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Physical Education as a Solution to Obesity in Children

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ABSTRACT
This research is a qualitative descriptive study that aims to find out the role of physical education as a solution to solving the problem of obesity in children in this modern era. The method applied in this study is a literature study that was excavated from various studies sourced from Google Scholar using the keywords physical education and obesity. The conclusion of this study is that physical education can help obese students achieve their lifelong health and fitness goals through fitness improvement approaches and counselling related to healthy lifestyles and the dangers of obesity.

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INTRODUCTION

Advances in technology have caused human habits to experience a significant shift. People choose instant and practical things to carry out various activities in this era of increasingly sophisticated communication tools. People, for example, prefer to use transportation instead of walking; many take advantage of internet programmes to make it easier than conventional methods, which are tiring and time-consuming; and children spend more time watching television, playing video games, and using mputers. This resulted in a significant decrease in physical activity (Gibney et al., 2008; Sabila, n.d.).

A person is said to be active if he participates in strenuous activity at least three times a week for a minimum of 20 minutes per day, is less active if students only do moderate activity for at least three hours per day in one week, and is inactive if they do not meet this requirement (Anam et al., 2016). Lack of physical activity in children is expected to continue to increase from year to year, which will have an impact on their health in the future, one of which is obesity (Farooq et al., 2020). Obesity is often characterised as a condition characterised by abnormal or excessive accumulation of fat in adipose tissue (WHO, Technical Report Series, 2004; Pertiwi et al., 2015).

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Obesity is caused by an imbalance between energy intake and expenditure, which results in excess energy being stored as fat tissue (Hall & Guo, 2017). According to WHO statistics, about 1.4 billion people are overweight, and 2.8 million adults die every year as a result of obesity and being overweight. Obese people are also more likely to develop degenerative diseases such as diabetes, heart disease, cancer, and sleep apnea (Lidiawati et al., 2020). In addition to physical ailments, people who are obese are more likely to experience social disorders and psychological problems such as discrimination, low self-esteem, depression, a negative self-concept, eating disorders, and a negative body image (Dephita, 2017).

Behaviour change for school-age children and adolescents is very important in the treatment and prevention of obesity (Peirson et al., 2015). Only in behaviour change programmes, especially through physical education, can knowledge related to healthy lifestyles and the prevention of obesity be given to students (Hinckson et al., 2013). For example, by providing facilities and infrastructure for physical activity and providing health-related materials for children's lives. Providing knowledge about those who are accustomed to eating fruits and vegetables and being more physically active has a lower probability of obesity (Iannotti & Wang, 2013). Conversely, children who generally drink sugary drinks consume lots of carbohydrates and fats and are at a higher risk of developing obesity. In addition, young people who spend a lot of time at home watching TV (and not doing much else) have a higher risk of obesity than the control group (Fadhilah et al., 2021). Furthermore, instilling habits to maintain a healthy lifestyle by eating fruits and vegetables and doing physical activity as well can be done in the classroom through lesson devices that combine the benefits of a fruit and vegetable diet and physical exercise (Davis et al., 2013).

To reduce mortality from metabolic and circulatory problems in the future, in addition to defeating disease and eliminating obesity as its primary cause. The relationship between obesity at a young age and old age requires treatment and prevention as early as possible, starting while the child is still in school. Obesity in schoolchildren must be addressed so that it can be overcome for those who are overweight and prevented for those who have never experienced obesity (Sabin & Kiess, 2015). This is done by providing mass or individual counselling (Callahan, 2013). The Ministry of Health of the Republic of Indonesia has published a guidebook for the prevention and control of overweight and obesity in children at school (Sihadi et al., 2017). The handbook contains guidelines for handling and preventing the incidence of obesity in schoolchildren through activities such as encouraging healthy lifestyles, finding cases of obesity and obesity through health screening at schools, and referring obese and obese students to the puskesmas. The difficulty in compiling a programmeme is ensuring continuity in programmeme implementation.

This study attempts to evaluate the treatment and prevention of overweight and obesity in schoolchildren through physical education. What has been done so far and how much the contribution of therapy and prevention has been to the management of overweight and obesity in schoolchildren is expected to provide suggestions for more sustainable treatment and prevention. Because, as we know, one of the main goals of physical education is to create fitness and health for students undergoing the educational process at school (Syafruddin et al., 2022).

MATERIALS AND METHODS

This research is qualitative and takes a scientific approach. Where the material is presented qualitatively using a literature study approach based on scientific studies or articles, which are then used to answer the problems studied in this study. The method used in this research is a literature study, which is carried out by digging and searching for various

sources of literature to uncover the problem under study (Syafruddin & Suparman, 2023). The sources of information used in this article come from various studies on Google Scholar. Article search strategy using the keywords obesity in children and physical education for publications published from 2013 to 2023 After obtaining a number of articles, a check is then carried out to see if the contents of the articles match the themes raised in the research.

RESULTS AND DISCUSSION

The most serious health threat to children today is not a terrible disease like leukaemia or a terrible tragedy like abuse. Obesity is the most threatening problem for children's health in this modern era. Child obesity has increased rapidly worldwide over the last few decades (González-Ivarez et al., 2020). Obesity affects 25% of American children. 80 percent of that 25 percent will grow into obese adults (Wulandari et al., 2016). Obesity is described as a very large accumulation of body fat. Obesity is defined as having a total body weight that is more than 25% fat in boys and more than 32% fat in girls (Permatasari et al., 2013). Genes, household environment, health, psychological effects, hypothyroidism, Cushing's syndrome, lifestyle, and eating habits are all linked to obesity. These factors are undoubtedly associated with obesity, but research has proven that the environment is the most important element (Ziauddeen & Fletcher, 2013). On average, children spend up to five or six hours per day engaged in sedentary activities such as watching television, using computers, and playing video games (Edelson et al., 2015). Worse, young people are subjected to well-crafted television commercials from fast-food chains and other purveyors of high-fat, high-sugar meals or snacks.

According to recent studies, children aged two to six who watch television are more likely to choose foods marketed on television than children who do not (Boyland & Halford, 2013). Unhealthy weight gain caused by poor diet and lack of exercise kills 300,000 people a year and costs around $100 million in medical care (Mobley-Meulman, 2013). Obesity appears to be increasing in the long term. The Lifestyle Research Institute (1988) predicts that most overweight children will grow up to be overweight adults. Obesity in young people aged 7 to 12 years grew by more than 5096 percent between 1958 and 1988, according to the study. Obesity should be a major focus for teachers, parents, and health organisations, according to the National Stroke Foundation (1999). The findings of various experts suggest that one out of every four young people is obese, which should be of immediate concern.

(Casa et al., 2014) In the city of Granollers, Spain, researchers studied the impact of diet on health and physical activity in elementary school students aged 5–6 years. As a result of the intervention group that received healthy eating habits and physical exercise, the BMI of children in the control group was 0.89 kg/m2 higher than in the intervention school two years later. According to the findings of this study, children who receive healthy eating and physical activity interventions in schools can help reduce the increase in cases of obesity in children. Behaviour modification for school-age children and adolescents is very important in the treatment and prevention of obesity. Only in a behaviour modification programme, especially physical activity and the physical and social environment, can the dangers of obesity be prevented for child development (Carroll-Scott et al., 2013). Schools, for example, provide facilities and infrastructure for physical activity. As an example, consider sports facilities and infrastructure. The intervention group was 248 children aged 10.2 years who were given school-based nutrition education treatment to improve nutrition knowledge, attitudes, and behaviours towards eating habits, including light and moderate activity interventions, compared to the control group of 224 children aged 10.6 years. Three months

later, the assessment was completed, and there was a significant change in eating habits, such as the intake of fried foods and soft drinks in the intervention group being lower than in the control group. Knowledge of nutrition and health was also higher in the intervention group than in the control group. However, there was no significant difference between the control and intervention groups for physical activity interventions.

Similar findings were found (Alexander et al., 2014; Cosmin et al., 2016) in California, America, which divided participants into two groups: the intervention group, which received extra physical education treatment in the form of a total of 150 minutes (2.5 hours) per week, cooking healthy food for 30 minutes per week, nutrition education in class, etc., and the control group. After six months of evaluation, there was no significant difference in BMI between the intervention and control groups. It was determined that nutrition and exercise education could help prevent obesity from worsening, but they could not reduce the number of obese people. Nonetheless, the findings of surveillance in eight schools in Mississippi and Tennessee on the relevance of teaching physical education in schools as one of the health promotion strategies Amis et al. recommend (Djaiman et al., 2017) The research findings of Llargués et al. (2017) also concluded that the practice of implementing healthy eating patterns and physical activity in schools can help reduce the increase in obesity in children. Environmental factors, in particular, lead to overweight and obesity. Genetic factors, although suspected to play a role, cannot explain the increasing prevalence of overweight and obesity. The influence of environmental factors mostly appears through differences in diet, eating behaviour, and physical activity.

In addition to diet, a lack of physical activity is also a factor causing overweight and obesity in school-age children. Children do not choose to play because of the limited time and lack of facilities for physical activity (Pate et al., 2016). The use of the "Settings" intervention in the classroom has many advantages. It says that schools are an important unit in a child's social environment not only because they spend a third of their work week at school but also because the school environment provides for constant interaction with other children and influential adults. Schools often play a formal role in providing health and physical education, which can influence knowledge of and attitudes towards healthy habits. Wherever possible, schools have facilities for physical activity training, such as gymnastics, basketball, badminton, and other sports fields. Education, in addition to physical activity Since the body can contribute to overall physical activity, participation in physical education and physical exercise at school is very important to get children moving and ensure energy balance (Ridwan & Astuti, 2021).

Nutrition interventions in schools are another key objective, such as modifying school food policies and/or increasing the availability of nutritious food in schools. Environmental nutrition interventions in schools usually focus on increasing the content of fruit and vegetable diets. Cut back on sugary drinks, fizzy drinks, and/or alcohol to fix drinks. Pay attention to the cleanliness of food and the school environment. (De Kadt et al., 2014) Experiment with walking to school. If the school is located in an urban area where students can walk from home to school, a method of walking to school is needed. Although it depends on the characteristics of the city or district, such as low crime rates, possible traffic congestion, and so on, If this technique is used, it is especially important to involve parents, school staff, and neighbourhood volunteers in safety monitoring. Walking to school has been shown to reduce obesity in Japan by engaging in frequent physical activity (Hsieh et al., 2014). The key to the success of the management agency for the schoolchildren's weight loss programme is support and good cooperation between schoolchildren, parents, and educators in the school environment (Sajawandi, 2015).

A quality physical education programme can be an important component in reducing childhood obesity (Williams et al., 2013). A physical educator is an important member of a school's interdisciplinary team. Obesity education should involve nutrition instruction, individual and group counselling, fitness programmes, and eating controls. The emphasis is on participation, self-control, developing the right attitude, and providing a positive self-perception. As team members, school nurses, guidance counsellors, administrators, and parents play important oles. They were all asked to help the younger generation develop short-term, achievable goals. It is rare for physical educators to come into contact with obese children. Obese children often experience dissatisfaction with physical activity, are ridiculed by their peers, are picked last for teams, and thus develop poor attitudes towards physical education and school in general (Pizzi & Vroman, 2013). Some children experience withdrawal and engage in antisocial behavior. A vicious cycle of increased frustration and isolation results in greater withdrawal, and food is sought for comfort and satisfaction as a substitute for acceptance and activity. A creative physical educator can try various techniques to encourage good attitudes towards sport and fitness. One option is to provide a programme that encourages maximum engagement, allowing all students to work at the same time. There is less time to judge peers when everyone else is busy working on skills. This teaching technique allows students to gain confidence and work at their own pace.

Another strategy is to focus class sessions on achieving and maintaining a level of physical fitness. Individual workout routines can be defined and followed. Individual progress, not group comparisons, will be used to determine success. Elementary school students often admire and like physical educators. Instructors can use this awe to provide individual counselling to students in need. Physical educators, with the help of school nurse teachers, can help children develop nutrition and exercise programmes for use at home (Lewallen et al., 2015). The physical educator can assess what physical activity opportunities exist for the child in a home scenario by talking with the child and assist the child in creating an exercise programme that the child can actually participate in by talking with the child. Merely telling someone what they should do is unlikely to lead to success; however, if the person is involved in the planning and selection of activities, he or she is more likely to be an active participant. If activities are matched to a child's skills, he or she will show greater confidence and motivation. It is very important to combine activities and abilities when selecting activities, as this increases the likelihood of success.

Treatment programmes for obesity in children must be consistent and implemented appropriately. Setting small weight-loss goals will help your child avoid becoming overwhelmed or discouraged. A monthly weight loss rate of two to four pounds can be a target goal. Setting goals can be a motivating aspect of maintaining a positive attitude and developing a child's self-confidence. A food journal can help you track the types and amounts of food you eat. Kids can easily observe their eating habits, count calories, and make decisions to eliminate troublesome foods. Parents should help their children balance calories through diet and activity. Providing psychological and moral support to parents who are helping their children with weight management problems requires defining the problem, providing information and feedback, teaching reinforcement tactics, and providing psychological and moral support. In addition, the social environment has a strong influence on eating behaviour and physical activity habits, especially when the activity takes place primarily in social contexts such as family dinners, group outings, school lunches, play time, and recreation time. Obese children need help dealing with this difficult condition.

For obese children, physical education can be a vital source of support and understanding. Obese children require greater oxygen uptake capacity to perform certain tasks in terms of physical performance. Obesity has a significant impact on children's

cardiorespiratory fitness because it requires them to function at a higher percentage of maximal oxygen intake (Bar-Or, 1983; Armstrong & Welsman, 2020). Consequently, expecting obese students to perform at the same level as their non-obese counterparts is unrealistic. Prescribing exercise for obese children in schools should focus on caloric expenditure rather than cardiorespiratory fitness (Rowland, 1991; Setty et al., 2013). The amount of time young people spend active should be emphasised, and moderation should take precedence over intensity.

Childhood obesity isn't going away anytime soon. To make significant progress in fighting the obesity pandemic, we must teach children that physical activity is as important as math or writing. Every student in the school should have access to regular physical education. Physical education programmes across the country should take a proactive approach to helping obese children by combining fitness, counselling, dieting, and nutrition (Wong & Cheng, 2013). At the same time, parental involvement can encourage their child to stay happy and motivated. The value of a healthy body cannot be overstated, and as an interdisciplinary team leader, physical education educators can help obese students achieve their lifelong health and wellness goals (McEvoy et al., 2017).

CONCLUSION

In treating obesity in children, physical education can play an important role in reducing the prevalence of obesity by implementing programmes to increase physical activity and healthy eating habits. Through improving fitness, providing counselling regarding healthy lifestyles, and providing an understanding of the dangers of obesity, physical education can help obese students achieve their lifelong health and fitness goals.

CONFLICT OF INTEREST

All authors declare that there is no conflict of interest in this research.

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