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# **Dental Health Promotion as Student Knowledge Improvement Effort**

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**ABSTRACT:** Oral health is often neglected due to lack of knowledge which in turn will damage dental health. Oral health promotion is an educational process that aims to improve the degree of better dental and oral health. This process is carried out to gain learning, experience, and knowledge through various methods and learning media. The purpose of this study was to determine the effectiveness of dental health promotion on increasing student knowledge. The research method was a quasi-experimental quasi-experimental pretest and posttest with a control group design. Data were tested using Shapiro Wilk, Wilcoxon test and Mann Whitney test to analyze the data. The results showed that the Socratic method using audiovisual was effective in increasing knowledge with a p-value of 0.007 while the didactic method using lectures is less effective in increasing knowledge with a p-value of 0.582. The socratic method using audiovisual is more effective in increasing knowledge than the didactic method using lectures with a p-value of 0.008.

**KEY WORDS:** Dental Health Promotion, Knowledge Improvement

## **I. INTRODUCTION**

The results of the Basic Health Research (Riskesmas) on the percentage of the Indonesian population in 2018 showed that the largest proportion of dental problems in Indonesia was tooth decay/cavities/sickness as much as 45.3%. The majority of oral health problems experienced by the Indonesian population are swollen gums or abscesses by 14%. This condition states that there is a lack of community effort in maintaining dental and oral health [1]. Improper oral hygiene maintenance causes the easy buildup of plaque, calculus and eventually damages dental health. Dental and oral health disorders hurt daily life, therefore the community needs to be given counselling [2].

Health education is included in health promotion which is needed as an effort to increase knowledge, attitudes, and actions. Efforts to provide and deliver information are needed. The effectiveness of health promotion is aimed at increasing public knowledge. Health promotion is effective in increasing public knowledge about dental and oral health [3]. Health promotion is the addition of a person's knowledge and abilities through various methods and learning media to increase awareness of the value of health so that they consciously want to change their behaviour into healthy living behaviours [4].

The didactic method using lectures is a form of interaction through explanations and oral narratives from the teacher to students. The socratic method using audiovisual or video is one of the technological advances that has had a lot of positive influence and progress on humans [5]. This audiovisual media is very effective for increasing one's knowledge in learning because it involves many senses to receive and process information so that the greater the content of the information, the easier the information is understood [6].

## **II. OBJECTIVE**

The purpose of this study was to determine the effectiveness of dental health promotion on increasing student knowledge.

### III. LITERATURE

The didactic method is carried out in one direction by the instructor to participants who listen but are not given the opportunity to give opinions. The socratic method provides opportunities for participate in expressing opinions [7].

### IV. METHODS

The research method uses a quasi-experimental pretest and posttest with a control group design [8]. The research subjects were students who were divided into two groups: 1. Socratic method intervention using audiovisual. 2. The didactic method uses lectures as a control. The dependent variable: knowledge of students' oral health maintenance. The sampling technique was purposive sampling, for samples that met the inclusion and exclusion criteria and had filled out the informed consent to obtain a total sample of 36 students. The data for measuring knowledge of dental and oral health was carried out by statistical tests.

The research data used a ratio scale so that the Shapiro-Wilk normality test was carried out. Statistical test to analyze paired variable data in the intervention group and control group, if normal data using the paired t-test while not normal using the Wilcoxon test. Statistical test to analyze the comparison between the intervention group and the control group, if the data is normal using the independent t-test, while not normal using the Mann Whitney test [9]. The knowledge questionnaire used is a oral health maintenance questionnaire. The knowledge questionnaire is 20 favourable questions. The correct answer is given a score of 1, while the wrong answer is given a score of 0.

### V. RESULTS

#### A. Data Normality Test

**Table 1. Data Normality Test**

Variable	Normality test*	
	<i>p-value</i>	
	Intervention	Control
Pretest knowledge	.002	.006
Posttest knowledge	.013	.457

\*Shapiro Wilk

The results of the normality test show that the p-value is <0.05, so it can be concluded that the data is not normally distributed, so the nonparametric test is continued.

#### B. Data Normality Test

**Table 2. Knowledge Effectiveness Test for the Intervention Group and the Control Group**

Group	Paired Data	Test Data	
	Test*	Unpaired**	
	<i>p-value</i>	<i>Mean</i>	<i>p-value</i>
Intervention	.007	42.72	0.008
Control	.582	30.28	

\*Wilcoxon

\*\*Mann Whitney



The results of the paired data effectiveness test showed that the p-value of the intervention group was 0.007 ( $p < 0.05$ ), meaning that the soractic method using audiovisual was effective in increasing students' knowledge scores. The p-value of the control group was 0.582 ( $p > 0.05$ ), meaning that the didactic method using lectures was less effective in increasing students' knowledge scores.

The results of the unpaired data effectiveness test showed that the p-value between the intervention and control groups was 0.008 ( $p < 0.05$ ), meaning that the soractic method using audiovisual was more effective in increasing students' knowledge scores than the didactic method using lectures.

## VI. DISCUSSION

The results showed the average value of the intervention group was 42.72 while the average value of the control group was 30.28 with a mean difference of 10.44. The soractic method using audiovisual can effectively increase the knowledge value of dental and oral health maintenance. The didactic method using lectures is less effective in increasing the knowledge score of oral health maintenance.

Previous research showed that before being given counselling the lecture group got an average of 42.26 and the audiovisual group was 39.76. Then, after being given dental health counselling, the lecture group got an average score of 62.02 and the audiovisual group was 70.48. The lecture group and the audiovisual group experienced an increase of 19.76 and 30.72. So it can be concluded that audiovisual is more effective than a lecture [10].

Audiovisual is an effective method in counselling because audiovisual media uses several senses in the body, such as ears to hear (audio) and eyes to see (visual), while lectures only use the sense of hearing. The audiovisual method that uses video is more interesting because it is equipped with animations and interesting effects due to the development of an increasingly advanced era [11].

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