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Research Article

STUDY OF THE EFFECT OF TWELVE WEEKS OF PHYSICAL EDUCATION CLASS ON PHYSICAL FITNESS AND MOTOR ABILITY IN ELEMENTARY SCHOOL STUDENTS

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Abstract:

Since the complications of obesity each year impose many social and financial costs, such as health care, disabilities, disabilities and early death, and reduce productivity for human societies. Therefore, accurate evaluation of the status of obesity in different societies can be effective in identifying, treating and preventing obesity in any society, and reducing these costs. Cardiovascular endurance is one of the factors of physical fitness that plays a role in long-term activities Plays a very important role. The purpose of this study was to investigate the effect of five weeks of physical education on physical and motor fitness in elementary school students. The research subjects included 270 elementary students of Ardabil who were selected by cluster of 3 schools from the statistical community. Cardiovascular endurance, flexibility, muscle strength, muscle strength, speed and agility of these subjects were measured before and after 5 weeks of physical education. Data were analyzed by SPSS 14 and descriptive and inferential statistics (t-test). The results of this study showed that after completing the five weeks physical education, cardiovascular endurance, muscular strength, speed, agility and muscle strength of students significantly improved ($P \leq 0.05$). There was no significant change in muscular flexibility of students ($P \geq 0.05$). Finally, it can be said that the physical education class is an effective factor in improving cardiovascular endurance, muscular strength, speed, agility and muscular strength of students, but in order to influence muscle flexibility, a modification of the class practice program should be performed and more effective exercises And more specialized.

Key words: endurance, physical education, obesity status, students

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INTRODUCTION:

Over the past decades, doctors and researchers have increasingly been confident in the value of regular physical activity as a health promoting drug, especially cardiopulmonary and obesity, and, based on their authoritative findings, show that physical activity as a part of leisure time Or the employment of people will be greatly reduced by the premature mortality rates, in particular from cardio-respiratory illnesses. In addition, physical exercises cause obesity and body fat to be controlled and reduced, blood pressure remains within safe limits, The bones of the time Thierry prevent the occurrence of weaknesses due to delayed aging, bone and joint pain and heal the tensions and stress disappear. According to the results of numerous researches in the last two decades, most scholars and scholars have classified components of physical fitness into two groups: 1. Health-related components; 2. Components related to motor skills. Awareness of the effects of exercise and physical activity on improving and improving the health and well-being of humans is long overdue. Geshtel (1983) argues that people need physical fitness programs for two main reasons: first, regular exercise exercises increase the efficiency and health of the heart and respiratory system, and secondly, the physical fitness of human capacity is fully utilized Life benefits increase. From Benet et al (1983)[1], physical education is part of general education that is performed through physical activity and movement such as games, racing, sports, exercise, gymnastics, dance, and similar activities. Wuest and Bucher (2009) defined physical education as an educational process in which physical activity is used as a way of helping students acquire skills, readiness, knowledge and positive attitudes toward optimal growth and well-being. What constitutes the basis of all human motor activity is the body's physical fitness, having high physical fitness not only helps us in our basic movements, but also helps in learning sports skills (Vahedi, 2003). The term physical fitness has broad implications and has been defined in various forms in various ways. As a rule, the quality and capacities of the human body are called physical fitness in accordance with physical activity (Gaini, 2003). Wuest and Bucher (2009) defined physical education as an educational process in which physical activity is used as a way of helping students acquire skills, readiness, knowledge and positive attitudes toward optimal growth and well-being. According to Binet et al. (1983), physical education is part of general education that is performed through physical activity and movement such as games, racing, sports, exercise, gymnastics, dance, and similar activities. West and Boucher (2009) defined physical education as an educational process in which physical activity is

used as a way of helping students to acquire skills, readiness, knowledge and positive attitude for optimal growth and well-being. Physical health and attention to personal hygiene is one of the biological goals of education. Hence, educational games and health education teaches the largest amount of physical education content in most countries of the world. It has been shown that health-related physical education programs that are moderately or intensively implemented have a positive and important role in expanding physical activity at school-level physical education classrooms (Sepasi, 2005). Body composition consists of fat mass and fat mass, which indicates the health, capability and apparent beauty of individuals. Extensive research on body composition for identifying the factors of body composition affecting health has suggested different indices, the most important of which is the mass index Body fat percentage, fat mass and waist to hip ratio. Research findings have shown that BMI is a good predictor of high-density lipoprotein (VLDL-C) and systolic and diastolic blood pressure in both sexes. Although BMI does not divide body components into fat and fatty parts, it is used as an indicator of body fat content to predict the risk factors for obesity (Eftekhari, 2010; Ramezaninejad, 2010). In all age groups, the effect of modern life style on physical composition has been observed. In a cross-sectional study on 2729 preschool children aged 3 to 5 years between 1992 and 2008, the body mass index showed that obese children had health problems, and this restricted In their activity, with increasing age and decreased physical activity, the body mass and body mass index is increased (West, 2009). One of the most important effects of physical activity is the reduction of the likelihood of overweight and obesity, which decreases with decreasing the likelihood of complications and chronic diseases after obesity. Physical activity not only improves cardio respiration, but also improves cognitive function and improves mental health. Physical composition is one of the factors affecting physical fitness that has a significant effect on physiological responses to exercise (Gaini, 2000). Maximal aerobic power is one of the most commonly used measurements in sports physiology, which expresses the individual's capacity for consumption, transfer, and reception of oxygen (Gaini, 2008). The actual and objective amounts of maximum oxygen consumption, especially when comparing groups or individuals with each other, or evaluating different exercise programs, have a physiological and clinical significance. Aerobic fitness is an indicator of pulmonary, cardiovascular, hematological components of oxygen delivery, and active muscle oxidation mechanisms, and has an inverse association with cardiovascular disease.

Aerobic capacity tests are commonly used in cross-sectional and long-term studies to investigate the relationship between coronary heart disease and cardiovascular fitness in individuals (Ozleyak, 2006). Anaerobic power and its importance have been considered as one of the most important factors in physical fitness and success of athletes in different disciplines. Some skills and exercises are in great need of this. This issue is important in activities that require skilling to be performed in the shortest time of the fastest track or more, and the weight, spear, throw the disk faster at a distance, and do more work in less time. Shows (Hey, 2001). Freeman (1992) argues that physical education goals that are in line with the general goals of education include the physical, mental and emotional development of students. These goals, which include different dimensions of the child, have led to unmatched physical education among different classes. Eliminating or neglecting physical education programs in elementary schools aged 7 to 11, which limits the physical and motor activity of the child, means depriving the child of normal physical, mental and social growth. Therefore, considering that physical education is an important part of education, it plays a vital role in the realization of the general goals of educating and educating a generous generation. The education organization, which is responsible for the education of individuals, especially non-nurses, adolescents and young people, is responsible for providing the health of their bodies and spirits through the development of physical education programs in schools. Hence, the expansion of physical education programs in schools is one of the basic needs of education and the necessity of

RESULTS:

Table 1: shows the mean and standard deviation of individual characteristics of the subjects in the two groups

standard deviation	Average	Number	Statistical index Variable
1.12	10.5	143	Age (year)
5.93	129.84	143	Height (cm)
4.24	31.23	143	Weight (Kg)
2.35	15.83	143	Body Mass Index (BMI)

First hypothesis: Five weeks of activity in the physical education class has a significant effect on the muscular strength of elementary students.

Table 2: Comparison of strength of male belt muscle strength in pre-test and post-test

P-value	T	standard deviation	average	Statistical index group
0.037	2.13	4.47	17.86	Post-test
		3.28	15.70	Pre-test (Horizons)

continuity in all educational levels is indisputable (Johnson, 2010). Therefore, considering the importance of each of these cases and that this issue has not been studied among students in terms of the effect of the unit of physical education course, the researcher intends to consider the effect of eight weeks of physical education on physical and motor fitness of students Basic Elementary.

RESEARCH METHOD:

After selecting the subjects, a consent form is given to cooperate in the research. After the subjects and their families showed their willingness to participate in this study, in order to measure the pre-test, the dependent variables of the study (weight, Height, strength, cardiovascular endurance, flexibility, muscle strength, agility, and speed). Subjects then participated in physical education classes for eight weeks, and after the end of five weeks, dependent variables were again measured. The statistical population of this study included all elementary students of Ardabil boy in the academic year of 2011-2012. The research community included 24 schools and 2500 students. The method of sampling is cluster type.

Statistical analysis methods

In this research, after collecting and entering data in the software environment (SPSS 16), descriptive statistics were used to calculate the central orientation and dispersion measures. The Kolmogorov-Smirnov test was used to check the normality of the data. Then, to test the research hypotheses, t-test was used for statistical analysis and was significantly ($p \leq 0.05$).

Second hypothesis: Five weeks of activity in the physical education class has a significant effect on cardiovascular endurance of elementary students.

Table 3: Comparison of Maximum Oxygen Consumption of Male Students in Pre-test and Post-Test

P-value	T	Standard deviation	average	Statistical index
				group
0.025	2.3	6.88	150.47	Post-test (540 meters away)
		7.80	146.10	Pre-test (540m)

DISCUSSION AND CONCLUSION:

According to the research, it seems that the physical and muscular fitness of young people is a fundamental and vital issue that ensures the health and well-being of people in the community. Increasing the body's capacity for exercise, except through physical education and motor activity, is not achieved from any other educational program, and physical education should be part of the complementary program of education. Those who are fit for fitness are safe from the dangers of cholesterol-related disease, and even less likely to be infected with these diseases in the future. Therefore, physical education teachers in schools and sports educators should, if possible, change the teaching and modification of activities and programs and encourage more students to inform the future generation of the dangers and consequences of inactive, as well as families Live in big cities to prevent their children from playing computer games in their leisure time and push them to exercise and physical activity. According to the results obtained in this study, it can be concluded that students can improve their fitness and physical fitness factors by participating in physical education courses and gain enough physical education during the year. According to the results of this research, it can be concluded that students can improve their physical fitness and physical fitness factors by taking part in the physical education course. First Phase: Five weeks of activity in physical education class has a significant effect on upper endurance muscular endurance of elementary students.

According to the results of this test, it can be concluded that there is a significant difference between the mean muscle strength of the shoulder belt in the pre-test and post-test, and the five-week activity in the physical education class has a significant effect on muscular endurance of elementary students, which has a significant effect on the outcome Research Findings of Rajayan and Zahedi (2011). Does not match But it is consistent with research (Salis, 1997). Possibly increased muscular endurance due to cellular-molecular changes in the central nervous system of the motor units, the neuromuscular attachment site, the systems

involved in the sarcoplasmic network, mitochondria, or in contractile proteins itself. Therefore, different stimuli such as hormonal changes, type, duration, and intensity of exercise can determine the main position of the change. The researchers conclude that adaptation after fasting training results from high changes in hormone and intense muscle tension during activity, which reduces reflexes (Salis, 1997). In this case, motor units are called for a specific action, which facilitates contraction and increases the muscle's ability to generate power. Such an increase in the pattern of the call of motion units can be due to stopping or reducing the inhibitory impulses (muscular duct), allowing more active motor units to be activated simultaneously. Exercise can slow down or counteract inhibitory impulses and allow the muscle to achieve higher levels of power. Therefore, increased potency may be achieved by reducing neuronal inhibition. While in resistance exercises, muscle tension and hormonal changes, activating cascade paths between genes and proteins, in addition to metabolic changes, it causes structural changes, especially in MHC, which ultimately causes hypertrophy or increases the size and diameter of the blisters They also have a direct relationship with increased strength and muscular endurance (Wilmor and Pollack, 1987).

Second hypothesis: Five weeks of activity in the physical education class has a significant effect on cardiovascular endurance of elementary students.

According to the results of this test, there is a significant difference between the mean cardiovascular endurance in pre-test and post-test, and eight weeks of activity in physical education class have a significant effect on cardiovascular endurance of elementary students. From the research findings (Guyini and et al, 2000; Salami, 2004; Rajaian and Zahedi, 2011), they are not consistent with the results of Eftkhari et al. (2007).

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