

## THE IMPACT OF MENTAL HEALTH PROMOTION USING AUDIOVISUAL MEDIA ON ADOLESCENTS' KNOWLEDGE ABOUT MENTAL HEALTH AT SMPN 3 PEKANBARU

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### Abstract

The prevalence of mental health problems in adolescents is increasing over time, the impact is affecting the social, cognitive and emotional development of adolescents. It is important to promote mental health using audio-visual media in order to increase teenagers' knowledge about mental health. The aim of this research is to determine the effect of mental health promotion using audio-visual media on teenagers' knowledge about mental health at SMPN 3 Pekanbaru. This research is a quantitative research, with a quasi-experiment research design (Quasy Experiment Method) with a Pre-test Post-test Nonequivalent Control Group Design approach, namely a design that provides a pre-test in the treatment group and control group. The sample consisted of 65 people using a stratified random sampling technique. The instrument used to assess knowledge is the Mental Health Knowledge Questionnaire (MHKQ) and displays videos of adolescent mental health. The average score for pre-test knowledge was 10.85 and post-test knowledge 17.24. The results of statistical tests for knowledge show  $p$  value =  $0.000 < 0.05$ , so the hypothesis  $H_0$  is rejected and  $H_a$  is accepted, which means there is an influence of health promotion with audio-visual media on teenagers' knowledge about mental health at SMPN 3 Pekanbaru.

**Keyword:** Adolescents 1; Mental Health 2; Health Promotion 3; Audiovisual 4.

### INTRODUCTION

Adolescence is a period when emotions tend to be unstable, and behaviors that emerge are influenced by emotions (Ragita & Fardana N., 2021). This condition makes adolescents more likely to express their emotions toward others, causing emotions to dominate self-control more than realistic thinking. The increase in emotional intensity among adolescents leads to a higher risk of depression, uncontrolled behavior, and rebellious actions. Therefore, adolescents need awareness as a preventive step to improve their mental health and reduce emotional and behavioral problems (Permatahati et al., 2023).

According to research conducted by the World Health Organization WHO, (2024) globally, it was reported that 1 in 8 adolescents (12%) aged 10–19 years experience mental health disorders. It was found that 3.6% of adolescents aged 10–14 years and 4.6% of adolescents aged 15–19 years experience anxiety disorders. Depression was reported in 1.4% of adolescents aged 10–14 years and 2.8% of adolescents aged 15–19 years (Osborn et al., 2022). Southeast Asia contributes to 27% of all depression cases and 23% of anxiety cases (Lemon et al., 2024).

The impacts of mental health disorders among adolescents include anxiety, sleep disturbances (insomnia), social withdrawal, decreased productivity, irritability without clear

reasons, prolonged stress, and eventually severe depression, which may lead to self-harm or even suicide (Agusthia et al., 2023).

The knowledge and awareness of the Indonesian public about mental health remain low. Based on the Indonesia National Adolescent Mental Health Survey (I-NAMHS) in 2022, only 2.6% of adolescents with mental health problems sought professional help. Overall, only one in fifty adolescents (2.0%) had used mental health services in the past 12 months (Indonesia National Adolescent Mental Health Survey, 2022).

Adolescent health knowledge can be improved through health promotion. The purpose of health promotion is to introduce, convey, and remind individuals about the benefits of certain health information, encouraging them to take appropriate action. To effectively deliver this health information, health promotion efforts are conducted (Annisa et al., 2024).

Health promotion is essentially an effort or activity aimed at informing health messages to individuals, groups, and communities. It is expected that through health promotion, changes in the behavior of the target audience can occur (Pertiwi et al., 2024).

Health promotion serves as an intervention that can be implemented as mental health education by identifying individual, social, and structural determinants of mental health, and then carrying out interventions to reduce risks, increase knowledge, and build supportive environments for mental well-being. Thus, adolescents' knowledge and attitudes can experience positive changes that support better mental health development (Rosidin & Sumarni, 2024).

To support the development of better mental health, mental health promotion can be conducted using media. The most commonly used medium for health promotion is audio-visual media, such as videos. This type of media engages both sight and hearing, which can enhance knowledge acquisition (Azkiya & Umaroh, 2024).

Audio-visual media can be utilized for health promotion activities designed in such a way that the content is easy for the audience to understand. Although each individual has a different learning style, the best media are those that combine audio and visual elements, as they make the delivered information easier to comprehend and more effective (Abdullah & Ilmiah, 2023).

This study is in line with previous research conducted by (Rahmawati & Widodo, 2024) entitled *"Changes in Adolescents' Knowledge and Attitudes After Being Given Mental Health Promotion."* The results of the study showed that the average scores of adolescents' attitudes and knowledge increased from before ( $n = 24.87$ ) to after ( $n = 47.54$ ) the intervention, with a  $p$ -value  $< 0.05$ . There was a significant difference in attitudes before and after the mental health promotion, indicating an influence between health promotion, knowledge, and adolescents' attitudes toward mental health.

Based on field observations and interviews conducted by the researcher with the guidance and counseling staff (BK) and the curriculum department of SMPN 3 Pekanbaru, located at Jalan Dahlia No.102, Kedungsari, Sukajadi District, on October 15, 2024, it was stated that SMPN 3 Pekanbaru has never received any seminars, counseling sessions, or health promotion programs related to adolescent mental health. Therefore, no previous studies in the field of health—specifically on adolescent mental health—have been conducted in this school.

The researcher also interviewed and observed 10 students at SMPN 3 Pekanbaru. The results showed that 8 students (80%) had no knowledge about adolescent mental health and could only describe people with mental health problems as those suffering from severe mental disorders treated in mental hospitals, while 2 students (20%) had limited knowledge about mental health, obtained from information on the internet.

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## METHODS

This research is a quantitative study using a quasi-experimental design (Quasi-Experiment Method) with a Pre-test Post-test Nonequivalent Control Group Design approach, in which both the experimental group and the control group are given pre-tests and post-tests. The study was conducted at SMP Negeri 3 Pekanbaru, located in Pekanbaru Regency, and was carried out from the planning stage to the completion of the final report, spanning from September 2024 to February 2025.

The population of this study consisted of male and female adolescents in the seventh grade (Grade VII) of SMPN 3 Pekanbaru. Based on interviews with the school's curriculum staff, the total number of seventh-grade students was 200, divided into five classes. The sampling technique used was based on a sample size formula, and the total number of samples obtained was 65 respondents. In this study, the minimum number of samples required for each group experimental and control was 65 students, consisting of 33 students in the experimental group and 32 students in the control group.

The instrument used in this research was the Mental Health Knowledge Questionnaire (MHKQ), which was developed to assess adolescents' knowledge and awareness regarding mental health. By using the MHKQ, the researcher was able to measure the changes in the level of knowledge before and after the mental health promotion intervention. The questionnaire consisted of 20 items divided into three main dimensions, namely Knowledge, which assessed the ability to recognize mental disorders; Belief, which measured the belief that mental disorders are not a sign of personal weakness; and Attitude, which evaluated supportive attitudes toward seeking appropriate mental health care.

Respondents were given two answer options for each item: "Yes, correct" and "No, incorrect." Seven items (numbers 2, 4, 6, 9, 10, 13, and 14) contained statements that were scored 1 if the respondent's answer was "No" (unfavorable), while the remaining thirteen items (numbers 1, 3, 5, 7, 8, 11, 12, 15, 16, 17, 18, 19, and 20) were scored 1 if the respondent's answer was "Yes" (favorable). The total score was calculated from all correct answers and categorized as follows: Good if the score was between 76–100, Fair if the score was between 56–75, and Poor if the score was below 56.

## RESULTS

### Univariate Analysis

#### A. Characteristics of Respondents

##### 1. Gender and Age

**Table 1. Overview of the Distribution of Respondent Characteristics at SMPN 3 Pekanbaru**

Gender	Frequency (f)	Percentage (%)
Male	32	49,2
Female	33	50,8
<b>Total</b>	<b>65</b>	<b>100</b>
<b>Age</b>		
11 years old	1	1,5
12 years old	32	49,2
13 years old	32	49,2
<b>Total</b>	<b>65</b>	<b>100</b>

Source: Primary Data Analysis, 2024

Based on the data in Table 1, more than half of the respondents (50.8%) were female, and almost half of the respondents (49.2%) were aged 12 and 13 years.

##### 2. Average Knowledge of the Intervention Group

**Table 2. Distribution of the Mean Knowledge Scores Before and After the Intervention in the Experimental Group**

	N	Mean	SD	Min	Max
<i>Pre-Test</i>	33	10,85	1,889	7	15
<i>Post-Test</i>	33	17,24	1,032	15	19

Source: Primary Data Analysis, 2024

Based on the data in Table 2, the average knowledge score in the intervention group during the pre-test was **10.85**, with a standard deviation of **1.889**, a minimum value of **7**, and a maximum value of **15**. Meanwhile, the average knowledge score during the post-test was **17.24**, with a standard deviation of **1.032**, a minimum value of **15**, and a maximum value of **19**.

##### 3. Average Knowledge of the Control Group

**Table 3. Distribution of the Mean Knowledge Scores Before and After in the Control Group**

	N	Mean	SD	Min	Max
<i>Pre-Test</i>	32	12,22	2,366	8	16
<i>Post-Test</i>	32	12,56	2,355	8	16

Source: Primary Data Analysis, 2024

Based on the data in Table 3, the average pre-test knowledge score was 12.22, with a standard deviation of 2.366, a minimum value of 8, and a maximum value of 16. Meanwhile, the average post-test knowledge score was 12.56, with a standard deviation of 2.355, a minimum value of 8, and a maximum value of 16.

**B. Bivariate Analysis**
**Table 4. Differences in the Mean Pre-test and Post-test Scores of Health Education Using Audio-Visual Media on Adolescents' Knowledge About Mental Health at SMPN 3 Pekanbaru**

Group	N		Mean	Aver age	Standard		Lowest		Highest		p	p		
			Pre-test	Post-test	Deviation		Value		Value					
			Score		(SD)		Pre-test	Post-test	Pre-test	Post-test				
			Increas e		test	test	test	test	test	test				
Interventi on	33	10,85	17,24	6,39	1,889	1,032	7	15	15	19	30%	0,000		
Control	32	12,22	12,56	0,34	2,366	2,355	8	16	8	16	2%	0,000		
												0,019		

Source: Primary Data Analysis, 2024

Based on Table 4.7, the average knowledge score in the intervention group during the pre-test was 10.85, and during the post-test was 17.24. In the control group, the average pre-test knowledge score was 12.22, and the post-test score was 12.56. The average increase in the intervention group from pre-test to post-test was 6.39, while the average increase in the control group was 0.34. The statistical test results for knowledge showed a  $p$ -value = 0.000  $< 0.05$ , indicating that the null hypothesis ( $H_0$ ) was rejected, meaning there was a significant difference in health education using audio-visual media on adolescents' knowledge about mental health at SMPN 3 Pekanbaru. In terms of practical significance ( $\Delta$ ), a difference of **30%** was found in the intervention group and **2%** in the control group, indicating that the intervention group was more effective than the control group in improving knowledge.

## DISCUSSION

### A. Univariate Analysis

#### 1. Characteristics of Respondents

##### a. Gender

The characteristics of respondents in this study show that most of the participants were female, with 33 respondents (50.8%), while 32 respondents (49.2%) were male. Differences in intelligence between males and females are often associated with physiological differences in the brain, although this is not directly related to differences in intellectual ability. Gender identity involves awareness, understanding, knowledge, and acceptance of oneself as male or female. Women tend to have more sensitive and empathetic feelings than men (Malfasari et al., 2020).

This finding is in line with research conducted by Barnas & Ridwan, (2019), which revealed that females generally have a higher level of knowledge compared to males, especially in the learning process. Women also tend to have greater motivation and consistency in learning than men.

According to the researcher's assumption, gender influences adolescents' level

of knowledge. Female adolescents tend to have higher knowledge levels because they possess greater motivation and learning consistency. Thus, female respondents demonstrated higher knowledge compared to their male counterparts.

b. Age

Based on age distribution, the study found that most respondents were 12 and 13 years old, each accounting for 49.2%, while only one respondent (1.5%) was 11 years old. Knowledge is influenced by several factors, including age. Age represents physical, psychological, and social maturity, which affects the learning process. This means that age is one of the key factors influencing how individuals process information, which ultimately affects the improvement of their knowledge (Dini & Nurhelita, 2020).

Apart from sources of information, the knowledge factor is also influenced by age. Age plays an important role in a person's ability to acquire knowledge. The older a person is, the more developed their comprehension and way of thinking become, resulting in better knowledge acquisition (Ratnasari, 2019).

This research is in line with the study conducted by Hardianti et al., (2021) stated that age is a factor that influences a person's knowledge and attitude. Memory and thinking ability are affected by age, therefore, as a person gets older, their cognitive capacity and mindset improve. Age becomes an important factor in one's ability to obtain information, both directly and indirectly, which in turn enhances their skills and experience.

According to the researcher's assumption, a person's memory is influenced in part by age. As a person grows older, it greatly affects their ability to make decisions regarding maintaining their mental health, because with increasing age comes greater knowledge and understanding.

2. The Average Knowledge Before and After Health Promotion in the Intervention and Control Groups

Based on the dependent sample *t*-test results, the average knowledge score before the health promotion was 10.85, and after the health promotion, the score increased to 17.24. There was a significant difference in the average knowledge score before and after the health education provided through video media. The dependent sample *t*-test showed a *p*-value of 0.000, which means *p* < 0.05. Therefore, it can be concluded that there was a significant difference between the pre-test and post-test results after health promotion using video media.

Meanwhile, the dependent sample *t*-test for the control group showed an average pre-test knowledge score of 12.22, and an average post-test score of 12.56. The results indicate that there was no significant difference between the pre-test and post-test scores in the absence of intervention.

From the pre-test and post-test data in the intervention group, several questionnaire items showed an increase in respondents' knowledge. Knowledge increased in the *Attitude* section, where respondents' awareness of World Suicide Prevention Day rose by 73%, and awareness of World Mental Health Day increased by 58%. In the *Knowledge* section, respondents' understanding that mental disorders are caused by distorted thoughts increased by 45%. In the *Belief* section, respondents' knowledge that middle-aged and elderly individuals can experience psychological or mental disorders rose by 39%, and understanding that psychological problems in adolescents do not affect academic performance increased by 36%.

This research is consistent with the study conducted by Mawaddah & Prasty, (2023) which showed an increase in students' knowledge about mental health and their ability to stimulate psychosocial development in the intervention group. Interventions are essential to prevent further mental health problems.

From the pre- and post-test results of the control group, it was observed that there was no significant increase in respondents' knowledge. The control group showed only a **3%–11%** increase in knowledge. This finding aligns with Riantiarno et al., (2024) who reported that in the control group, respondents' knowledge did not significantly improve, showing only a **2%–3%** increase.

Adolescent health knowledge can be improved through **health promotion**, which aims to introduce, convey, and emphasize the benefits of specific health information to encourage positive behavioral change. To ensure that this information is effectively delivered, health promotion activities are implemented(Annisa et al., 2024).

Health promotion serves as an intervention that provides mental health education by identifying individual, social, and structural determinants of mental health, and implementing interventions to reduce risks, increase knowledge, and build supportive environments for mental well-being. Consequently, adolescents' knowledge and attitudes may experience positive changes that support the development of better mental health (Rosidin & Sumarni, 2024).

To further support mental health development, health promotion activities are carried out using media. The most commonly used medium for disseminating or promoting health information is **audiovisual media**, particularly **videos**. Video media engage both sight and hearing, thereby enhancing knowledge acquisition (Azkiya & Umaroh, 2024).

According to the researcher's assumption, the intervention group that received mental health promotion through audiovisual media experienced a greater increase in knowledge compared to the control group, which did not receive such promotion. This is because audiovisual media effectively deliver health promotion messages, leading to improved knowledge in the intervention group compared to the control group that did not receive audiovisual-based health promotion.

## B. Bivariate Analysis

Bivariate analysis was used to determine whether there was a difference in the mean scores between the intervention and control groups. Based on the statistical tests conducted in this study, namely the **dependent sample t-test** and **independent t-test**, the results showed that the mean knowledge score in the intervention group was **10.85** before the intervention (pre-test) and **17.24** after the intervention (post-test). In the control group, the mean knowledge score was **12.22** before the intervention and **12.56** after the intervention.

This study is consistent with the previous research conducted by (Rahmawati & Widodo, 2024) entitled "*Changes in Adolescents' Knowledge and Attitudes After Being Given Mental Health Promotion.*" The results of their study showed that the mean scores of adolescents' attitudes and knowledge increased from 24.87 (before) to (after) the intervention, with a *p*-value < 0.05. The study concluded that there was a significant relationship between health promotion, knowledge, and adolescent attitudes toward mental health.

In essence, **health promotion** is an effort or activity aimed at communicating health messages to individuals, groups, and communities. It is expected that health promotion can bring about behavioral changes among its target audience. **Audio-visual media** are used to

deliver health messages and function as a tool to enhance the reception of health information among target groups (Pertiwi et al., 2024).

To support the development of better mental health, health promotion activities are carried out using various media. The media most commonly used to disseminate or promote health information are **audio-visual media** in the form of videos. Video media engage both the senses of sight and hearing, which can enhance knowledge acquisition (Azkiya & Umaroh, 2024). Audio-visual media can be used to conduct structured health promotion activities that are easy for audiences to understand. Although individuals have different learning styles, the most effective medium is one that combines **audio and visual elements**, allowing the delivered information to be received more effectively and efficiently (Abdullah & Ilmiah, 2023).

The effectiveness level of video media is higher than that of posters or slides (Rahmawati & Widodo, 2024). Audio-visual media can convey a clearer depiction of health promotion messages and are considered effective in delivering these messages to the intended audience. Learning media in the form of videos can increase students' enthusiasm, create a more enjoyable and meaningful learning experience, and thus facilitate the process of information absorption (Intaniasari & Utami, 2021).

In addition to making the learning process easier, health promotion through audio-visual media is also used to deliver health messages, functioning as a tool to enhance message acceptance among the target group (Pertiwi et al., 2024). The increase in students' knowledge delivered by health service providers through audio-visual media, such as videos, demonstrates higher knowledge scores. The use of audio-visual formats—audio, video, or animation—can significantly improve knowledge during health promotion activities and serve as a more engaging educational medium (Lala et al., 2020).

According to the researcher's assumption, the results indicate a **significant difference between the intervention group and the control group**. This can be observed from the difference in the mean knowledge scores before and after the health promotion using audio-visual media, where the intervention group had a much higher mean score increase than the control group (**6.39 > 0.34**). Thus, there was a far more significant improvement in the intervention group compared to the control group.

## CONCLUSION

Based on the results of the study involving 65 respondents, it was found that 50.8% were female and 49.2% were male. Overall, the respondents were categorized as early adolescents (ages 10–13 years), with 1.5% aged 11 years, 49.2% aged 12 years, and 49.2% aged 13 years. The average knowledge score of the experimental group regarding adolescent mental health before the intervention (pre-test) of mental health promotion using audio-visual media was **10.85** with a standard deviation (SD) of **1.889**. After the intervention (post-test), the average knowledge score increased to **17.24** with an SD of **1.032**. Meanwhile, the average knowledge score of the control group before the intervention (pre-test) was **12.22** with an SD of **2.366**. The statistical test results for knowledge showed a **p-value = 0.000 < 0.05**, indicating that the null hypothesis ( $H_0$ ) was rejected and the alternative hypothesis ( $H_a$ ) was accepted. This means there was a significant effect of mental health promotion using audio-visual media on adolescents' knowledge about mental health at **SMPN 3 Pekanbaru**. In terms of practical significance ( $\Delta$ ), a difference of **30%** was found in the intervention group and **2%** in the control group. It can be concluded that there is a significant difference in knowledge between the experimental and control groups.

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