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Proceeding Paper

THE EFFECT OF EMPOWERING LITTLE DOCTORS ON KNOWLEDGE AND ATTITUDES ABOUT OBESITY PREVENTION IN IT AL-QISWAH ELEMENTARY SCHOOL STUDENTS

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Abstract

Obesity can be experienced by anyone, including children. The still high rate of obesity in children in Bengkulu City requires prevention efforts. One effort that can be made is to provide health education about obesity prevention in the form of empowering small doctors. This study aims to determine the effect of empowering small doctors on knowledge and attitudes about preventing obesity in children. This research is a quantitative research with a research design like an experiment plan model one group pretest-posttest design. The population in this study was class IV students at Al-Qiswah IT Elementary School, Bengkulu City and used techniques total sampling to get a total of 33 respondents. Data analysis used on knowledge and attitudes is a test Wilcoxon. The results of implementing the empowerment of small doctors were an average of 88.63% in the very good category. The average knowledge of children increased by 92.42 in the very good category. The average attitude increased by 90.94 in the very good category. Test calculations on knowledge and attitude variables through tests wilcoxon obtained Sig. < 0.05, which means that there is an influence of empowering small doctors on knowledge and attitudes about obesity prevention at Al-Qiswah IT Elementary School, Bengkulu City. It is hoped that empowering small doctors regarding obesity prevention can be used as an effective method in conveying health information to students and can be applied in students' learning methods.

Keywords: Obesity**,** Empowerment, Little Doctor, Knowledge, Attitude

INTRODUCTION

Childhood obesity is a global issue in developing countries and causes clinical problems, increasing the rates of illness and premature deat (Smith, J.D et.al, 2020). Children with obesity are at a higher risk of developing chronic or non-communicable diseases and psychological disorders, as well as

increasing the risk of obesity in adulthood (Alkautsar, et.al, 2022). At the same time, children are accustomed to consuming foods high in fat and sugar, and this consumption pattern, coupled with a lack of physical activity, leads to an increase in the incidence of childhood obesity (Fadhilah, et.al, 2021). One in five primary school-aged children and one in seven adolescents in Indonesia are overweight or obeses (WHO, 2021). Childhood obesity impacts various bodily systems, including orthopedic, cardiovascular, respiratory, liver, and psychological issues. Childhood obesity often persists into adulthood and can lead to metabolic disorders like glucose metabolism issues and degenerative diseases such as cardiovascular diseases (stroke and heart disease) and blood vessel blockages (Fadhilah, et.al, 2021).

Excess weight can have negative effects on health. According to WHO, obesity is responsible for 10.3% of all deaths worldwide. Based on SSGI 2022 data, obesity (overweight) among children aged 5-12 years is 10.8% overweight and 9.2% obese, meaning 1 in 5 children aged 5-12 years are overweight or obese due to a lack of physical activity (64.4%). Obesity is one of the issues that has caught the government's attention. Approximately 39 million children under the age of 5 were overweight or obese in 2020. More than 340 million children and adolescents aged 5-19 years were overweight or obese, both in developed and developing countries, showing an 18.5% increase (WHO, 2021). The prevalence of obesity in Indonesia is 9.6%. In 2016, more than 340 million children and adolescents aged 5-19 years were affected by obesity. This condition has changed from 4.9% in 2000 to 5.6% in 2017, with more than two million children in Indonesia experiencing obesity or being overweight (Banjarnahor R, et.al). According to the data from Bengkulu City Health Office, the prevalence of obesity among elementary school children in Bengkulu City in 2022 was 242 children, with a percentage of 15.78%. The Betungan Health Center has the highest obesity rate, with 25.7% of children being obese. From the above obesity data, the obesity rate at SD IT Al Qiswa is 18.8% (Bengkulu City Health Office, 2022). Empowering the Small Doctor Program is an effort to empower students in a school who meet the criteria and are trained to participate in various health maintenance and improvement activities for themselves, their peers, their families, and their surroundings. The School Health Program (UKS) can reach the school-aged population, allowing each child the opportunity to participate as a UKS volunteer (Rizona F, et.al, 2020). The high prevalence of obesity cases among school children has led the author to conduct research titled “The Effect of Empowering Small Doctor Groups on Knowledge and Attitudes Regarding Obesity Prevention in Elementary School Children”.

MATERIALS AND METHODS

This study is a quantitative research using the One Group Pretest and Posttest method, which is used to assess the impact of empowering small doctor groups on students' knowledge and attitudes regarding

obesity prevention at SD IT Al Qiswa in Bengkulu City. The sample for this study consisted of 33 students from SD IT Al Qiswa, selected using random sampling technique. Data sources were obtained from references, distribution of questionnaires, observations, and documentation from students. The instruments used in this study were questionnaires and an obesity booklet. Data analysis was performed using the Wilcoxon signed-rank test.

RESULTS AND DISCUSSION

Results

Formation of Small Doctors Program for Obesity Prevention at SD IT Al-Qiswah

Table 1: Formation of Small Doctors Program for Obesity Prevention at SD IT Al-Qiswah

No.	Variable	Small Doctors						Mean
		1	2	3	4	5	6	
1.	Knowledge	100	90	100	90	100	100	96,67
2.	Attitudes	70	82,5	76	85	90	80	80,58
Mean		85	86,25	88	87,5	95	90	88,63

Based on Table 1, it is known that the average score for the small doctors' knowledge assessment is 96.67, categorized as very good; the average score for the attitude assessment is 80.58, categorized as good; and the overall average score is 88.67, categorized as very good. Almost all students have participated in the small doctors' empowerment activities on obesity prevention effectively.

Formation of Obesity Prevention Knowledge Module at SD IT Al-Qiswa

Table 2: Obesity Prevention Module at SD IT Al-Qiswa

No	Variable	Value	Explanation
1.	Expert Validation of Media	98,57	Suitable

Based on Table 2, it is known that the assessment result for the media's suitability with 14 criteria is 98.57, categorized as very good, which means that the design of the obesity prevention module is very suitable to be trialed for use in the small doctor program at SD IT Al-Qiswa.

Students' Knowledge Before and After Small Doctor Empowerment at SD IT Al-Qiswa

Table 3: Average Student Knowledge Before and After Empowerment

Variable	N	Mean±SD	Min-Max	CI95%
Knowledge				
Before (Pretest)	33	45,76±17,683	10-80	39,49;52,03
After (Posttest)	33	92,42±9,024	70-100	89,22;95,62

Based on Table 3, it can be observed that the average increase in knowledge before and after the implementation of the small doctor empowerment program on obesity prevention at SD IT Al-Qiswa is as follows: from an average score of 45.76, categorized as poor, it increased to 92.42, categorized as good, with the standard deviation decreasing from 17.683 to 9.024. It can be said that 95% of the average knowledge ranged from 39.49 – 52.03, categorized as poor, has increased to a range of 89.22-96.62, categorized as good.

Students' Attitudes Before and After Small Doctor Empowerment at SD IT Al-Qiswa

Table 4: Average Student Attitudes Before and After Empowerment

Variable	N	Mean±SD	Min-Max	CI95%
Attitude				
Before (Pretest)	33	29,45±4,040	22-38	28,02;30,89
After (Posttest)	33	36,30±2,555	30-40	35,40;37,21

Based on Table 4, it explains the increase in the average attitude score of students after the implementation of the small doctor empowerment program on obesity prevention, from an initial score of 29.45, categorized as good, to 36.30, categorized as very good, with the standard deviation decreasing from 4.040 to 2.555. It can be observed that 95% of the average attitude scores ranged from 28.02–30.89, categorized as good, have increased to a range of 35.40–37.21, categorized as very good. Based on this, it can be concluded that nearly all classes experienced an improvement in the average attitude towards obesity prevention after the small doctor empowerment program.

The Effect of Small Doctor Empowerment on Knowledge and Attitudes Towards Obesity Prevention at SD IT Al-Qiswa

Table 5: The Effect of Small Doctor Empowerment on Knowledge and Attitudes Towards Obesity Prevention

Variable	Before		After		Average	P
	MEAN	SD	MEAN	SD	MEAN	*Value*
Knowledge	45,76	17,683	92,42	9,024	69,09	0,000
Attitudes	29,45	4,040	36,30	2,555	47,60	0,000

Based on Table 5, the significance value of the test for the variables of knowledge and attitudes, analyzed using the Wilcoxon test with a p-value < 0.05, indicates that H0 is rejected and Ha is accepted. Therefore, it can be concluded that the small doctor empowerment program has an effect on knowledge and attitudes regarding obesity prevention at SD IT Al-Qiswa.

Discussion

Formation of Obesity Prevention Small Doctor Program at SD IT Al-Qiswah

In this study, the small doctor empowerment was carried out using the module 'Recognize and Prevent Obesity'. The results of the small doctor empowerment implementation show that nearly all the small doctors involved in this program participated very well. Therefore, this program can be utilized to enhance knowledge and attitudes towards obesity prevention at SD IT Al-Qiswa.

Empowering small doctors using a health education module on obesity prevention at SD IT Al-Qiswa has an impact on increasing SD students' knowledge about obesity prevention, with a noticeable difference in average knowledge before and after the small doctor empowerment. The results of this study in line with the findings by Martony (2020), which explain that there is an improvement in the knowledge of elementary school students following health education training. The study by Sayafrawati et.al (2021), explains that small doctor training through health education materials, especially using visual aids or simulations, effectively enhances the knowledge of small doctors.

Formation of the Obesity Prevention Module

Based on Table 2, it is known that the result of the feasibility evaluation with 14 criteria is 98.57, categorized as very good, which means that the design result of the obesity prevention module is highly suitable for trial use in the small doctor empowerment program at SD IT Al-Qiswa. The 14 criteria that have been reviewed and validated by experts include: Relevance, Material, Maintainability, Usability, Timeliness of Material Delivery, Documentation, Communication, Creativity, Simplicity, Typography, and Illustrations. The structure and design of the obesity prevention module have been deemed suitable, with easy to understand content, appropriate color composition, and language that is appropriate for the readers and validated for use in the research. The material presentation has also been reviewed by experts, ensuring it is simplified and aligned with obesity prevention content. The study by Mu', A & Hanum, T (2023), confirms that the module is effective in improving student learning outcomes, particularly benefiting students with a visual learning style, as it includes text and images that can be perceived through the students' visual senses.

Student Knowledge About Obesity Prevention

In this study, small doctor empowerment was conducted using a health education module titled 'Recognize and Prevent Obesity', which involved 6 sessions of training. The average result of the knowledge assessment for small doctors throughout the empowerment activities was 96.67, categorized as very good, indicating that nearly all students who participated in the small doctor empowerment activities achieved a high level of knowledge about obesity prevention. This increase

in knowledge is attributed to the health promotion activities based on the 'Recognize and Prevent Obesity' education module. The module has several advantages, including a design that is suitable for elementary school students, with bright colors, illustrated characters, and engaging text. It also includes evaluations related to healthy eating and physical activity in the form of appealing images. This design contributes to the effectiveness of the empowerment program, as the module is well-suited to the characteristics of elementary school students, thereby maximizing the effectiveness of the empowerment activities. These results are consistent with the findings by Martony (2020), which show that there is an improvement in elementary school students' knowledge following health education training.

Student Attitudes Towards Obesity Prevention

In this study, small doctor empowerment was carried out using a health education module titled 'Recognize and Prevent Obesity', which involved 6 sessions of training. The average result of the attitude assessment for small doctors throughout the empowerment activities was 36.30, categorized as very good, indicating that nearly all students who participated in the small doctor empowerment activities developed a positive attitude towards obesity prevention.

The change in attitude is attributed to the health promotion activities conducted through the small doctor empowerment program based on the 'Recognize and Prevent Obesity' education module. The empowerment program with this educational module significantly impacted the improvement of elementary school students' attitudes towards obesity prevention, as evidenced by the difference in attitude scores before and after the program. These results are consistent with the findings by Earlyawan P.A. et.al (2023), which demonstrate that there is an increase in elementary school students' attitudes following health education training. Findings by Kelly J. et al. (2024) reveal that children tend to adopt attitudes that disregard dietary guidelines and fail to obtain calories from nutritious sources.

The Impact of Small Doctor Empowerment on Students' Knowledge and Attitudes Towards Obesity Prevention at SD IT Al-Qiswah, Bengkulu City

The results of the statistical analysis using the Wilcoxon test with a p-value < 0.05 indicate that the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. This means that the small doctor empowerment program has a significant impact on students' knowledge and attitudes towards obesity prevention at SD IT Al-Qiswah. The increase in knowledge is attributed to the health promotion activities conducted through the small doctor empowerment program, based on the 'Recognize and Prevent Obesity' education module.

According to Nurafirfah (2020), the implementation of the small doctor program led to improvements in students' knowledge and attitudes. Thus, there is a significant impact of the small doctor program on students' knowledge and attitudes. To achieve children's health within the school environment, strategies such as advocacy, social support, and empowerment are necessary. Empowering students can be done through the small doctor program. Additionally, collaboration with various stakeholders is essential to realize children's health, especially in the school setting.

CONCLUSION

The conclusion of this study is: 1). Students who participated in the small doctor program at SD IT Al-Qiswah have generally shown very good engagement in the prevention of obesity, leading to the formation of a small doctor program that can be utilized to enhance SD students' knowledge about obesity at SD IT Al-Qiswah, Bengkulu City. 2). The obesity prevention module titled 'Understanding and Preventing Obesity' can be used as an educational tool that has been implemented in the small doctor program at SD IT Al-Qiswah, Bengkulu City. onclusions from this research: 3). There was an increase in knowledge among students at SD IT Al-Qiswah, Bengkulu City, from a lower level of understanding before the implementation of the small doctor program to a higher level of understanding after the program. 4). There was an improvement in attitudes among students at SD IT Al-Qiswah, Bengkulu City, moving from a good level before the small doctor program to an excellent level after the program. 5). The small doctor program had a significant impact on students' knowledge and attitudes regarding obesity prevention at SD IT Al-Qiswah, Bengkulu City. The suggestions in this study: 1). Health Service Institutions: It is expected to utilize and provide information about health promotion through the little doctor program by using the educational module "Understanding and Preventing Obesity" to improve knowledge and attitudes about obesity prevention. 2). Schools: It is expected that the educational module "Understanding and Preventing Obesity" can be used as a resource in continuing the little doctor program in schools. 3). For Undergraduate Students: It is expected that this study can be input and reference for other students in conducting research with various variables in health promotion.

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