



Dental And Oral Health Counseling Efforts On Students' Knowledge Levels (SDN 02 Tiron Madiun)

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Abstract

Dental and oral health is an integral part of body health. To achieve optimal dental and oral health, periodic treatment must be carried out. At SDN 02 Tiron Madiun, there has never been any socialization about oral and dental health. The purpose of this study is to analyze dental and oral health extension efforts on students' level of knowledge. The research method used is quasi-experimental with a research design of one group pretest and posttest design. The study was conducted at SDN 02 Tiron Madiun with 22 respondents. The Wilcoxon signed-rank test is used to analyze the data. Based on the data obtained, it shows that 22 respondents have a level of knowledge with a good category, 21 people (95.5%) and this study shows the influence of dental and oral health counseling on students' knowledge level ($p = 0.021$). Intervention in the form of counseling with poster media can significantly increase student knowledge. Provision of knowledge and teaching about dental and oral health from an early age to reduce the incidence of dental caries in school-age children.

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Introduction

Knowledge is a factor that shapes a person's behavior (Sari & Jannah, 2021). Health behavior is something related to individual actions in maintaining and improving health (Adhiatmitha et al., 2018) According to Blum's theory, behavior is one of the important factors that determine dental and oral health (Astuti, 2018) Maintenance of dental and oral hygiene is one of the efforts to improve health. The mouth is not just for the entrance of food and drink but the function of the mouth is more than that and not many people realize the great role of the mouth for one's health and well-being. Therefore, dental and oral health plays a role in supporting one's health (Afrinis et al., 2020)

Dental health efforts need to be reviewed from environmental aspects, knowledge, education, awareness, and handling of dental health including prevention and treatment. Most people ignore the overall state of dental health. Dental care is considered not too important, even though the benefits are very vital in supporting health and appearance (Sriyono, 2009) Preventive measures against dental and oral diseases need to be done so that there is no disruption of function, activity (study and work), and decreased work productivity which will certainly affect the quality of life (Departemen Kesehatan, 1991). Learning is an attempt to master everything useful for life. According to the European concept, this meaning of

learning is rather narrow, it only includes memorizing, remembering, and producing something learned (S Notoatmodjo, 2007).

The first step to increase knowledge and prevent dental and oral health problems in children is to provide dental and oral health education. Providing dental and oral health education to elementary school children is important because at this time children begin to develop habits that usually tend to stay until adulthood, one of which is the habit of maintaining dental and oral hygiene (Sholiha et al., 2021).

Educational media can be used as a means of support, which can stimulate the thoughts, feelings, attention, and interest of the recipient of the material. For children, the use of media containing pictures can increase the effectiveness of education. There are various forms of media as supporting tools for health education such as print and electronic media (Azalea et al, 2016).

Learning media is very important in explaining learning material, there are many types of learning media, one of which is the type of Visual-based learning media. Visual Media is media that uses the sense of sight as an intermediary or delivery of messages of media content. Visual media is divided into two, namely two-dimensional and three-dimensional visual media. Two-dimensional visual media are media that only have dimensional sizes of length and width or media that can only be seen in a flat plane (Santayasa, 2007) An example of two-dimensional visual media is poster media, this poster media is widely used in learning because of its simple and easy to make creation. Poster media is an illustration of a simplified image that aims to attract attention, is easy to remember, and can understand the material taught. Poster media in classroom learning serves to attract the attention and interest of students, as well as a method for students to be interested and implement the material delivered in everyday life (Sadiman, 2010) From the background of the above problems, the purpose of this study is to analyze dental and oral health counseling efforts on the level of student knowledge.

Methods

The research method used in this study is quasi-experimental, (Arikunto, 2010) mentioned that the study aims to show a cause-and-effect relationship between dependent and independent variables. and does not depend on random, with one group pretest-posttest design research design is a research activity that provides an initial test (pretest) before being given treatment after being given treatment then gives a final test (posttest). This research was carried out at SDN 02 Tiron Madiun on May 8-27, 2023. The population of this study was all students of SDN 02 Tiron Madiun. The sampling technique using purposive sampling is a sampling technique with certain considerations (Sugiyono, 2016) so that the sample number is 22 respondents. The data collection tool used in the study was a Guttman-scale questionnaire. The questionnaire related to students' knowledge of dental and oral health totaled 10 questions with 2 answer options, namely true and false. This research has obtained ethical feasibility from the STIKES Bhakti Husada Mulia Madiun Ethics Commission with number 028/E-KEPK/STIKES/BHM/IV/2023.

Results

This study was conducted to determine the effect of counseling efforts on dental and oral health on the level of knowledge of grade 4 and 5 students at SDN 02 Tiron, Madiun Regency. Based on the research and interventions carried out, the results described in the following table were obtained.

Table 1. Characteristics of Respondents

Characteristics	f	%
Class		
4	12	54,5
5	10	45,5
Gender		
Male	12	54,5
Female	10	45,5
Total	22	100

Based on the table above, the research population data of 22 students can be seen that there are more grade 4 students than grade 5 students. The frequency of students in grade 4 is 12 students (54.5%) while for grade 5 students as many as 10 students (45.5%). Based the gender, it can be explained from the total respondents as many as 22 students, the number of male students is 12 students (54.5%) more than female students are 10 students (45.5%).

Table 3. Pre-test Results of Respondents' Knowledge

Knowledge	f	%
Pre-test		
Less	1	4,5
Moderate	7	31,8
Good	14	63,6
Post-test		
Moderate	1	4,5
Good	21	95,5
Total	22	100

The knowledge pre-test *data* on respondents had the lowest score of 0 and the highest score of 15. Based on the analysis of initial test data (Pre-Test) before counseling intervention, respondents who knew with good categories were 14 students with a percentage of 63.3%. Respondents with moderate categories were 7 students with a percentage of 31.8%. And respondents with fewer categories as many as 1 students with a percentage of 4.5%. From the table of the results of the final test data analysis (*Post-Test*) above, it can be known that the level of knowledge of students after counseling with a good category is 21 students with a percentage of 95.5%. Respondents with moderate categories were only 1 student with a percentage of 4.5%. And there were no students with fewer categories after dental and oral health counseling.

Table 5. Wilcoxon Signed Ranks Test Results

	Mean (min-max)	P-value
Knowledge before counseling (n=22)		
Knowledge after counseling (n=22)	2,591 (1 - 3)	0,021
	2,954 (2- 3)	

This study used the SPSS application as a tool for data analysis. Hypothesis testing uses significance values provided that the value $\alpha = 5\%$. The test used is *Wilcoxon Signed Ranks* shown in *Asymp values*. *Sig. (2-tailed)*, *this test is said to be significant if the value of Asymp. Sig. (2-tailed) is smaller than 0.05*. Based on the table of *Wilcoxon Signed Ranks* test results above, the *Asymp value* is obtained. *Sig. (2-tailed)* of 0.021 is smaller than 0.05, so there is an influence of dental and oral health counseling efforts on the level of knowledge of grade 4 and 5 students of SDN 02 Tiron, Madiun Regency. That is, counseling efforts with poster media are effective in increasing students' knowledge about oral and dental health.

Discussion

1. Characteristics of Respondents by Class

According to Rukmana & Suryana (2006), the classroom is a social environment for children or students, where in the classroom there is a process of interaction between students and other students and teachers. Based on the table above, the research population data of 22 students can be seen that there are more grade 4 students than grade 5 students. The frequency of students in grade 4 is 12 students (54.5%) while for grade 5 students as many as 10 students (45.5%).

According to Buhler in Sobur (2011), children aged 9-11 have high objectivity, which can be referred to as a period of probing, trying, and experimenting which is stimulated by the urge to investigate great curiosity, concentration and energy accumulation to practice, explore and explore.

These characteristics of students are generally owned by SDN 02 Tiron students, therefore the existence of dental and oral health counseling in grade 4 and 5 students can be used as a forum to instill knowledge about dental and oral health which can later arise attitudes accompanied by actions that can form habits to maintain oral and dental health.

2. Characteristics of Respondents by Gender

According to Hungu (2007), sex is the difference between women and men biologically since a person is born. Based on the gender of respondents, out of a total of 22 students, the number of male students was 12 students (54.5%) more than female students were 10 students (45.5%).

Gender is a factor that influences the incidence of tooth decay. Suwelo (1992) stated that the prevalence of dental caries in girls is higher than in boys. This is because, among other things, the eruption of girls' teeth is faster than boys' so girls' teeth stay longer in the oral cavity and longer are related to direct factors of caries, which include teeth and saliva, microorganisms, food, and time.

Based on the results of a study conducted by Basyar et al., in 2022 entitled *The Effect of Counseling on the Level of Knowledge of Dental and Oral Health of SDIT Al-Fityah Students* with a total of 53 respondents,

the majority of respondents with the most gender are women, namely 30 people (56.6%). While the male sex was 23 people (43.4%).

Based on theory, women have a higher risk of tooth decay, especially dental caries, than men. However, both have the same role and obligation in maintaining healthy teeth and mouth so that later they can avoid diseases that do not only attack one sex.

3. Characteristics of Respondents Based on Level of Knowledge

Based on the results of the initial test data analysis (Pre-Test) before counseling intervention was given, respondents who knew with good categories were 14 students with a percentage of 63.3%. Respondents with moderate categories were 7 students with a percentage of 31.8%. And respondents with fewer categories as many as 1 students with a percentage of 4.5%.

Then, based on the results of the analysis of the final test data (*Post-Test*) above, it can be known the level of knowledge of students after counseling with a good category, which is as many as 21 students with a percentage of 95.5%. Respondents with moderate categories were only 1 student with a percentage of 4.5%. And there were no students with fewer categories after dental and oral health counseling. Knowledge is the result of knowing, and this happens after people have sensed a particular object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste, and sense of touch. Most human knowledge, however, is acquired through the eyes and ears. Knowledge can be obtained by someone naturally or intervened either directly or indirectly (Soekidjo Notoatmodjo, 2012). Good dental and oral hygiene can be realized through good and correct knowledge and behavior toward the maintenance of oral and dental health. Knowledge is a factor that shapes a person's behavior. Lack of knowledge will shape wrong behaviors and attitudes toward the maintenance of oral and dental health (Marimbun et al., 2016)

The results study following research conducted by Basyar et al., in 2022 entitled The Effect of Counseling on the Level of Knowledge of Dental and Oral Health SDIT Al-Fityah students totaling 53 respondents in the form of increased knowledge before and after counseling. Before the counseling, most students had a moderate level of knowledge about oral and dental health 69.8%, 18.8% of students had a good level of knowledge and 11.4% of students had a poor level of knowledge. After counseling, the percentage of students with poor knowledge levels was 16.9%, then students with moderate knowledge were 69.8% and students with good knowledge were 13.3%. The provision of counseling to increase knowledge about dental and oral health is very important, especially for elementary school students. With this knowledge, it will encourage attitudes and the formation of actions to maintain healthy teeth and mouth. Maintaining the cleanliness and health of teeth and mouth can prevent various kinds of diseases that can arise in the oral cavity. Efforts to maintain healthy teeth and mouth are one of the events to improve health starting from an early age.

4. Dental and Oral Health Counseling Efforts on the Level of Knowledge of Grade 4 and 5 Students of SDN 02 Tiron

The results of the study found that there was an influence between dental and oral health counseling on the level of knowledge of SDN 02 Tiron students. Based on the results of the *Wilcoxon Signed Ranks* test above, the *Asymp* value was obtained. *Sig. (2-tailed)* of 0.021 is smaller than 0.05, so there is an influence of dental and oral health counseling on the level of knowledge of grade 4 and 5 students of SDN 02 Tiron Madiun Regency. This research is supported by research by Basyar et al., in 2022 entitled The Effect of Counseling on the Level of Knowledge of Dental and Oral Health of SDIT Al-Fityah Students that there is an influence before and after counseling on dental and oral health. From the *Wilcoxon test results*, a P-value of 0.041 was obtained.

Dental and oral health education (PKG) is an educational process that arises based on dental and oral health needs that aims to produce good dental and oral health and improve the standard of living. In the educational process including dental and oral health education, individuals gain experience or knowledge through various educational media (Kantohe et al., 2016)

The provision of dental and oral health counseling at SDN 02 Tiron is part of dental and oral health education. Dental and oral health education is very influential on knowledge based on data obtained for knowledge at SDN 02 Tiron there has been an increase in knowledge. This is because in the counseling process students are directed to understand and connect what they have gained through dental and oral health education with what they see through interesting poster media. So this can prove that health education through poster media is one effective way to increase student knowledge.

Dental and oral health counseling is important to students. With this counseling, it can increase students' knowledge of maintaining dental and oral hygiene. A clean and healthy oral cavity can prevent diseases of the oral cavity. With this knowledge, it can be the beginning of the formation of behavior to maintain healthy teeth and mouth. Routine dental and oral health counseling can form the habit of maintaining the student's dental and oral health.

Conclusion

From the results of the research conducted, it can be concluded that there is an increase in student knowledge about dental and oral health with poster media. For future research, you can use video media tailored to respondents of kindergarten-age children.

Author Contributions

Conceptualization, Novelia Eka Pri Wardani, and Annisa Wiratna Putri; methodology, Karina Nur Ramadhanintyas; software, Karina Nur Ramadhanintyas; validation, Novelia Eka Pri Wardani, and Annisa Wiratna Putri; formal analysis, Karina Nur Ramadhanintyas; investigation, Annisa Wiratna Putri; resources, Annisa Wiratna Putri; data curation, Karina Nur Ramadhanintyas; writing—preparation of the original draft, Karina Nur Ramadhanintyas; writing—review and editing, Novelia Eka Pri Wardani; visualization, Novelia Eka Pri Wardani and Annisa Wiratna Putri; supervision, Karina Nur Ramadhanintyas; project administration, Novelia Eka Pri Wardani and Annisa Wiratna Putri; funding acquisition, Karina Nur Ramadhanintyas All authors have read and approved the published manuscript version.

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Institutional Review Board Statement

Ethical Feasibility from the Ethics Commission of STIKES Bhakti Husada Mulia Madiun with number 028/E-KEPK/STIKES/BHM/IV/2023.

Conflicts of Interest

The authors declare no conflict of interest.

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