

Physical fitness level and weight status in children and adolescents: Comparison between students of Surabaya city and Sidoarjo regency

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Authors contribution: a – Preparing concepts; b – Formulating methods; c – Conducting
research; d – Processing results; e – Interpretation and conclusions; f - Editing the final
version

Received: 15 August 2022; Revised: 23 August 2022; Accepted: 30 August 2022

Abstract

Obesity, a sedentary lifestyle, and poor cardiorespiratory fitness in childhood can be bad for children especially regarding physical fitness and increased weight. This study aimed to analyze and compare the physical fitness and weight status of children and adolescents in Surabaya and Sidoarjo regency. This research uses a survey approach using physical fitness tests and weight measurements. The research instrument on physical fitness uses a physical fitness test with 5 items test. While the weight status is measured by measuring the body mass index (BMI). The sample selection of research subjects used random sampling techniques. The results showed that the physical fitness boys' students in The city of Surabaya and Sidoarjo regency are the same in the moderate category. In contrast, girls in the city of Surabaya are better compared to Sidoarjo regency. The teenage boys and girls of Surabaya city are better than the adolescent boys and girls students of the Sidoarjo regency. The weight status of Surabaya city boys is better compared to Sidoarjo regency boys. In contrast, the girls of Surabaya and Sidoarjo are included in the average category. The teenage boys of Surabaya city are better than the adolescent students of the Sidoarjo regency, in the teenage students of Surabaya city are better than the female adolescent students of the Sidoarjo regency. This research can be used as data on the development of students, teachers, and all related parties that must correctly stabilize the condition of students, children, and adolescents to carry out their activities.

Key Words: physical fitness, weight status, students, children, adolescents

INTRODUCTION

Obesity, a sedentary lifestyle, and poor cardiorespiratory fitness in childhood can be bad for children especially regarding physical fitness and increased weight. This study aimed to analyze and compare the physical fitness and weight status of children and adolescents in Surabaya and Sidoarjo regency. This research uses a survey approach using physical fitness tests and weight measurements. The research instrument on physical fitness uses a physical fitness test with 5 items test. While the

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weight status is measured by measuring the body mass index (BMI). The sample selection of research subjects used random sampling techniques. The results showed that the physical fitness boys' students in The city of Surabaya and Sidoarjo regency are the same in the moderate category.

In contrast, girls in the city of Surabaya are better compared to Sidoarjo regency. The teenage boys and girls of Surabaya city are better than the adolescent boys and girls students of the Sidoarjo regency. The weight status of Surabaya city boys is better compared to Sidoarjo regency boys. In contrast, the girls of Surabaya and Sidoarjo are included in the average category. The teenage boys of Surabaya city are better than the adolescent students of the Sidoarjo regency, in the teenage students of Surabaya city are better than the female adolescent students of the Sidoarjo regency. This research can be used as data on the development of students, teachers, and all related parties that must correctly stabilize the condition of students, children, and adolescents to carry out their activities.

Recent research data show that about a third of adults are obese, associated with chronic diseases such as hypertension, diabetes, hyperlipidemia, and metabolic syndrome (Chaeroni et al., 2021; Prasepty, 2017; Prativi, G. O , Soegiyanto, 2013). This phenomenon also increases in younger age groups (Novitasari & Setiyo Hartoto, 2020; Putra et al., 2021). Furthermore, 65-80% of obese adolescents will be obese as adults (Amirzan et al., 2020; Wouters et al., 2020). In addition, adolescent obesity is associated with depression, low self-esteem, helplessness, isolation from peer groups, and mental and psychosocial problems (Chen et al., 2018; Novitasari & Setiyo Hartoto, 2020; Putra et al., 2021). Therefore, additional physical activity opportunities are needed in schools to improve children's physical fitness, health, and overall well-being (Ma'arif & Prasetyo, 2021; Nurcahyo, 2015). It is necessary to recognize the importance of improving physical fitness and measure the results periodically.

According to the results of research by [Chen et al., 2018](#); [Wouters et al., \(2020\)](#) explained that physical fitness correlates significantly with students' physical activity. Physical activity positively relates to the fundamentals of motion skills in students [Bramantoro et al., \(2020\)](#). The relationship between the two variables is reciprocal, meaning they have a relationship that affects each other. It can be concluded that a high level of physical fitness will affect the students' physical activity ability, which will help improve their movement skills.

One factor that hinders physical fitness is the occurrence of obesity experienced by children and adolescents in Indonesia. Obesity in Indonesia is increasing at an alarming rate of increase. According to [\(Riskseddas, 2018\)](#), the prevalence of obesity among Indonesian adults has almost doubled from 19.1 percent to 35.4 percent. Obesity experienced by children and adolescents today due to lack of movement and unhealthy lifestyles results in children and adolescents' weight being far from normal. Obesity, in general, is closely related to a diet that is not good and tends to be over-energized. Obesity is defined as a medical condition in the form of accumulated fat in the body, which is clinically expressed in the form of a Body Mass Index (BMI) $\geq 27 \text{ kg} / \text{m}^2$ [\(Elmagd, 2016; Lavie et al., 2019\)](#). Various nutritional advantages in toddlers will have a continuous impact until adulthood. Excess to these nutrients is known as overweight and obesity. Obesity was rarely discussed before the 20th century because most of the world's population still suffers from malnutrition. So that the increase in the weight of the population is still a sign of an increase in a society's health and economic status, it has only been in the last 25 years that the problem of obesity and its increasing impact has been discussed in various scientific meetings and public health planning in the world.

The basic mechanism from the occurrence of overweight to obesity is the imbalance of energy inputs and their expenditure. The cause of such imbalances is the easy access and variety of types of food that are rich in energy. On the contrary, technological advances and lifestyle changes

decreased energy expenditure from 1.69 kcal/min / KgBB to 1.57 kcal/min / KgBB. Factors became that cause obesity both internally and externally, such as genetics, metabolic disorders, energy imbalances, and physical activity. If left untreated early, obesity can lead to osteoarthritis, cancer, coronary heart disease, and respiratory disorders such as sleep apnea. The impact of obesity is quite widespread on various degenerative chronic diseases such as hypertension, coronary heart disease, stroke, cancer, type 2 diabetes, and bone disorders. Due to the many conditions that can be caused by obesity, the morbidity and mortality rate of obese people is relatively high. So obesity has an impact on health costs both directly and indirectly. It is estimated that in developed countries, obesity consumes 2-10% of the national health costs of each country each year. In developing countries, it can exceed 10%.

Therefore, this study compares physical fitness and weight status in children and adolescents in the Surabaya city area and Sidoarjo regency. This study took the age classification of children between 6 - 12 years in boys and women, while adolescents between 13 - 19 years in boys and women, according to WHO.

METHOD

This research method uses a quantitative approach through a survey where researchers provide tests and measurements to children and adolescent students in Surabaya and Sidoarjo regency with an Indonesian physical fitness test aged 13-15 years. The subjects in this study were children and adolescent students of Surabaya city and the Sidoarjo regency. Then, the sampling technique in this study was accidental sampling. Accidental sampling is a technique for determining samples based on coincidence and is considered suitable as a sample in accordance with the provisions (Sugiyono, 2012). This study used the accidental sampling technique of 776 students from the Surabaya and Sidoarjo regency. The subjects of this study were divided into four age groups according to the Department of Health of the Republic of Indonesia

students who had an age classification of children or 6 – 9 years and 10 – 12 years, and the category of adults aged 13-15 years and 16 – 19 years.

Research Procedure

All testing procedures for the seven physical fitness items were carried out using the same instruments suggested by the new physical fitness test guidelines developed by the Japan Sports Bureau of the Ministry of Education, Science and Technology in 2008.

Physical fitness parameters

This assessment was assessed using a version of the physical fitness test with fitness batteries related to fitness tests in children and adolescents. These components are described as follows: a sprint test, a body lift hanging test, a seating bed test, an upright jump test, and a long-distance running test. All these tests are adjusted to the age level of the research projects to be studied.

Weight Status

Weight status is measured by measuring body mass index (BMI). The body mass index (BMI) test instrument uses the BMI calculation formula, which is carried out by taking weight data (kg) divided by height (m²) (Bayu et al., 2021). The data collection technique carried out is by means of measuring the height and weight of the sample. Furthermore, data calculations are assisted using the Microsoft Excel Software application. The weight and height measurement test procedure adopted by (Ngatman & Andriyani, 2017) has a validity and reliability rate of 0.98.

Data Analysis

Data is processed through a t-score, then the data is interpreted, namely by categorizing the data. Categorization is grouped into 5: very good, good, Average, less, and very less. Categorization using reference 5 normal limits (Sudjiono, 2011) is as follows:

Table 1. Category raw score

Number	Range of Norms	Category
1	$X \geq M + 1,5 SD$	Very Good
2	$M + 0,5 SD \leq X < M + 1,5 SD$	Good
3	$M - 0,5 SD \leq X < M + 0,5 SD$	Moderate
4	$M - 1,5 SD \leq X < M - 0,5 SD$	Less
5	$X < M - 1,5 SD$	Very Less

This research approach uses descriptive percentages. This aims to determine the level of physical fitness of children and adolescent students in the Surabaya and Sidoarjo regency. All testing procedures use the same instruments in each age classification of children and adults based on the Indonesian physical fitness test guidelines through 5 tests with standard scores based on their age. While the weight status is measured by measuring body mass index (BMI), the body mass index (BMI) test instrument uses the BMI calculation formula, which is carried out by taking weight data (kg) divided by height (m²) (Bayu et al., 2021). The data collection technique carried out is by means of measuring the height and weight of the sample. Furthermore, data calculations are assisted using the Microsoft Excel Software application. The weight and height measurement test procedure adopted by (Ngatman & Andriyani, 2017) has a validity and reliability rate of 0.98.

RESULT

A total of 776 willing participants, including children and adolescents aged 6-19 years, were included in this study. The entire sample consisted of boys and girls, and some subjects were adjusted according to the age classification category of the group in the city of Surabaya and Sidoarjo regency. In detail, the research data acquisition will be described in the figure below.

Table 2. Physical fitness of boys and girls students in Surabaya city and Sidoarjo regency

Age (y)	Surabaya City						Sidoarjo Regency					
	N	Very Good	Good	Moderate	Less	Very less	N	Very Good	Good	Moderate	Less	Very less
Boys												
6 – 9 year	40	5 (12,50%)	12 (30,00%)	18 (45,00%)	3 (7,50%)	2 (5,00%)	39	3 (7,69%)	2 (5,13%)	23 (58,97%)	8 (20,51%)	3 (7,69%)
10 – 12 year	55	9 (16,36%)	12 (21,82%)	18 (32,73%)	9 (16,36%)	7 (12,73%)	40	10 (25,00%)	8 (20,00%)	16 (40,00%)	5 (12,50%)	1 (2,50%)

Oce Wiriawan

Physical fitness level and weight status in children and adolescents: Comparison between students of Surabaya city and Sidoarjo regency

13-15 year	58	6 (10,34%)	24 (41,38%)	9 (15,52%)	11 (18,97%)	8 (13,79%)	50	4 (8,00%)	15 (30,00%)	22 (44,00%)	6 (12,00%)	3 (6,00%)
16-19 year	62	13 (20,97%)	30 (48,39%)	14 (22,58%)	4 (6,45%)	1 (1,61%)	40	3 (7,50%)	19 (47,50%)	7 (17,50%)	6 (15,00%)	5 (12,50%)
Girls												
6-9 year	40	0 (0,00%)	16 (40,00%)	12 (30,00%)	8 (20,00%)	4 (10,00%)	39	8 (17,78%)	5 (11,11%)	17 (37,78)	9 (20,00)	6 (13,33%)
10-12 year	55	10 (18,18%)	18 (32,73%)	14 (25,45%)	8 (14,55%)	5 (9,09%)	55	9 (16,36%)	16 (29,09%)	18 (32,73%)	8 (14,55%)	4 (7,27%)
13-15 year	54	14 (25,93%)	22 (40,74%)	8 (14,81%)	7 (12,96%)	3 (5,56%)	52	6 (11,54%)	22 (42,31%)	11 (21,15%)	11 (21,15%)	2 (3,85%)
16-19 year	59	9 (15,25%)	19 (32,20%)	12 (20,34%)	10 (16,95%)	9 (15,25%)	32	3 (9,38%)	8 (25,00%)	14 (43,75%)	4 (12,50%)	3 (9,38%)

Based on Table 1, the descriptive results of the percentage of Indonesian physical fitness tests for male students in Surabaya amounted to 40. Sidoarjo Regency totals 39 years, with a classification of children's age (6-9 years). The results were obtained after taking the test in the city of Surabaya, the most category of 18 students entered the average category with a percentage of 45.00%. Meanwhile, in Sidoarjo district, the most category of 23 students is included in the Average category with a percentage of 58.97%. In the Indonesian physical fitness test, female students in Surabaya totaled 40 years, and Sidoarjo district numbered 39 years with a child age classification (6-9 years). The results were obtained after taking the test in the city of Surabaya, the most category of 16 students was included in the good category with a percentage of 40.00%. Meanwhile, in Sidoarjo district, the most category of 17 students is included in the Average category with a percentage of 37.78%.

In the Indonesian physical fitness test, male students in the city of Surabaya numbered 55 years and Sidoarjo regency numbered 40 with a child age classification (10 - 12 years), the results were obtained after conducting a test in the city of Surabaya the most category of 18 students were included in the moderate category with a percentage of 31.73%. While in Sidoarjo district, the most category of 16 students is included in the Average category with a rate of 40.00%. In the Indonesian physical fitness test, male students in the city of Surabaya amounted to 55 years and Sidoarjo regency amounted to 55 years with a child age classification (10 - 12 years), the results obtained after conducting the test in the city of

Surabaya category of at most 18 students were included in the good category with a percentage of 32.73%. Meanwhile, in Sidoarjo district, the most category of 18 students is included in the average category with a rate of 32.73%. In the Indonesian physical fitness test, male students in the city of Surabaya numbered 58 and Sidoarjo regency numbered 50 with a child age classification (13-15 years), the most category of 24 students was included in the good category with a percentage of 41.38%.

Meanwhile, in Sidoarjo district, the most category of 22 students is included in the Average category with a percentage of 44.00%. In the Indonesian physical fitness test, female students in the city of Surabaya totaled 54 years and Sidoarjo regency numbered 52 with a child age classification (13-15 years), the results were obtained after conducting a test in the city of Surabaya the most category 22 students were included in the Good category with a percentage of 40.74%. Meanwhile, in Sidoarjo district, the most category of 22 students is included in the Good category with a percentage of 42.31%.

In the Indonesian physical fitness test, male students in the city of Surabaya numbered 62 and Sidoarjo district numbered 40 with a child age classification (16 - 19 years), the most category of 30 students was included in the Good category with a percentage of 48.39%. Meanwhile, in Sidoarjo district, the most category of 19 students is included in the Good category with a rate of 47.50%. In the Indonesian physical fitness test, female students in the city of Surabaya numbered 59 and Sidoarjo regency as many as 32 with a child age classification (16 -19 years), the most category of 19 students was included in the Good category with a percentage of 32.20%. Meanwhile, in Sidoarjo district, most 14 students are included in the Average category with a rate of 43.75%. If the comparison of the physical fitness level of male and female students in the city of Surabaya and Sidoarjo regency is depicted in the diagram as follows:

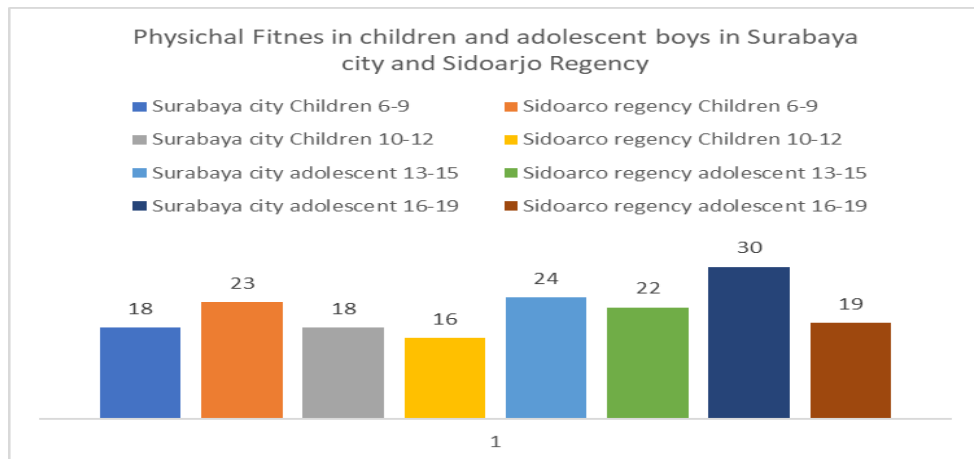


Figure 1. level of physical fitness in children and adolescent boys in Surabaya city and Sidoarjo regency

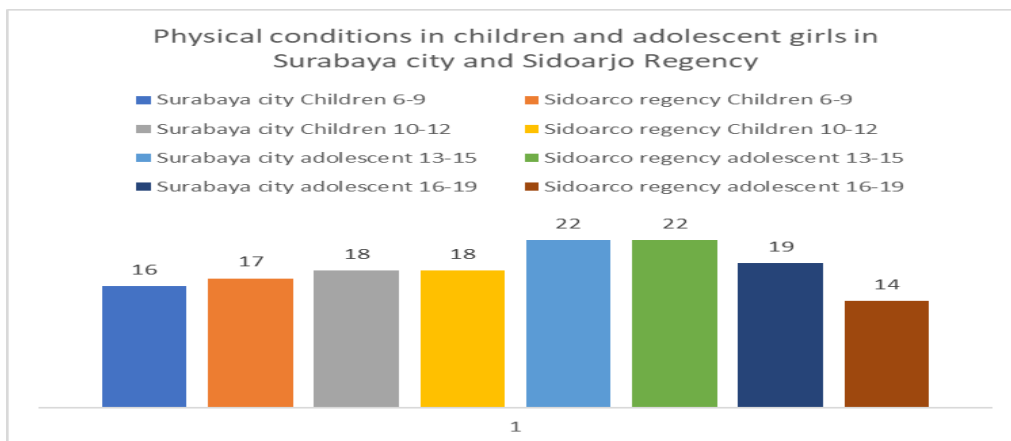


Figure 2. level of physical fitness in children and adolescent girls in Surabaya city and Sidoarjo regency

The weight status of the observations made on the subjects was 776 consisting of children and adolescents aged 6-19 years in this study. The entire sample consisted of boys and girls, and some subjects were adjusted according to the age classification category of the group in the city of Surabaya and Sidoarjo regency. In detail, the acquisition of weight status data will be described in the figure below.

Table 3. Weight status of boys and girls students in Surabaya city and Sidoarjo regency

Age (y)	Surabaya City					Sidoarjo Regency				
	N	Underweight	Normal	Overweight	Obesity	N	Underweight	Normal	Overweight	Obesity
Boys										
6 – 9 year	40	9 (22,50%)	13 (32,50%)	8 (20,00%)	10 (25,00%)	39	10 (25,64%)	9 (23,08%)	13 (33,33%)	7 (17,95%)
10 – 12 year	55	8 (14,55%)	12 (21,82%)	22 (40,00%)	13 (23,64%)	40	8 (20,00%)	9 (22,50%)	15 (37,50%)	8 (20,00%)
13-15 year	58		14 (24,14%)	20 (34,48%)	8 (13,79%)	50		12 (24,00%)	19 (38,00%)	9 (18,00%)
16 – 19 year	62	16 (27,59%)	25 (40,32%)	11 (17,74%)	14 (22,58%)	40	10 (20,00%)	15 (37,50%)	10 (25,00%)	9 (22,50%)
Girls										
6 – 9 year	40	6 (15,00%)	21 (52,50%)	8 (20,00%)	5 (12,50%)	39	10 (25,64%)	16 (41,03%)	8 (20,51%)	5 (12,82%)
10 – 12 year	55	5 (9,09%)	24 (43,64%)	18 (32,73%)	8 (14,55%)	55	7 (12,73%)	20 (36,36%)	18 (32,73%)	10 (18,18%)
13-15 year	54		22 (40,74%)	23 (42,59%)	5 (9,26%)	52	11 (21,15%)	18 (34,62%)	14 (26,92%)	9 (17,31%)
16 – 19 year	59	4 (7,41%)	15 (25,42%)	23 (38,98%)	16 (27,12%)	32	6 (18,75%)	9 (28,13%)	12 (37,50%)	5 (15,63%)

Based on Table 3, can be seen the descriptive results of the percentage of the status of body weight in 776 consisting of children and adolescents aged 6-19 years consisting of boys and girls in the city of Surabaya and Sidoarjo regency, the results were obtained after conducting tests in the age group of 6-9 years with boys sex in the category of children in the city of Surabaya the most weight status was included in the normal category of 13 students with a percentage of 32.50%, while in Sidoarjo regency, the most weight status is included in the overweight category of 13 students with a rate of 33.33%. In the age group of 6-9 years with the girl's gender category of children in the city of Surabaya, the most weight status is included in the normal category of 21 students with a percentage of 52.50%, while in Sidoarjo regency, the most weight status is included in the normal category of 16 students with a rate of 41.03%.

In the age group of 10-12 years with boys gender in the category of children in the city of Surabaya, the most weight status is included in the overweight category as many as 20 students with a percentage of 40.00%, while in Sidoarjo regency, the most weight status is included in the overweight category of 15 students with a rate of 37.50%. In the age group of 10-12 years with girls sex in the category of children in the city of

Surabaya, the most weight status is included in the normal category as many as 24 students with a percentage of 43.64%, while in Sidoarjo regency the most weight status is included in the normal category as many as 20 students with a rate of 36.36%. In the age group of 13-15 years with boys gender in the adolescent category in the city of Surabaya, the most weight status is included in the overweight category as many as 20 students with a percentage of 34.48%, while in Sidoarjo regency, the most weight status is included in the overweight category as many as 19 students with a rate of 38.00%. In the age group of 13-15 years with girls gender in the adolescent category in the city of Surabaya, the most weight status is included in the overweight category as many as 23 students with a percentage of 42.59%, while in Sidoarjo regency, the most weight status is included in the normal category as many as 18 students with a rate of 34.62%. In the age group of 16-19 years with boys sex in the adolescent category in the city of Surabaya, the most weight status is included in the normal category of 25 students with a percentage of 40.32%, while in Sidoarjo regency the most weight status is included in the normal category of 15 students with a rate of 37.50%. In the age group of 16-19 years with girls gender in the adolescent category in the city of Surabaya, the most weight status is included in the overweight category as many as 23 students with a percentage of 38.98%, while in Sidoarjo regency, the most weight status is included in the overweight category as many as 12 students with a rate of 37.50%. If the comparison of the level of weight status of boys and girls students in the city of Surabaya and Sidoarjo regency is depicted in the diagram as follows:

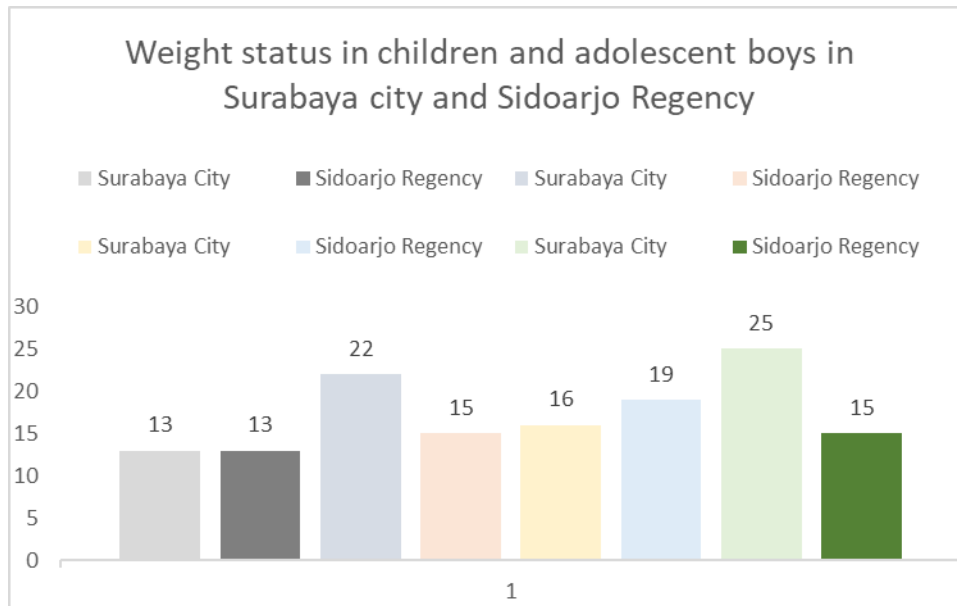


Figure 3. Weight status of students of children and adolescent boys in the city of Surabaya and Sidoarjo regency

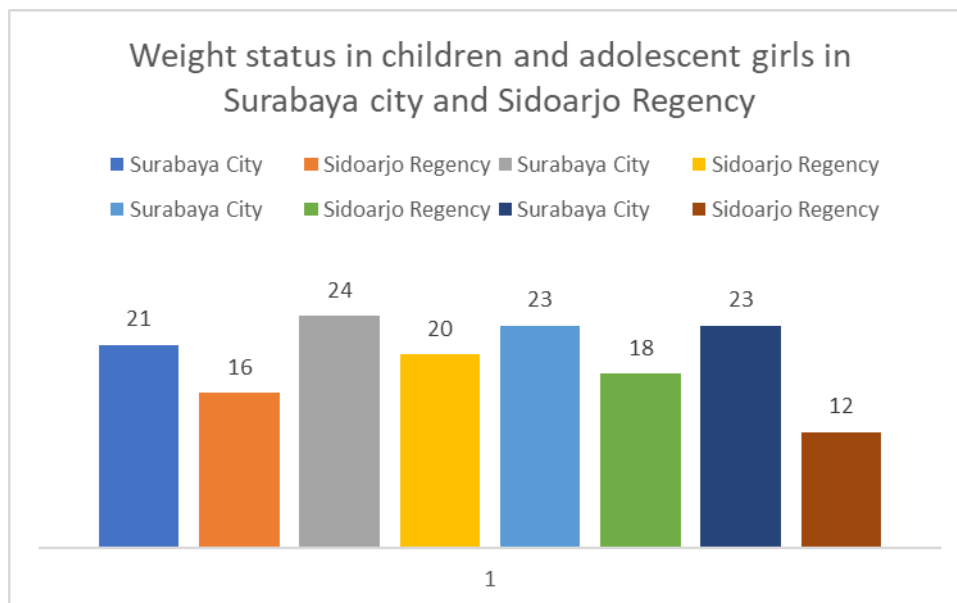


Figure 4. Weight status of students of children and adolescent girls in the city of Surabaya and Sidoarjo regency

DISCUSSION

The fitness level of boys and girls students in children and adolescents of Surabaya city and Sidoarjo regency have significantly different results. This difference can be seen from the results of the measurements that have been made. In physical fitness, the moderate

category obtained by boys students in the city of Surabaya is included in the good category, while boys students in the Sidoarjo regency are included in the moderate category. In physical fitness, the moderate category obtained by girls students in the city of Surabaya is included in the good category. In contrast, girls students in Sidoarjo regency are included in the moderate category. Physical fitness is one of the parts of a body that can be used as an indicator of the body's condition. Fitness is physical fitness, which is a person's ability to be able to do daily work efficiently without excessive fatigue so that they can still enjoy their free time. The benefits obtained if you have good physical fitness are providing convenience for a person or student in carrying out daily tasks without experiencing significant fatigue and will, avoiding someone from various diseases, both mild and severe, and improving learning ability (Rodriguez et al., 2020; Tian & Wang, 2021). Students with good physical fitness tend to be active in the classroom and perform well in sports branches (Djimde et al., 2019). Meanwhile, fewer physical fitness students will look lazy and less eager to learn.

Good physical fitness is expected to be the basic capital for children to carry out their daily lives vigorously and without feeling significant fatigue in carrying out all their activities. The activities carried out by children and adolescents can look like children's habits in carrying out activities at school, such as studying and playing, which can be done without any qualms (Haverkamp et al., 2021). The fact is that children behave less enthusiastically in carrying out the learning process, and children often feel tired and sleepy during learning activities or playing when doing activities at school. (Allsabab et al., 2022) states that the activities carried out by children are needed for good physical fitness because there are so many activities that children do, such as activities at school or home. It is possible for children who currently do a lot of activities at school or home to have a physical activity that is lacking in their daily lives. Thus, according to the researchers' assumptions, the

factors that support physical fitness must be seen from children's overall activity in their daily lives.

Overweight children tend to be physically less active than children with normal body weights. [Ryder et al., \(2019\)](#) Rather than the cause, physical inactivity may result from obesity. ([Duckworth et al., 2016](#); [Robinson & Sutin, 2016](#)) Maybe being overweight makes physical activities playing, running, etc., less fun for overweight children, who thus prefer to withdraw from such activities. Physical activity is essential, for example, for developing various motor skills in early childhood. Lack of physical activity can lead to impaired skills that, in turn, prevent the child from engaging in physical activity and eventually decrease fitness. The positive message from this study is that physical fitness and weight status need to be measured to match the child's development. Fitness and weight status incompatible with the child's development significantly interfere with the habit of physical activity during the child's growth period.

The factors that improve children's physical fitness vary, such as physical activity, nutritional fulfillment, and good rest patterns. In addition, bad habits that can affect physical fitness in children and adolescents, such as playing with gadgets, being lazy in moving, and consuming a lot of food and drinks that do not have the fulfillment of children's nutrition, can also influence physical fitness. Clarity is also seen in the activities of students during breaks at school. Children tend to be more passive in moving and prefer canteens or chatting in class. Rest time is rarely used to play on the school grounds, do traditional games, chases, play balls are rarely found in the school. So that the child's literacy of movement is reduced, this can have an impact on physical fitness. The food factor also influences physical fitness because the food consumed by students today varies in shape and type, and most of it is classified as fast food. Fast food impacts children's fitness because it affects nutrition in children.

Physical fitness is needed while at school to support the success of the learning process in one day. It is hoped that good physical fitness can provide a good quality of learning for children by not feeling tired quickly

and excited in the learning process. (Nurcahyo, 2015; Putra et al., 2021), for physical freshness to be maintained, it will not be separated from a healthy lifestyle that must be applied in daily life by getting used to eating four healthy five perfect foods, always maintaining personal hygiene, getting enough rest, avoiding bad habits that can reduce physical freshness.

The weight status of boys and girls students in children and adolescents had significantly different results. This difference can be seen from the results of the measurements that have been made. In the moderate weight status, the category obtained by boys students in Surabaya city is included in the normal category, while boys students in Sidoarjo regency are, on average, included in the overweight category. In the moderate weight status, the category obtained by girls students in the city of Surabaya is included in the normal category, while girls students in Sidoarjo regency are on moderate included in the normal category. Body mass index greatly affects the quality of a person's health, including the physical fitness that students and adolescents have. Children and adolescents who experience inappropriate BMI will not be able to perform optimally, so the activities carried out by children and adolescent students will not be optimal (Feng et al., 2019). Students must have an ideal body. This aims to be able to carry out activities that support their daily activities.

A healthy lifestyle is a mandatory thing to do for children. This is done to maintain the children's bodies to match the normal size with their age. (Lee et al., 2021; Tian & Wang, 2021) the results of her research showed that the weight of the body owned by children is increasing due to lifestyles and activities that are felt to be less carried out by children. (Hsieh et al., 2017) stated that uncontrolled weight status in children would be obese so that obese children can contract dangerous diseases. Then (Davidson et al., 2019) stated in their research that weight status has a negative relationship with physical fitness, meaning that the greater the category of body weight value, the lower the level of physical fitness. Based on some of the studies that have been presented, of course, this

weight status can affect the condition of children and adolescent students, especially in the learning process, so teachers and related parties should pay attention to nutritional intake, which includes food and drink, and also the lifestyle carried out by children, not to mention nutrients in food and drinks, as well as the lifestyle carried out by children and adolescent students that is not appropriate and appropriate, makes the weight status of children and adolescents not in the normal category (Fan et al., 2020; Limbers & Summers, 2021).

CONCLUSION

This study's results can be used as an indicator of the profile of children and adolescent students in the city of Surabaya and Sidoarjo regency so that related parties can consider them to improve or maintain good conditions for students. This is important so that the student's condition (physical fitness and weight status) can support the learning process or activities carried out by children and adolescents. In the future, the results of this study are expected to be a concern to creating an activity that can stabilize the fitness and weight status of students and adolescents in the midst of an easy life that makes children and adolescents less mobile or sedentary life and consumes food that is not healthy.

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