

Education on Limiting Sugar Consumption as an Effort to Maintain Balanced Nutrition in Adolescents at SMP N 51 Pekanbaru

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Abstract

Adolescents tend to consume more sugar than other age groups. The habit of consuming sweet drinks needs special attention in public health considering its significant contribution to increasing blood sugar levels and body weight, including adolescents at SMP N 51 Pekanbaru. The purpose of community service is to improve the knowledge, attitudes, and actions of adolescents at SMP N 51 Pekanbaru in limiting sugar consumption as an effort to maintain balanced nutrition. Community service activities are carried out by providing education through lecture methods using *power points*. Educational activities result in an increase in the level of knowledge and attitudes in limiting sugar consumption, while there is no increase in actions in limiting sugar consumption after being given education, this occurs because of the difficulty in conducting counseling outdoors because *the power point* displayed cannot be seen clearly by all participants.

Keywords: Adolescents, Balance Nutrition, Education, Sugar Consumption

A. INTRODUCTION

Non-communicable diseases in Indonesia are increasing. This is closely related to daily food consumption. The results of the analysis of the Individual Food Consumption Survey show that 3 out of 10 people in Indonesia (29.7%) consume sugar beyond recommendations. The habit of consuming sweet drinks is nothing new. In the adolescent age group, namely the age range of 13-18 years, there is a tendency to consume more sugar than other age groups, namely consuming excess sugar as much as 53.1%, consuming excess salt as much as 26.2% and consuming excess fat as much as 40.7% (Ministry of Health of the Republic of Indonesia, 2020) (Zubaidah, 2020).

Some factors that cause people to enjoy consuming sweet drinks include a preference for sweet tastes, peer influence, and exposure to mass media and social media advertising. In addition, packaged sweet drinks are easily found in various places such as cafes or shopping centers (Harijono, 2020) (Scientia et al., 2018). This incident further worsens the health situation in adolescents, considering that adolescence is a very important period for good growth and development. A balanced nutritious food intake is very important for a healthy growth and development process. If eating habits are good, by consuming healthy and balanced nutritious foods, these habits will affect adulthood (Lestari & Sari, 2021) (Roehan, 2015).

Packaged sweet drinks that are often consumed have quite high sugar content. For example, a 500 mL can of soda has a sugar content of 52 grams. Meanwhile, the daily sugar

consumption limit recommended by the Ministry of Health (Kemenkes) is 50 grams of sugar or the equivalent of four tablespoons. This recommendation is in contrast to the reality. In recent decades, there has been a significant increase in the consumption of sweet drinks. Indonesia ranks third in Southeast Asia as the country with the highest consumption of packaged sweet drinks in 2020 (CDC, 2022) (Brich & Ventura, 2009) .

According to Malik and Hu (2019), consumption of sweetened beverages contributes to weight gain and the incidence of type 2 diabetes mellitus (DM). Previous studies found a significant relationship between consumption of sweetened beverages and increased body mass index. Research in Malaysia by Abu Bakar et al. (2020) stated that individuals who consumed more SSBs had a higher body mass index (Malik et al, 2010) (Winarno, 2018) .

The habit of consuming sweet drinks needs special attention in public health considering its significant contribution to increasing blood sugar levels and body weight. Another cause of nutritional problems in adolescents is a lack of nutritional knowledge. This can be seen in the habit of consuming the wrong food and drinks. Good nutritional knowledge will influence healthier food consumption patterns. So that nutritional knowledge influences the selection and provision of food and drinks. If nutritional knowledge increases, there is a tendency to be more careful in consuming food and drinks (Kurniawati & Hidayati, 2021) (Pesantren et al., 2017) (Johnson et al, 2009) .

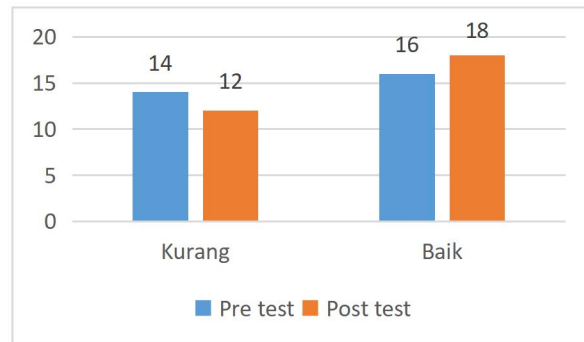
B. METHODS

Community service is packaged in the form of educational counseling on limiting sugar consumption with the aim of increasing knowledge, attitudes and actions in limiting sugar consumption. The target of this activity is 30 students of SMP Negeri 51 Pekanbaru using *simple random sampling*. These students were selected because it is expected that students can immediately limit sugar consumption from an early age in order to reduce the impact of excessive sugar consumption.

The implementation method used in this community service activity is to provide information and skills through the lecture method. The lecture method is a method that provides explanations of a material. Before and after the activity, students are asked to do a *pre-test* and *post-test* . The results of measuring knowledge, attitudes and actions are grouped into good and poor categories. The media used in implementing this community service activity is in the form of a power point presentation.

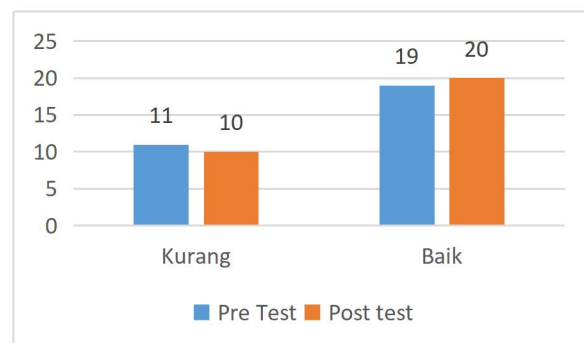
C. RESULTS

Diagram 1. Differences in the results of measuring the level of knowledge of adolescents about sugar restrictions before and after counseling.



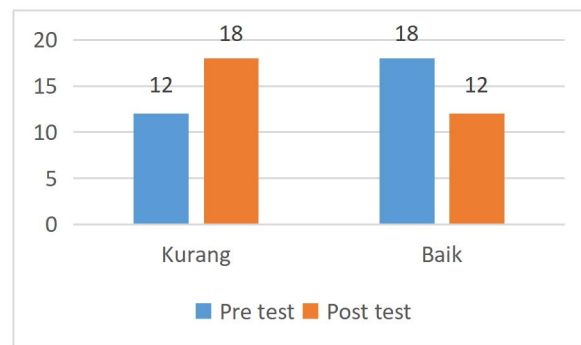
Based on diagram 1, it is known that before being given counseling, the majority of respondents had a level of knowledge about sugar restrictions with a category of less as many as 14 people (46.7%) and a category of good as many as 16 people (53.3%). While after being given counseling, the majority of respondents had a level of knowledge about sugar restrictions with a category of less as many as 12 people (40%) and a category of good as many as 18 people (60%).

Diagram 2. Differences in the results of measuring the level of adolescent attitudes regarding sugar restrictions before and after counseling.



Based on the diagram 2. It is known that before being given counseling, the majority of respondents had a level of attitude about sugar restriction with a category of less as many as 11 people (36.7%) and a category of good as many as 19 people (63.3%). While after being given counseling, the majority of respondents had a level of attitude about sugar restriction with a category of less as many as 10 people (33.3%) and a category of good as many as 20 people (66.7%).

Diagram 3. Differences in the results of measuring the level of adolescent action regarding sugar restriction before and after counseling.



Based on diagram 3, it is known that before being given counseling, the majority of respondents had a level of action on sugar restriction with a category of less than 12 people (40%) and a category of good as many as 18 people (60%). While after being given counseling, the majority of respondents had a level of action on sugar restriction with a category of less than 18 people (60%) and a category of good as many as 12 people (40%).

The activity began by conducting a pre-test to the counseling participants by giving several questions regarding the participants' knowledge regarding limiting sugar consumption. After being given counseling and closed by conducting a post-test. The results obtained by the students were the participants' answers during the pre-test and post-test which were divided into aspects of knowledge, attitude, and action from 30 samples.

Based on the results of data analysis on the knowledge aspect, there was a difference but not significant in the knowledge of participants regarding sugar consumption restrictions before and after counseling. Before counseling, 14 (46.7%) teenagers had poor knowledge, 16 (53.3%) teenagers had good knowledge. The material was delivered using the lecture method with power point media, where the effectiveness of this lecture method was also proven by other studies such as Emiwati's study (2012) which proved that lectures increased the knowledge of Madrasah Tsanawiyah students. So far, the lecture method has been considered a less good method in the learning process. Research conducted by Amaliah et al (2014) shows that the discussion method is better than the lecture method, as well as research conducted by Wijaya (2016) which states that the *Student Teams Achievement Division method* is better than the lecture method.

After counseling, the results showed that 12 teenagers (40%) had poor knowledge and 18 teenagers (60%) had good knowledge. Research conducted by Kalangi, et al. (2017) stated that counseling had an influence but was not significant on knowledge.

Based on the results of data analysis on the attitude aspect, it was found that there were differences in the attitudes of participants regarding limiting sugar consumption before and after being given counseling. Before being given counseling, 11 (36.7%) teenagers had poor attitudes, 19 teenagers (63.3%) had good attitudes. After counseling, the results showed that 10 teenagers (33.3%) had poor attitudes and 20 teenagers (66.7%) had good attitudes.

Based on the results of data analysis on the action aspect, there was a significant difference in the participants' actions regarding limiting sugar consumption before and after counseling. Before counseling, 12 (40%) teenagers had poor actions, 18 teenagers (60%) had good actions. After counseling, the results showed that 18 teenagers (60%) had poor knowledge and 12 teenagers (40%) had good knowledge.

Factors that cause the success of education using the lecture method include:

1. The use of *power point* makes it easier for participants to focus more on the lecture material.
2. Showing more images in PowerPoint makes the lecture explanation always interesting.
3. Inserting light interludes in between lectures helps participants avoid boredom.
4. Insert questions and answers in between lectures so that participants pay attention to the correct answers to the questions.

The limitations in this study include:

1. The time constraints of the participants and the research team meant that not many questions could be asked by the participants or researchers.
2. The difficulty in conducting counseling outdoors is because the power point displayed cannot be seen clearly by all participants.
3. The difficulty of researchers in knowing the implementation of the knowledge that has been obtained in real daily practice. This is actually important because science which is part of knowledge is not called science if it does not change a person's behavior (Yudha, 2016).

The delivery of information is influenced by the methods and media used because the methods and media used can provide a significant effect on increasing knowledge. This can

be seen from the results of the research analysis above which shows an increase in knowledge before and after being given counseling on limiting sugar consumption. This proves that the counseling method is effectively used to increase participants' knowledge about limiting sugar consumption (Brich & Ventura, 2009).

D. CONCLUSION

From the results of data analysis conducted after education on limiting sugar consumption in adolescents conducted at SMP N 51 Pekanbaru, there was an increase in the knowledge aspect of 6.7%, and an increase in the attitude aspect of 3.4%, while in the action aspect there was a decrease of 20%. The education conducted was effective in increasing the knowledge and attitude aspects, but was not yet effective in the action aspect.

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