



ANALYSIS OF NURSING CARE WITH WALKING SPORTS INTERVENTION TO REDUCE SEDENTARY BEHAVIOR IN CHILDREN WITH OBESITY IN RT 03 RW 09 GROGOL, LIMO, DEPOK

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ABSTRACT

Introduction: Overweight and obesity is a problem of excess nutrition that is increasingly common in children around the world. Overweight and obesity in children is the result of calorie (energy) intake that exceeds the number of calories expended or burned through metabolic processes in the body. Lifestyle changes that lead to westernization and sedentary life styles are often found in big cities in Indonesia. Simple physical activities that can overcome obesity in children include walking. Walking is a way to increase physical activity that is simple, easy, and can be done by anyone at any time. This writing aims to determine the effectiveness of walking interventions for reducing body mass index in school-age children.

Method: This type of research is qualitative with a case study approach. The population in this study were obese children. Number of subjects 2. Subject criteria: obese children aged 6 to 10 years with a threshold > 2 SD based on measurements of Body Mass Index, have body characteristics: round face, double shoulders, both inner thighs are pressed against each other and rub together, distended stomach, and a relatively short neck. This research was conducted for one month. Walking exercise is done 3 times in 1 week and is done for approximately 40 minutes.

Results: In resume patients, there was a weight loss of 1 kg with a decrease in BMI of 0.4 SD. So it can be concluded that the walking intervention had an effect on reducing body mass index in school-age children.

Conclusion: Community nurses are expected to be able to apply walking as a management method for overcoming weight and obesity in school-age children.

Keywords: *Obesity, School Age Children, Walking Sport, Walking Exercise*

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INTRODUCTION

Being overweight and obese has serious consequences for children, including early diabetes and high blood pressure, psychosocial problems related to stigma and bullying by other children, and lower learning outcomes (UNICEF, 2022). Overweight and obese children are also at greater risk of experiencing various forms of non-communicable but life-threatening diseases as adults. For example, heart disease, stroke, and some types of cancer. The

obesity epidemic is one of the biggest challenges to global public health, ranking in the top three causes of chronic health problems. An increase in obesity rates is generally associated with a person's habit of consuming foods with more fat than needed (Ministry of Health, 2018). There were 340 million children and adolescents aged 5-19 years who were overweight or obese in 2016. The prevalence of overweight and obesity among children and adolescents aged 5-19 has increased dramatically from just 4% in 1975 to

over 18% in 2016. The increases have been similar among boys and girls: in 2016 18% of girls and 19% of boys were overweight (WHO, 2021). In Indonesia, based on Basic Health Research data (2018), the prevalence of obesity in Indonesia at the age of over 18 years is around 21.8%, while children aged 5 to 12 years who are overweight or obese are respectively 11.9%. and 8%. The 2018 Riskesdas also showed that the prevalence of obese children and toddlers (BB/TB) in Central Java was 7.6%, and in Sukoharjo Regency, the prevalence of overweight children and toddlers was quite high, namely 12.3% (Ministry of Health RI, 2018).

Obesity management is carried out by increasing physical activity with sustainable movements with low to moderate intensity movements so that there is an increase in energy expenditure and an increase in muscle mass. An active lifestyle is a balancer of energy intake, thus the energy intake will never be excessive in the body if you always live an active life (Ministry of Health, 2018). Lifestyle changes that lead to westernization and sedentary lifestyles are often found in big cities in Indonesia. This lifestyle change causes a change in knowledge and attitude, especially the attitude of parents towards their children in eating patterns, food selection which refers to a diet high in calories, fat and cholesterol. In addition, other factors that cause obesity in children are heredity and parenting styles (Heri et al., 2021).

To reduce the incidence of obesity, the American Heart Association (IDAI, 2016) recommends that children aged two years or more should do at least 60 minutes of moderate-intensity physical activity that is fun and varies according to development according to the child's age (Khairunnisa and Dermawan, 2016). 2021). Simple physical activities that can overcome obesity in children include walking. Several cities in various developed countries in the world promote walking to school activities.

Based on the results of the preliminary study, the authors chose one family to be managed and one resume family. The results of the explanation previously described regarding the problem of overweight in school-age children through sports activities and walking, the authors have determined the implementation of "Analysis of Family Nursing Care with Walking Sports Intervention to Reduce BMI and Sedentary Behavior in Children with Obesity in Rt 03 Rw 09 Grogol Village, Limo District, Depok City.

METHOD

This type of research is qualitative with a

case study approach. The population in this study were obese children. Number of subjects 2. Subject criteria: obese children aged 6 to 10 years with a threshold > 2 SD based on measurements of Body Mass Index, have body characteristics: round face, double shoulders, both inner thighs are pressed against each other and rub together, distended stomach , and a relatively short neck. This research was conducted for one month. Walking exercise is done 3 times in 1 week and is done for approximately 40 minutes.

RESULTS

Table 1. Characteristics of research subjects

No.	Characteristics	frequency
1.	gender	
	Man	2
	Woman	0
2.	Age	
	0-5 years	0
	6-10 years	2
3.	classification	
	Mild obesity	2
	Moderate obesity	0
	Severe obesity	0
4.	long suffered	
	< 1 years	0
	> 1 years	2

Source: Researcher data (2023)

Researchers took a number of 2 subjects according to predetermined criteria. The characteristics of most of the subjects were in the age range of 6-10 years (100%), male (100%), and most of the subjects were obese for more than 1 year, namely 2 people (100%).

Implementation carried out 3 times in 4 weeks with a total of 12 meetings. The intervention was carried out in the form of walking for approximately 40 minutes in one day. In addition to these activities, families are also given education regarding obesity or overweight, the causes of obesity, the impact of obesity, how to handle and overcome obesity and how to serve nutritious food for obese children. Children were also measured to monitor changes in BMI in patients during the intervention process.

Table 2 Frequency Distribution of Walking Exercise Intervention Evaluation in Patient Management and Resume

An. C pasien Kelolaan				
Minggu Ke-	1	2	3	4
TB, BB dan IMT Sebelum intervensi	TB= 124 BB= 40 kg IMT= +4,4 = +4,8 SD	TB= 125 BB= 39,4 kg IMT= +4,4 SD	TB=12 5 BB= 39 kg IMT= +4,25 SD	TB= 125 BB= 38,2 kg IMT= +4,02 SD
TB, BB dan IMT Sesudah intervensi	TB= 124 BB= 39,8 kg IMT= +4,25 = +4,7 SD	TB=12 5 BB= 39 kg IMT= +4,25 SD	TB=12 5 BB= 38,6 kg IMT= +4,15 SD	TB=12 5 BB= 38 kg IMT= +3,95 SD
Total Penurunan BB dan IMT	BB= 2 kg IMT= 0,85 SD			
An. C Pasien Resume				
Minggu Ke-	1	2	3	4
TB, BB dan IMT Sebelum intervensi	TB= 129 BB= 42 kg IMT= +4 SD = +4,1 SD	TB= 129 BB= 41,4 kg IMT= +4 SD	TB= 130 BB= 41,6 kg IMT= +3,9 SD	TB= 130 BB= 41,4 kg IMT= +3,8 SD
TB, BB dan IMT Sesudah intervensi	TB= 129 BB= 41,4 kg IMT= +3,9 = +4 SD	TB=12 9 BB= 41 kg IMT= +3,9 SD	TB=13 0 BB= 41 kg IMT= +3,7 SD	TB=13 0 BB= 41 kg IMT= +3,7 SD
Total Penurunan BB dan IMT	BB= 1 kg IMT= 0,4 SD			

Table 2 shows the distribution of the frequency of evaluation of weight loss and BMI after walking in An. C. An.C's body weight Before walking, which was 40 kg and after four weeks of walking regularly 3 times in 1 week, An. C Says you are not tired when doing light to moderate activities. An.C's

body lost 2 kg in weight and decreased BMI by 0.85 SD.

Evaluation of the walking exercise intervention has shown significant results in reducing sententary behavior and reducing body weight and body mass index in school-age children. The results showed that after walking three times a week and carried out for one month, An.C and An.M's body weight and BMI decreased. An. C decreased by 0.85 SD. While An. M experienced a decrease in BMI of 0.4 SD. There is a difference in weight loss between managed patients and resume patients, this is because An. M said that he was still lazy to do activities outside the house. He still often plays games and stays at home. Compared with An. Patient C said that he often played outside the house and reduced fatty snacks. However, this shows that the management of walking sports which is carried out three times a week and is carried out regularly for one month can reduce sententary behavior and reduce weight in school-age children.

Weight loss results in An. M after intervention for 4 weeks 12 times is 1 kg. Body weight before the intervention was 42 kg and after the intervention was 41 kg. Before the intervention of An. M has a height of 129 cm in the third week there was an increase in height to 130 cm and in the fourth week he was still 130 cm. An.M's body mass index of course also experienced a significant decrease, namely by 0.4 SD before the intervention of +4.1 SD and after the BMI intervention counted +3.7 SD.

DISCUSSION

From the above results it is known that walking sports can lose weight in school-age children with obesity. Significant weight loss was shown in the two study subjects where subject 1 lost 2 kg of weight, and the second subject lost 1 kg of weight.

In line with research conducted by (Khairunnisa and Dermawan, 2021) which said that the subject criteria: obese children aged 6 to 10 years with a threshold > 2 SD based on measurements of Body Mass Index, have body characteristics: round face, double shoulders, the two inner thighs stick together and rub together, the belly is distended, and the neck is relatively short.

There is research which says that technological advances in the form of electronic devices such as video games, playstation, television and computers also cause children to be lazy to do physical activity and change lifestyles that lead to a sedentary lifestyle (Powell et al., 2018). In addition to the above factors, children's physical activity can also

affect the occurrence of obesity. Lack of physical activity or known as a sedentary lifestyle can result in energy not being used so that metabolic processes do not occur optimally which results in accumulating energy reserves. Over time, this will become fat deposits and uncontrolled weight gain occurs (Rizona et al., 2020).

There is research that says Management of Weight Management: Walking Exercise with Obesity Nursing Problems is effective for losing weight (Khairunnisa and Dermawan, 2021). This is in line with research conducted by (Darmawati, Setiawan and Fitriyani, 2020) which says that there are significant changes in children's daily activities. These changes in habits have a positive meaning in efforts to manage weight by AUS with changes in sedentary living habits to moderate and vigorous activities. This study also describes a change in BMI value of 0.21 with a p value of $0.004 < 0.05$ which shows that there is a significant effect on changes in BMI even though the numbers are not too high, and are in a stable range. However, according to statistical calculations, the results before and after the program are significant.

Research (Chiang et al., 2019) was carried out by dividing subjects into 3 groups, namely the Walking Step Goal Group (WSG), Control Group (CG) and Walking Exercise Group (WEG) which were given the same number of steps but different intensity, then Compared to the results of this study, it was shown that these two groups had an influence on body composition measurements but in WEG there were more significant changes, namely in body weight, body mass index and waist circumference measurements.

Research (Mori, Armada and Willcox, 2012) shows that the activity of walking to school with a radius of 2 to 4 kilometers in elementary school-age children and 3 to 6 kilometers in junior high school-aged children in Japan can overcome obesity in children and increase their fitness. Research conducted by (Zamzani, Hadi and Astiti, 2017) illustrates that the results of the Fisher's test show that there is a relationship between physical activity and the incidence of obesity in children as evidenced by the value of $p = 0.009$ (1 hour/day).

This research is not in line with research conducted by (Darmawati, Setiawan and Fitriyani, 2020) entitled Implementation of the Walking and Cycling to School Program for School-Age Children in Depok City which says that compared to walking, cycling provides more calorie burning results. height for weight loss in children. Cycling has a faster effect than walking on reducing a child's Body Mass Index.

Increasing students' habits of walking and cycling to school has been shown to reduce sedentary lifestyles in students and to have a positive effect on reducing the BMI of students with obesity.

CONCLUSION

The results of walking exercise interventions performed on managed and resume patients show that this intervention is proven to be able to help reduce sedentary behavior and reduce body weight and body mass index in children with obesity.

For families with obese children: It is hoped that this walking exercise intervention can be continued routinely 3 times a week with interval training by children as a treatment in reducing sedentary behavior and overcoming obesity and helping to reduce BMI.

Families are expected to be able to motivate children not to adopt sedentary behavior at home and to do light physical activities such as walking and playing bicycles. Families are also expected to be able to regulate and monitor healthy eating patterns and activities that children with obesity can do. Families are expected to increase their knowledge by reading booklets that have been made by the author regarding obesity management.

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