



Original Article

Balanced Nutrition Education on Overweight Knowledge in Islamic Center Adolescents

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ABSTRACT

Adolescents are a group that is vulnerable to problems with balanced nutrition. Problems that occur during adolescence will continue into adulthood if prevention efforts are not taken. Balanced nutrition education is an alternative to increase and increase knowledge of overweight in adolescents. This study aims to determine the effect of balanced nutrition education on knowledge of overweight in adolescents. The research design uses quasi experiments with a one group pretest-posttest approach. The population in this study was 30 respondents using a total sampling technique. The research results obtained a pre-test score of 2.30 and a post-test of 1.33 with a change (mean difference) of 0.967. There is an influence of balanced nutrition education on knowledge of overweight in adolescents. It is hoped that health service officers in primary basic services will further improve health education for adolescents regarding balanced nutrition education as an effort to prevent overweight in adolescents.

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INTRODUCTION

Balanced nutrition is a daily food composition that contains nutrients in types and quantities that suit the body's needs, taking into account the principles of food diversity, physical activity, clean living behavior and maintaining a normal body weight on a regular basis (DINKES Bandung, 2022). Healthy food intake contains various nutrients that the body needs. to maintain body health, perfect growth and development (in children), nutritional reserves, as well as optimal daily activities and functions (DINKES Bandung, 2022).

According to WHO (2019), in 2018 in the world more than 1.9 billion teenagers were overweight. Of this number, more than 650 million teenagers are overweight. 39% of teenagers consisting of 39% men and 40% women are overweight. About 13% of the world's adolescent population, 11% of men and 15% of women are overweight. The prevalence of overweight in the world has almost tripled from 1975 to 2018.

Based on 2018 Basic Health Research (Riskesmas) data, as many as 38.3 million people in Indonesia experienced overnutrition, Aceh was ranked fifth in the prevalence of overweight in Indonesia. The incidence of overweight in Indonesia, apart from causing heart disease and diabetes, also causes a high incidence of comorbidity with various diseases such as reproductive hormone abnormalities and fertility disorders., hiperinsulinemia, disfungsi sel beta pankreas, hipertensi, serta *sleep apnea*. Based on data from the Lhokseumawe City Health Service, the highest number of overweight children of school age was found in Banda Sakti District, namely 36 people in 2018 and 20 people in 2019.

For Muara Dua District, 3 people were overweight in 2019 and 34 people in 2020. In 2021 in Banda Sakti sub-district there will still be 20 people who are overweight and in 2022 in Muara Dua sub-district there will still be 34 people who are overweight. In 2023, there will be 30 people at the LPQ Islamic center in Lhokseumawe.

Based on research conducted by (Meidiana, et al. 2018) it was found that the results of the research showed that the average value of knowledge and attitudes of teenagers after and before being given education for the Leaflet group was an average value of knowledge before 8.60 and after 9.48 for attitude before 36.58 and after 40.38 while the knowledge video group before 8.83 and after 9.42 for attitude before 36.45 and after 39.65. There is the effectiveness of education on teenager knowledge and attitudes in responding to being overweight.

Rizona, et al. 2019 said about the effectiveness of healthy snacks in improving the knowledge and attitudes of overweight students. Increase in the average knowledge score from 14.78 to 17.00 and the average attitude score from 11.72 to 13.22. The test results show that there is educational effectiveness with a difference in knowledge and attitude scores before and after the FGD with a value of $p=0.000$. Education about healthy snacks with group discussions can increase the knowledge and attitudes of overweight school children to understand about healthy snacks. Schools should provide information about healthy snacks both in the learning process in the form of discussions involving active children and the use of other media such as posters or leaflets.

Based on research conducted by (Tribita, et al. 2022) regarding the effectiveness of the use of nutrition education media on knowledge of overweight and obesity in school teenagers. The results of the research showed that there was an influence of the use of nutrition education media on teenagers' knowledge about overweight.

Based on research conducted by (Gifa, et al. 2021) regarding the influence of educational disks on diet patterns for obesity and overweight on knowledge, attitudes and dietary compliance in Islamic boarding schools. Based on the results of the research it can be concluded that there is no influence on knowledge and attitudes between groups. those given educational disc media

and the group without educational disc media and the influence on dietary compliance between the group given educational disc media and the group without educational disc media. It is hoped that students will need to improve and understand the information obtained regarding diet patterns. So you can apply it in everyday life.

METHOD

This research uses a quasi experiment, namely research by carrying out experimental activities, which aim to determine the symptoms or effects that arise as a result of certain treatments or experiments. The design used is "One Group Pre Test Post Test Design. Overweight knowledge was measured before and after being given balanced nutrition education. The population in this study was 30 respondents at the Lhokseumawe Islamic Center. The sampling technique used in this study was total sampling, namely the entire population was sampled, totaling 30 respondents.

RESULTS

The characteristics of the respondents in this study can be visible in Table 1 below:

Table 1 Frequency Distribution of Respondent Characteristics (n=30)

Characteristics of Respondents	f	%
Age		
12 years old	17	56.7
13 years old	13	43.3
Class		
Class 1	15	50.0
Class 2	15	50.0
Gender		
Male	13	43.3
Female	17	56.7

Resource: primary research

Male Based on table 1 above, it was found that the majority of respondents' ages were around 12 years, with 17 respondents (56.7%). Based on the class of respondents, both Class 1 and Class 2, there were 15

respondents (50%). And the majority of respondents were female, 17 respondents (56.7%).

Table 2 Frequency distribution of overweight knowledge (n=30)

No	Knowledge	Pretest		Posttest	
		f	%	f	%
1	Good	2	6,7	20	66,7
2	Enough	17	56,7	10	33,3
3	Not enough	11	36,7	0	0,0
Jumlah		30	100,0	30	100,0

Resource: primary research

Based on table 2 above, it shows that before being given education, it was found that the majority of respondents' knowledge was in the sufficient knowledge category, namely 17 respondents (56.7). And after being given education, the majority of respondents' knowledge was in the good knowledge category, namely 20 respondents (66.7%).

Table 3: The effect of balanced nutrition education before and after being given education.

Knowledg Overweight	Mean	Mean	Standart Deviasi	ρ Value
Pre Test	2,30	0,967	0,596	0,000
Post Test	1,33		0.479	

Based on table 3, it is known that the average before and after education increased, where the average before education was 2.30 and after education was 1.33 with an average change (mean difference) of 0.967, the calculated t value of 12.794 was greater than t table value (1.699) which means there is an influence of balanced nutrition education on knowledge of overweight with a probability value or sig. (2-tailed) = 0.000 < α = 0.05, it can be concluded that balanced nutrition education is effective in overweight knowledge.

DISCUSSION

The research results, it is known that the characteristics of respondents based on a

majority age of 12 years are 17 respondents (56.7%). This shows that the age of 12 years can influence good knowledge. Ages 12 years and over are the age that is vulnerable to good knowledge. This is in line with research (Risma et al., 2018) which states that those aged 12 years and over tend to have good knowledge, this is because the older they get, the more their understanding and thinking patterns will develop so that the knowledge they gain will also improve and increase.

Based on the class of respondents, both class 1 and class 2, there were 15 respondents (50.0%). This shows that a person's level of education or class influences good knowledge. The higher a person's education, the more a person's knowledge increases. This is in line with research (Suhardjo 2013) which states that the higher the education, the easier it is to accept and develop knowledge and technology so that it can improve welfare.

Based on gender, the majority were female, namely 17 respondents (56.7%). This shows that the female gender has good knowledge. This could be because women care more about education so they want to look for lots of information to increase their knowledge. This is in line with research (Wulandari A, et al. 2020) which states that women tend to have better knowledge compared to men. This is because women have more time to read or discuss with their environment.

1. Pre-Test

Based on the results of research conducted at the LPQ Islamic Center Lhokseumawe, the results of the univariate analysis in table 2 show that the majority of respondents have good knowledge, namely 2 respondents (6.7%). Knowledge is a very important domain for the formation of a person's behavior. Most nutritional problems can be avoided if teenagers have sufficient knowledge about maintaining nutrition and managing eating (Notoatmodjo, 2010). Providing information both formally and informally can increase knowledge. Before

the education was carried out, respondents' knowledge was reduced due to a lack of previous knowledge about balanced nutrition education.

This research is in line with research conducted by Ramadhani & Khofifah (2021) where the p-value is 0.000 with an increase in respondents' knowledge seen from the pretest results of respondents who obtained an average value of 51.43 and the posttest results of respondents who obtained an average value of 71.14.

According to research assumptions, before being given education, there were 2 respondents who had good knowledge, because teenagers did not get enough information about balanced nutrition, teenagers were less concerned about being overweight so teenagers did not dig up information about overweight. Therefore, it is necessary to provide balanced nutrition education to increase knowledge about overweight. Education can be done through several media and methods. Education carried out with the help of media will make it easier and clearer for the audience to receive and understand the material presented. In this research, education was provided using leaflet media. It is hoped that balanced nutrition education through this leaflet media can increase teenagers' knowledge at Islamic centers.

2. Post-test

Based on the results of research conducted at the LPQ Islamic Center Lhokseumawe, the results of the univariate analysis in table 2 show that the majority of respondents have good knowledge, namely 20 respondents (66.7%). Knowledge is a very important domain for the formation of a person's behavior. Most nutritional problems can be avoided if teenagers have sufficient knowledge about maintaining nutrition and managing eating (Notoatmodjo, 2010). Providing information both formally and informally can increase knowledge. Before the education was carried out, the respondents' knowledge was reduced due to

a lack of previous knowledge about balanced nutrition education.

This research is in line with research conducted by Ramadhani & Khofifah (2021) where the p-value is 0.000 with an increase in respondents' knowledge seen from the pretest results of respondents who obtained an average value of 51.43 and the posttest results of respondents who obtained an average value of 71.14.

According to research assumptions, after being given education, the average knowledge of respondents increases, this is because the education provided is easily understood by teenagers so that teenagers' knowledge increases after being given education. This education can be said to be very effective in increasing teenagers' knowledge about overweight.

3. The influence of balanced nutrition education on knowledge of overweight.

The pre-test and post-test show a paired t-test with a P value of 0.000 which can be concluded that balanced nutrition education has an effect on teenagers' knowledge about overweight. Where the average value before and after education increased, before education was 2.30 and after education was 1.33 with an average change (mean difference) of 0.967. which means there is an influence of balanced nutrition education on knowledge of overweight in teenagers at the Lhokseumawe Islamic Center.

The results of this research are in line with research conducted by Pakhri et al., (2018) regarding the influence of nutritional education on nutritional knowledge and energy, protein and iron intake in adolescents. The results showed that there was an influence of nutritional education on respondents' nutritional knowledge as proven by the significant value (P) of 0.000.

This research is also in line with research conducted by (Meidiana, et al. 2018) regarding the influence of education through audio-visual media on the knowledge and attitudes of overweight teenagers. It was

found that the results of the research showed the average value of knowledge and attitudes of teenagers after and before being given education to the leaflet group's average value for knowledge before and after was 9.48, the value for attitude before was 36.58 and after 40.38, while the video group's knowledge before and after was 8.83 and after 9.42 for attitude before 36.45 and after 39.65. There is an educational influence using audio-visual media and leaflets on increasing the knowledge and attitudes of overweight teenagers.

This is also in line with research conducted by (Rizona, et al. 2019) regarding the effectiveness of healthy snacks education in increasing the knowledge and attitudes of overweight students, increasing the average knowledge score from 14.78 to 17.00 and the average attitude score from 11.72 to 13.22. The results of analysis using the Wilcoxon test show that there is educational effectiveness with a difference in knowledge and attitude scores before and after the FGD with a value of $p = 0.000$. Education about healthy snacks with group discussions can increase the knowledge and attitudes of overweight school children to understand about healthy snacks. Schools should provide information about healthy snacks both in the learning process in the form of discussions involving active children and the use of other media such as posters or leaflets.

Researchers assume that balanced nutrition education can be used as an alternative to increase knowledge, which can be seen from the increasing knowledge after being given education.

Based on the discussion above, it can be concluded that the majority of respondents have good knowledge, namely 12 years old (56.7%), based on the class characteristics of the respondents, it is found that class 1 and class 2 have the same frequency, namely 15 respondents (50.0%). From the research results, it was found that the majority of respondents were female, namely 17 respondents (56.7%). From the research results, it was found that the

average value before being given balanced nutrition education was 2.30 and after being given the education, namely 1.33 with an average change (mean difference) of 0.967. The calculated t value (12.794) was greater than the t table value (1.699). which means there is an influence of balanced nutrition education on knowledge of overweight with a probability or sig value. (2-tailed) = 0.000 < α = 0.05, it can be concluded that balanced nutrition education is effective in overweight knowledge at the LPQ Islamic Center Lhokseumawe.

CONCLUSIONS AND RECOMMENDATION

Based on the research conducted, it can be concluded that balanced nutrition education is effective in overweight knowledge among teenagers at the Lhokseumawe Islamic Center with p value = 0.000. It is hoped that respondents will be able to increase their knowledge about balanced nutrition and knowledge about overweight. It is hoped that educational institutes can add literature references related to knowledge of overweight in adolescents. It is hoped that future researchers will be able to conduct research by conducting more comprehensive balanced nutrition education and adding characteristics of height and weight. It is hoped that health service officers in primary primary care will further improve health education for adolescents regarding balanced nutrition education as an effort to prevent overweight in adolescents.

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