

## Level of health status related to physical fitness and physical components for primary school students in the Qassim region

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### Introduction

The interest in the physical activity of human mental, physical and social health is an important project for the Kingdom's 2030 vision, as it is considered one of the most important elements of the quality of life, and there is no doubt that the high rate of lack of physical activity in the Kingdom increases the importance of this and makes it a vital and essential goal to maintain the physical health of society and individuals.

One of the most important elements of the quality of life for the Kingdom's 2030 vision is a balanced healthy pattern, as the opportunities currently available for exercising physical activity do not rise to the aspirations of the vision, which made it work to set goals that help raise these opportunities through increasing sports facilities and appropriate facilities that provide all opportunities Exercise, physical activity and sports in a suitable environment.

At the top of the Kingdom's 2030 vision is a priority for the health status of citizens and residents in the Kingdom of Saudi Arabia, and that their happiness does not take place without the completion of their physical, psychological and social health; therefore, the importance of building a society in which its members enjoy a balanced healthy pattern.

**Puciato *et al.* (2018)** mentioned that the great potential for

regular physical activity contributes to a general improvement in the quality of life in terms of health, fitness and performance, and the reduction of risks of some occupational diseases, and that obtaining a high evaluation of the quality of life-aware in general increases with increasing levels of activity Physical, programs that aim to improve the quality of life for people should include the promotion and development of physical activity.

Health-related physical fitness is one of the most important areas and research interests of our time, as indicated by scientific studies, medical bodies and health organizations, and this importance undoubtedly doubles more if it is related to the children's category; as many studies and scientific research have shown that physical fitness plays an important role It is very important in the health aspects of adults in general and children in particular, and the importance of these studies increases the apparent reluctance of children to engage in physical activities (**WHO, 2018**).

Obviously, despite children's natural inclinations, they have become less physically active in recent decades, the World Health Organization has identified obesity as one of the real problems threatening the world in general and children in particular, and has confirmed that the countries that suffer from it most significantly and are significantly Countries from the continent of Asia and Africa.

Children with reduced mobility are likely to remain overweight and obese until puberty, and develop noncommunicable diseases such as: diabetes, heart disease, and blood vessels at a younger age, as well as associated diseases, which are largely

preventable; therefore prevention From childhood obesity you need a high priority. (**WHO, 2018**).

The evidence has demonstrated the important role of physical activity and the many physical and psychological benefits of children's development that are reflected in quality of life. And it stresses that among the main issues are, "a low-life lifestyle automatically leads to an unhealthy behavior pattern" and "levels of physical activity in children today are lower than levels of physical activity in children from previous generations?", And that the current environment imposes a potentially inactive lifestyle It contributes to increasing childhood obesity, and there is conclusive evidence that physical activity helps to lead a healthy lifestyle to prevent diseases, as the study confirmed that physical activity and the level of fitness on which a child grows will have an influential role in the quality of life, and confirms that the lifestyle It needs to change as more strategies are needed From the level of physical activity, efforts should focus on facilitating an active lifestyle for children in an attempt to put an end to the increased prevalence of children with ADHD. (**Anderw and Neil, 2007**).

It can be concluded from this that people who exercise physically regularly can reduce the risk of death, regardless of the cause, and that active people increase the quality of life expectancy they have, and it can be said that inactive people suffer from an increase in premature death by 20% To double compared to active people. It is seen that physical activity plays an important role in improving the quality of sleep, and studies have also demonstrated that physical activity has an important role in increasing self-esteem and improving physical fitness,

general

appearance and self-confidence, and has confirmed that regularity in appropriate fitness programs is important in reducing the negative effects of excess weight and reducing Of the risks of heart diseases and ... etc. And very clearly it makes sure that fitness is much more than entertainment or health; rather, it is an essential type of good and wonderful life in general. It can be confirmed that physical activity plays an important role in controlling the effect of aging. (**Ohuruogu. 2016**) On the contrary, physical inactivity leads to the development of chronic diseases and premature death, and we confirm that there is overwhelming evidence of the effectiveness of regular physical activity in the primary and secondary prevention of many chronic diseases (for example, cardiovascular disease, diabetes, cancer, and high Blood pressure, obesity, depression, osteoporosis) and premature death. From this it follows that there is a linear relationship between physical activity and health condition, so that more physical activity and physical fitness lead to additional improvements in health status (**Darren et al., 2006**).

Physical activity creates a healthy lifestyle and has a role in fighting obesity and epidemic diseases, modifying unhealthy behavior, and improving body composition as it has positive effects in lowering the BMI and improving levels of cardiac fitness in children, as it appears that physically active children have a level Respiratory cardiac fitness is significantly higher than those who are inactive, and the study stresses the importance of providing education professionals with information that helps them to develop effective programs to

promote health, lose weight, and improve children's cardiovascular fitness. (Hsieh *et al.*, 2014; Lazaar *et al.*, 2007; Friedrichi *et al.*, 2012).

It should be emphasized the importance of the role of physical activity in raising the strength of children and reducing fat and its relationship to the level of body mass and cardiovascular fitness. As physical activity plays an important role in the relationship between body composition properties, mass index, body fat percentage, and fitness elements, it appears clearly between body mass index and fitness elements, because body formation is closely related to fitness, but not always as expected, so it is noticed that The BMI should be interpreted as a measure of obesity / overweight; it may even be an indicator of muscle mass. By (Monyeki *et al.*, 2005; Stevens *et al.*, 2004; Abu Hanifah *et al.*, 2013). From the change that physical activity causes and its relationship to the BMI and obesity (low equivalent metabolic expenses) and BMI and obesity, then a sharp drop in activity during adolescence is an important path to obesity (Kimm *et al.*, 2005).

Physical activity has an effect on physical fitness and body composition, as it appears that active children have better results in the cardiovascular fitness test, balance and compatibility and have a lower fat percentage, and it is clear that children who engage in activities in the gym, have better exercise capabilities and stronger body shaping compared to inactive children Sports clubs (Larsen *et al.*, 2017).

An English study by (Basterfield *et al.*, 2014) concluded that increasing moderate to high intensity physical activity may help reduce excess weight or obesity in boys; however more research is needed to examine this relationship in girls, and children also do not adhere to the

Kingdom's guidelines United regarding diet and physical activity, and more needs to be done to improve this situation.

To predict the relationship between moderate to high intensity physical activity, body mass index, and respiratory fitness, this paper (**Aires et al., 2010**) provides evidence of an inverse and significant BMI correlation with respiratory cardiac fitness, and cardiac respiratory fitness associated with levels of medium and high physical activity, where it was Children who are overweight / obese are less in performance than their normal-weight counterparts, the level of intensity of physical activity did not show any effect on the level of body mass index; therefore, weakened cardiac respiratory fitness was associated with obesity, which confirms the importance of increased cardiac fitness to its protective effect until In young people.

In an American study of (**Carrel et al., 2005**), I checked whether a school's fitness program could improve body composition, cardiovascular fitness, and insulin sensitivity in overweight children. The sample of the study consisted of fifty-five children suffering from extra weight and a rise in body mass index. The sample was distributed to two experimental groups subject to a physical fitness program, and a control group subject to physical education lessons in schools for a period of nine months, and pre-test and dimensional tests were performed, which showed Tribal results: There were no statistically significant differences between the two groups, while there was a very significant improvement for the experimental group compared to the control group in the numerical tests, in the level of fitness and body mass index, and also there is a clear improvement in the level of insulin in favor of the group

The experimental amendment clarifies in the school education curricula in the school that simple and consistent changes in the amount of physical activity have beneficial effects on body composition, fitness and insulin levels in children, and there must be participation from educational authorities to improve the health of children who are overweight to be part of Their treatment of related diseases.

In a Brazilian study of (**Santos *et al.*, 2015**), it aimed to evaluate the adjustments of body formation in post-puberty students after practicing the physical activity program during one academic year and the sample consisted of 386 students between the ages of 15 and 17 years, divided into two groups: the study group consists of the 195 students and the control group 191 students, the study group was presented to the physical activity program and the control group attended the traditional physical education classes, body composition was evaluated using the body mass index, body fat percentage, fat mass, and lean mass, and the results showed a positive effect of the program Activity B. There was a decrease in body fat percentage (mean differences = -5.58%) and waist circumference (-2.33 cm), as well as an increase in fat-free mass (+2.05 kg) in the study group for both sexes, While it was observed in the opposite control group, the study concluded that programmed physical activity encourages a significant reduction in body fat in school children after puberty.

Changes in physical fitness and body composition according to the physical activities of Korean teenagers a study by **Cho and Kim (2017)** to verify the importance of regular physical activity on body composition and fitness, the study sample consisted of 31 students in

the fifth grade in Seoul, were divided into two groups an active group and a group Inactive, body measurements (height, weight, body mass index, and fat mass) and fitness factors (muscle strength, muscle endurance, flexibility, agility, balance, and fit) were calculated, and the results of this study showed that the fat mass of the inactive group was higher compared to group A There are two active activities, and in the balance component of the sample of children who have obesity, there is a significant difference in muscle mass between the (left and right arm) and (left and right leg), and the active group has achieved higher degrees of elasticity compared to the inactive group, and this was found The study had significant differences in weight, body fat percentage, body mass index, flexibility, balance between active and physically inactive groups, which may negatively affect health indicators related to growth and development, and obesity in the study sample.

A study by (**Raistenskis et al., 2016**) aimed to assess the differences between physical activity and fitness in children who are obese, overweight and normal weight. The cross-sectional study was carried out using a cluster sampling method in three Lithuanian schools. Anthropometric data were analyzed for 532 Lithuanian children, height, weight, waist, hip circumference, and skin thickness were measured, BMI, waist-to-hip ratio, and body fat percentage were assessed, and physical activity and fitness level was assessed by questioning and walking test for a duration Six minutes, the maximum oxygen.

consumption was calculated to assess the children's aerobic capacity, the associations were analyzed between anthropometric data, the six-minute walk distance, the duration and strength of physical



activity, the study showed that 20.1% of the studied children were obese or overweight, that Turning them into moderate to high-intensity physical activity atleast 22.4 minutes per day and walking an average of 50.6 meters during the six-minute test, the obese and overweight children were less physically active and had less physical fitness than children of normal weight, and the results confirm that the matter In need of interventions to increase physical activity and improve physical fitness in children who are obese and overweight.

In a study that aimed to study the relationship between physical activity and body mass index in non-obese children, one hundred healthy children (60 boys and 40 girls) aged 6 to 8 years, were distributed in two groups according to the risk (high or low) of obesity in the future Children were selected from schools in the Collerin region of Northern Ireland (UK). The energy spent over a 10-day period was measured by measuring the heart rate, and to adjust the body size taking into account the length, body mass index and fat percentage, the results showed that the children Those at risk of obesity had a higher BMI and a K. This is compared to children not at risk of obesity, and the study found no differences in the level of physical activity of the two groups. (**Rennie et al., 2005**).

A recent Chinese study was conducted to explore the effect of exercise on body composition, cardiovascular function, and physical fitness in obese and weak children from the age of 5 years. The study sample consisted of 42 children with excessive obesity and 62 who suffer from excess skinnyness and then were randomly distributed to two groups, the first group The experimental group and the second

group the control group, and tribal measurements were made for body composition, cardiovascular function and fitness as well as dimensional tests at the end of the program. (50% of the heart rate reserve), and 50 training sessions in total, and the results of this study show that sports training has a role in reducing the BMI, waist circumference and percentage of body fat, and also worked to reduce the increase in body mass in children who have Excess obesity and children with excessive skin. Exercise training has resulted in a significant reduction in systolic blood pressure in obese children, as well as reduced heart rate responses during exercise, and this study concluded that 10 weeks of exercise training Moderate intensity is an effective and safe treatment for children Those who are 5 years old, whether they are obese or have a normal body mass. (Tan *et al.*, 2016).

In some of the few and advanced studies that were conducted on the Saudi society in the importance of physical activity related to health (Al-Hazaa and Al-Muzaini, 1999; Alumni and Al-Muzaini, 2000; Al-Muzaini, 2003; Al-Harbi, 2008; Al-Hazaa, 2010) by identifying the level of fitness related to health and the level of physical activity among Saudi children. The results of the study indicated a decrease in the level of cardio- respiratory fitness and the level of physical activity while muscle fitness and flexibility were within the normal limits. The studies concluded the importance of developing fitness-related elements of health, and this could be through the development of physical education lessons and their content so that they can develop the physical and skill aspect, because of this stage the importance of quality physical and physiological maturity and all aspects of the child. This is recommended

by the results of studies (**Jabbari, Ali bin Muhammad (2016); Azab, Mahmoud Suleiman (2010); Hussein and Ahmed, 2009; Hamed, 2006; Oxyzoglou et al., 2009; Haga, 2009; Chiodera et al., 2008**) to the role of physical education programs in developing and developing fitness-related elements related to various health and motor fitness.

**It is clear from the analysis of previous studies related to the research topic that:**

1. Lack of research in this field for this sample in general and in Arab studies in particular.
2. Agreeing on the importance of physical activity and the importance of physical fitness and its role in health for the individual and for children in particular.
3. Many studies agree on the use of the descriptive approach and its suitability for such studies.
4. Many results indicate a positive relationship between the level of health and quality of life in general.

**Benefiting from previous studies:**

Knowing the studies had a great impact on understanding the study problem and formulating it, setting and setting goals, as well as choosing the appropriate method for the nature of the study, and knowing the method and steps appropriate to the research procedures.

**Purpose of the study:**

The study aims to know the level of health status related to physical fitness and physical components for primary school students in the Qassim region.

### Study questions:

1. What is the level of health status associated with physical fitness in the following elements:

- Endurance and strength testing of the abdominal muscles.
- Endurance and strength testing for back muscles.
- Flexibility test for lower back and hamstrings.
- Test the elasticity of the shoulder and arm.

2. What is the level of health status associated with the physical components in the following elements:

- Fat percentage.
- Body mass.

### Importance of studying:

1. The study works to identify the relationship between body components and physical fitness as an indicator of the health status of primary school students in the Qassim region, and then the results of this study will contribute to helping to develop plans and programs for physical education.
2. This study helps the health workers to know the health status of students at this stage.
3. The lack of sufficient data and the lack of such studies in the Kingdom makes the study important.

### Materials and Methods The study simple Measurements:

The researcher has used some elements of the international fitness gram scale that determines the health status of individuals through fitness tests and physical components, which are standards defined by the Cooper Institute in Dallas, Texas, and represent the minimum levels of physical and physical fitness that provide Protection against diseases that result from the standard of living. The California Department of Education considers this measure the health standard for student

performance. The researcher has used some elements of the scale appropriate to the study sample, as follows:

1. Weight: The weight was measured by a calibrated medical scale of 0.1 kg.
2. Length: The inserted length scale was used to the nearest 1 cm.
3. Measure the skin fold.
4. Body mass index.
5. Test the endurance and strength of the abdominal muscles.
6. Test the endurance, strength and flexibility of the back muscles.
7. Flexibility test for lower back and hamstrings.
8. Test the elasticity of the shoulder and arm.

### **Study tools:**

Physical and physical measurements were made on all students in the second semester of the academic year 1438-1439 and they were as follows

### **Physical components:**

#### **Height and weight:**

The measurement of weight was carried out by a calibrated medical scale and measured to the nearest (0.1) kg. The measurement was taken using the length scale and measured to the nearest (0.5) cm.

#### **BMI:**

The BMI was measured by the weight and height formula, which is the weight over the square of the height.

#### **Skin fold measurement:**

The thickness of the skin folds was measured in five areas of the body: the biceps muscle, the triceps brachial muscle, and under the scapula, and the abdominal region, above the iliac bone by the skin fold thickness scale from the right side, using the Harpenden type

Harpenden type According to known procedures.

### **Fat percentage:**

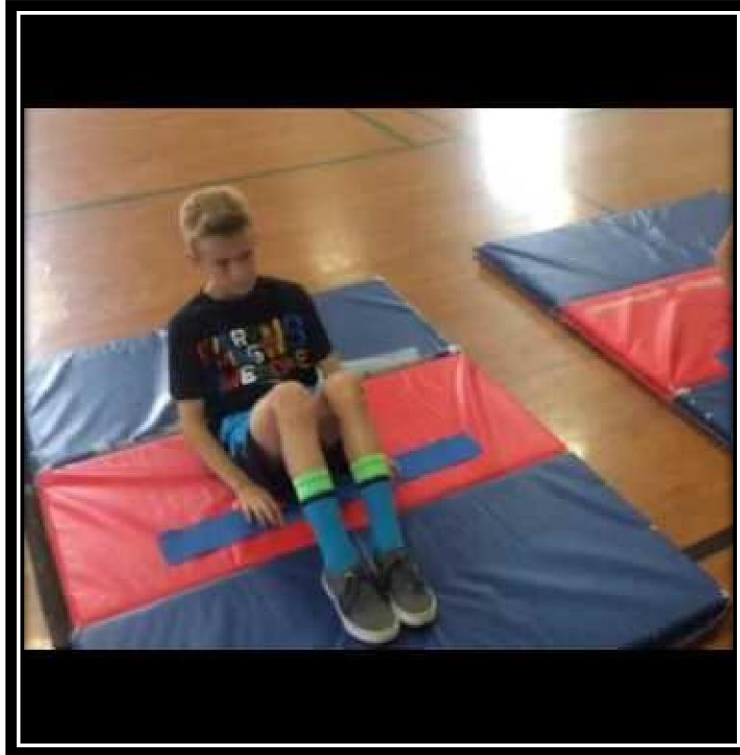
The percentage of lipids was estimated by measuring the thickness of the skin fold and then converting the values of the thickness of the skin fold into lipid ratios by applying the Lehmann equation (**Hazza, 2008**).

### **Health-related fitness items:**

#### **Physical tests:**

#### **Abdominal muscle strength and endurance test:**

The test starts from lying down and bends the knees at an angle of 140 degrees, the arms are straight beside the body and the hands are straight on the ground, then the head and shoulders are raised up while moving the hands on the ground to touch the other end of the tape, performed every time in 3 seconds, the test is performed with a colleague to help count and note the performance and after taking the situation The colleague places the tape under the body of the student, the colleague takes the position behind the head with the hands placed on the floor, as shown in Figure 1.



**Figure 1: Abdominal muscle strength and endurance test**

**Back muscle strength test:**

The back muscle strength test starts from the flatness and arms extended under the thighs with the torso raised up using the back and firm muscles to take the measurement, and it uses a personal mattress, a ruler with measurement marks on 6,9,12 inches. Stand extending below the thighs, marking just below the eyes to be a fulcrum for the ruler to measure, the lab slowly raises the upper body to a maximum distance of 12 inches (30 cm) and stability, registers above 12 inches (30 cm), moving flexibility is not allowed. The student is not encouraged to raise his head more than 30 cm, - the required range for health is 30 cm, and this is illustrated in Figure 2.



**Figure 2: Testing the strength of the back muscles**

**Flexibility test for lower back and hamstrings.**

The flexibility test for the lower part of the back and the hamstrings begins to sit on the ground and bend the right leg trunk to the center of the left leg, and puts the palm of the right arm on the left and the tilt of the trunk forward, to reach the maximum extent, and the best distance is calculated, the distance of the right leg and then the left is measured as in Figure 3.





**Figure 3: Flexibility test for the lower back and hamstrings**

**Shoulder and arm flexibility test:**

Shoulder exercises are a simple elasticity test to determine if the hands can be joined behind the back. This test measures the elasticity of the arm and shoulder, and is done through a standing position. He touches his body and directs fingers downward, places the other arm behind his back, and faces the palm of the hand outward and the fingers upward in an attempt to touch the fingers of each hand as shown in Figure 4.



**Figure 4: Shoulder and arm flexibility test**

**Statistical analysis:**

The Statistical Program (SPSS) for Social Sciences version 19 was used, where all the data for the study were entered by computer, using the following statistical parameters: mean, standard deviation, percentages and graphs.

**Results**

The results of the physical measurements of the study sample of 263 students in Table (1) indicate that the average age was 9.42 with a lifetime of 6, the standard deviation was 1.95, the average length at 139.27 cm and its standard deviation at 8.94, and recorded the lowest value of 116.5 cm, and higher value of 163 cm, while the lowest value of the weight was 17.5 kg, the highest weight was 76.6 kg, with an average of 36.84, and a standard deviation of 11.5.

**Table (1): Arithmetic averages and standard deviations for the general data of the study sample**

Variables	Arithm eticMean	Stan dard Deviation	Low estValue	High estValue
<b>Age</b>	9.42	1.95	6	13
<b>Height (cm)</b>	139.27	8.94	116. 5	163
<b>Weight (kg)</b>	36.84	11.27	17.5	76.6

Table (2) shows the number and proportions of the study sample according to the body mass index level (thinness, normal weight, and extra weight), arithmetic mean, standard deviation, highest value and lowest value. The extra weight was 28% and 19%, respectively, the mean was 18.67 and the standard deviation was 4.03, while the highest value was 10.86 and the lowest value was 31.16.

**Table (2): Distribution of the study sample according to the body mass index level**

Body Mass Index Levels (BMI levels)	Number	Percentage
<b>Thinnest (under 18.5)</b>	125	53.0
<b>Natural (Ideal) (18.5-less than 25)</b>	66	28.0
<b>Overweight (25-Under 30)</b>	45	19
<b>Total</b>	236	100.0
<b>Mean</b>	18.67	
<b>Standard deviation</b>	4.03	
<b>lowest value</b>	10.86	
<b>highest value</b>	31.16	

**Al-Hazaa (2006)** mentioned that **Lehuman *et al.* (1992)** set some criteria for the skin fold group at the triceps muscle and below the scapula to determine the percentage of fat in the body, and it is used after collection and consideration. The category to which the examiner belongs, and is reflected This is based on the results of the study in Table (3), where it is clear that 3% of the study sample had a sharp decrease in the percentage of fats, while 13.6% had a non-sharp decrease, while 36.9% had an ideal fat percentage, and there was a slight increase in the percentage of fats. Among the study sample, it was 9.7%, and a very high percentage was recorded at 19.1%, while 5.9% of the subjects were not identified of the study of any level, the arithmetic average has reached 20.85 standard deviation 10.85 and recorded the lowest value at 4.15 and the highest value was at 44.05.

**Table (3): Distribution of the study sample according to the level of fat percentage**

Level of fat percentage	Number	Percentage
Very low (under 7)	7	3.0
Low (7- less than 10)	32	13.6
Perfect range (10-less than 20)	87	36.9
A bit high (20-under 25)	23	9.7
High (25-less than 32)	28	11.9
Very high (32 or more)	45	19.1
Not specify	14	5.9
<b>Total</b>	<b>236</b>	<b>100.0</b>
<b>Mean</b>	<b>20.85</b>	
<b>Standard deviation</b>	<b>10.93</b>	
<b>Lowest value</b>	<b>4.15</b>	
<b>Highest value</b>	<b>44.05</b>	

In Table (4), the mean and standard deviations for the physical fitness measurements of the study sample are shown, where the mean for the right torso flexibility was 7.63 and the standard deviation is 12.37, while the mean for the flexibility of the northern torso is 7.09 and the standard deviation is 11.78, the mean for the abdominal muscles is 13.18 and the standard deviation for the same muscle was at 8.48, the average back muscles were 4.36-, while the standard deviation for the muscles themselves was at 14.11.

**Table (4): Means and standard deviations for physical fitness measurements of the study sample**

Variables	Number	Mean	Standard deviation	Lowest value	Highest value
Right torso elastic	195	7.63	12.37	6.69-	46
Flexibility of the trunk north	195	7.09	11.78	7.48-	45
back muscles	195	13.18	8.48	0	42
Abdominal muscles	194	4.36	14.11	44-	29

In Table (5), the distribution of the study sample is shown according to the flexibility of the right shoulder, as it appears that 162 of the sample members passed the test with a rate of 68.6%, and 74 of them did not pass the test at a rate of 31.4%. In the elasticity of the northern shoulder of the study sample, the number of candidates passed was 145 by 61.4%, and those who did not pass 62 and by 38.6%, as shown in Table No. (6).

**Table (5): Distribution of the study sample according to the elasticity of the shoulder right**

Right shoulder elastic	Number	Percentage
Pass the flexibility test	162	68.6
Not pass the flexibility test	74	31.4
<b>Total</b>	<b>236</b>	<b>100.0</b>

**Table (6): Distribution of the study sample according to the elasticity of the shouldernorth**

Left shoulder elastic	Number	Percentage
Pass the flexibility test	145	61.4
Not pass the flexibility test	62	38.6
<b>Total</b>	<b>236</b>	<b>100.0</b>

## Discussion

It is clear from the studies that were conducted on the Saudi children mentioned above that the measurements used to measure the body mass index and measure the percentage of fats are the same as the measurements used in the fitness tests, and it is clear from the results of this study, Table (2) that more than half of the sample was less than The normal limits for the body mass index; by 53%, they were less than the natural limit that is less than 18.5, and they are not within the safe limits for health based on the standards of health organizations, as some organizations believe that weight loss is linked to some diseases that are not less important Weight-related diseases (**WHO, 2018**) and this is consistent with the (**Uzzogara, 2016**), and this indicates that attention must be paid by the public health and nutrition specialists, physical activity and teachers this standard for a healthy weight.

The table shows that 28% of the study sample is in the normal weight, which means that a third of the sample is counted in the healthy limits according to the tests of Gram Fitness.

On the contrary, the percentage of excess weight of the study sample reached 19%, which raises concern because there is a high probability that the obese will remain at a young age obese in old age (**Al-Hazaa. 2006, Nawal 2012**), in addition to the fact that overweight at a young age is linked to many diseases, health, psychological and social problems and other diseases (**WHO, 2018**).

Table (3) shows that the percentage of grease for the study sample averaged 20.85, and it exceeded the normal healthy boundaries a little; according to the criteria of **Lohmann (1999)**, which ranges between 10-20, which differed with previous studies conducted by **Al-Khuriji and Al-Muzaini (2001) and Al-Harbi. (2008)**. Those who indicated that the percentage of fat in Saudi samples was within the normal limits, which indicates that there has been an increase in the percentage of fats among Saudi children during the last ten years, it should be noted that attention must be paid to physical activity, physical fitness, sports nutrition and special programs.

By doing so to maintain children's health and survival, within the healthier safe limits and this is consistent with what was mentioned by (**Abu Hanifh et al., 2013, Monyeke et al., 2005, Hsieh et al., 2014, Lazaa ., 2007, Stevens et al., 2004**). Moreover, the results indicated that 11.9% of the sample The study has a noticeable increase in the percentage of fats, and 19.1% of the sample has a very high fat percentage; this is a dangerous indicator, and the table also shows that 3% of the study sample has a low fat percentage, and 13.6% is slightly lower than normal limits It follows that attention must be paid to school feeding, public health and fitness programs and this is consistent with what he

mentioned (**Uzzogara, 2016**).

It is clear from Table (3) that 3.00% of the study sample has a very low fat percentage; the reason may be due to malnutrition, as this level is very low, and therefore more attention must be paid to the quantity and quality of food and the food program that children eat, and this is consistent with what he mentioned (**Basterfield et al., 2014**).

By comparison between the results of Tables (2) and (3), which reflects the first a high percentage of the study sample has a decrease in the body mass index and the second shows that a high percentage of the study sample has a high percentage of fat; it is clear from this that the body mass index may not adequately reflect the actual weight, and that the high percentage of fat is the most important test due to its greater association with many diseases and health problems, and is consistent with what it indicated (**Kesavachandran et al., 2012**).

Through Table (4), which shows arithmetic averages and standard deviations for measuring some fitness elements for FG tests, it is clear that the average elasticity of the torso on the right side and the left side has reached 7.63 and 7.09, respectively, and this is less than the normal limit that was classified in the health limits of the FG test. Where it must be at this stage has reached 8.00 or more in order to be within the safe boundaries of health, and this has been agreed with (**Kin & Cho, 2017; Manyely et al., 2005**) that the higher the percentage of fats, the less flexibility, and the person is vulnerable to diseases and injuries. As shown in Table (3).

It appears from Table (4) that the back muscles of the study sample are higher than the normal limits; that is, the sample has a distinct strength in the back muscles that has reached 13.18 and this represents higher than the normal limit, which ranges between 9-12 according to the tests of Gram Fitness and agreed with the results of the **Al-Harbi (2008)** in which the Cooper scale was used, which showed the results as being in the normal limits, and on the



other side there appears to be a very large weakness in the abdominal muscles, where the average is much lower than the normal limits that range from 9 to 22; It reflects poor muscular endurance and muscular strength in the abdominal area; this calls for a revision of the nightly programs of sports and school activities, and also the work of further studies to find out the secret of this weakness great in these muscles, and it agreed with a number of previous studies such as (**Hsin *et al.*, 2014; Abu Hanifah *et al.*, 2014 and Kim & Cho, 2017**).

Through discussion of Table (4) it is clear that there is a big difference between the back muscles and the abdominal muscles where the back muscles were higher than the normal limits, and they were more strong and muscular endurance, while the abdominal muscles had a marked weakness in strength and muscular endurance as the results indicated that the abdominal muscles Much less than normal limits, and the researcher attributes this strength in the back muscles to the reason that may be due to excessive loads in school bags that are carried on the back of the student daily to and from school, and one of the American studies indicated that students carry school bags from 10 to 20 minutes a day To and from school D have a negative impact on children; and that the creation of a functional imbalance in the balance of power back muscles and the strength of the abdominal muscles; which may lead to the creation of distortions in the strength of the study sample in the future, it was agreed with the **Turkish (2013)**.

It is clear from Tables (5) and (6) the percentage of the sample who passed the flexibility test for the right shoulder has reached 68.6%, and this indicates that more than half of the sample passed the flexibility test, and also that 61.4% of the study sample passed the test for the left shoulder, while 38.6% and 31.4% of the sample for the left and right shoulder respectively did not pass the test; this means that not a small percentage of the sample does not have elasticity in the shoulder, although this is one of the characteristics of

the age stage of the study sample, where flexibility at this stage is a significant advantage that decreases when progressing by age. This result is consistent with the results of some advanced studies such as **Al-Hazaa (1995), Al-Khuriji and Al-Muzaini (2001), Al-Jabri, Hussein Ali (2006) and Al-Harbi (2008)**, which were classified using the Cooper scale.

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