showed that before the intervention, the average attitude score was 39.3, and after the intervention, it increased to 62.5, showing an improvement of 23.2 points. The results revealed that out of 19 attitude questions, respondents had low scores on statement number 5, which stated that being attracted to the opposite sex is normal and can serve as motivation for studying. However, there are negative impacts of dating, such as a decline in academic performance, weakened creativity, and difficulty concentrating.[15] Overall, the data analysis shows a significant difference in respondents' knowledge and attitudes before and after receiving health education through WhatsApp.

Another finding from the study is that there was a change in adolescents' attitudes toward premarital sex, as expected from health education. Health education was able to influence attitudes to the point where adolescents were willing to pay attention to and respond to stimuli, such as answering questions. However, it has not yet reached the highest level of attitude, which involves valuing, such as encouraging others to discuss or act on an issue or taking responsibility for the choices made and their risks.[16]

Demographic factors can have a greater impact on the likelihood of risky behavior than coping styles. This means that what is identified and measured as coping styles in individuals, in the process leading to risky or healthy behaviors, may not be as important. It's important to note that the rejection of this research hypothesis could be due to cultural and social factors. Healthcare providers need to understand the unique sex-based coping styles and follow up regularly.[17,18]

This aligns with the goals of health education, as mentioned in previous research, which aims to enhance the knowledge, attitudes, and skills of individuals, groups, and communities to achieve optimal health. Health education is a learning process for individuals, groups, or communities, transforming them from being unaware of health values to being knowledgeable, and from being unable to address health issues to becoming independent in managing their health.[19] Adolescents' attitudes influence their behavior. An adolescent's attitude toward premarital sex reflects how much they accept or reject various forms of sexual behavior engaged in by partners who are not bound by marriage.[20]

Video media is more effective than image media in increasing adolescents' knowledge about premarital sex. There is an impact on the level of knowledge regarding free association among adolescents in the class.[21] The message delivered is intentionally meant to create contradictions between the components of an individual's attitude or between attitude and behavior inconsistency, which disrupts attitude stability and opens the opportunity for the desired change. When an individual is exposed to a persuasive message, they will think about the message, consider the arguments within it, and assess what arguments are lacking. These thoughts lead to the acceptance or rejection of the message, rather than the message itself. In their social interactions, individuals react by forming specific attitudes toward various psychological objects.[22]

5. Conclusion

There is an effect of health education on adolescents' knowledge and attitudes toward premarital sex at SMA Medan, with a p-value < 0.001.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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