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# **Fitness Exercises As A Means Of Motivation For Physical Education Classes For High School Students**

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# Fitness Exercises As A Means Of Motivation For Physical Education Classes For High School Students

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#### ABSTRACT

In the article, fitness aerobics is considered as one of the effective forms that provide the formation of interest and motivation among high school students for physical exercises and health promotion. The purpose of the work is to develop a methodology for using fitness aerobics in physical education classes in physical education classes for high school girls. The study was conducted on the basis of Kharkov Specialized School № 33. The study involved 25 students in grades 10-11. Research methods: analysis of scientific and methodical literature; pedagogical observation; pedagogical experiment; pedagogical testing; methods of mathematical statistics. The method of using fitness aerobics in the physical education classes of high school girls was theoretically substantiated and developed. Improved the content of the planned independent fitness classes, which were used as an additional reserve of motivation and increase weekly physical activity. The data on the use of fitness aerobics to increase the level of physical fitness of high school students and motivation for physical education have been supplemented. The results of the experiment that in comparison with the data at the beginning of the students' motivation to attend physical education classes had changed. Before the introduction of pedagogical technology, the vast majority of students attended physical education classes to get a positive assessment, then, at the end of the formative experiment, the students went to physical education classes because they liked the style of the lessons and in order to improve their health and level of physical fitness.

Keywords: fitness aerobics, high school students, physical culture, health, methodology.

#### **1. INTRODUCTION**

Today, the health of general secondary school students is steadily deteriorating (Krutsevych, 2008; Griban et al., 2018; Andrieieva et al., 2019; Nosko et al., 2020; Shkola et al., 2021). Modern research shows that 90% of school graduates have health problems. Thus, the number of healthy school graduates ranges from 5 to 25 %. At the same time, more than 50 % have unsatisfactory physical fitness (Otravenko et al., 2021). The state of health of girls of senior school age causes special concern, insufficient level of which negatively affects their future reproductive function. Exercise should play an important role in improving health, training a fully developed personality, after all in school the responsible attitude to own health, important theoretical knowledge and practical skills for its preservation is formed (Shiyan et al., 2007; Tymoshenko, 2017; Arefiev, 2018). In recent years, many studies in different directions have been conducted to research the problem of improving the content of physical culture, different teaching methods and motivation to perform physical exercises. One such problem, as experts state, is the decline in interest in traditional physical education lessons.

Fitness aerobics is one of the effective forms of ensuring the formation of positive interest in students, motivation to engage in physical culture, development of physical qualities and health promotion (Fomenko, 2019; Shkola et al., 2020; Zhamardiy et al., 2020). The need for widespread use of this form is also due to the

fact that it has a positive effect on the development of physical qualities, such as: speed, endurance, agility, flexibility, balance, coordination of movements, thus ensuring the normal physical development of students. However, despite the important role of fitness aerobics, the use of this form as a means of forming motivation for regular exercise in high school girls remains at a low level. This proved the relevance of the chosen research topic. In recent years, a lot of research has been conducted on the development of motor skills of girls. Various means and pedagogical methods of influencing the physical fitness of girls have been introduced into the educational process (Pyatnytska, 2017; Shkola, et al. 2019).

Modern young girls separate fitness aerobics from other types of physical activity. The variety of exercises for modern music in the dance style, high emotional background of classes based on the interaction of rhythm of music and rhythm of movements provide opportunities for aerobics to maintain a high rating among other types of physical culture and health-improving activities. It is proved that fitness aerobics has great potential for a healthy lifestyle, involvement in the culture of movement, development of motor skills, emotional uplift and general mood. It effectively affects the correction of the general appearance, promotes the harmonization of physical development, improves the functional state of the body's major systems, improves mental performance, etc. (Williams, 2013; Mikheienko et al. 2017; Otravenko et al. 2021; Shkola, et al. 2021).

The research of a number of specialists is devoted to the possibilities of using different types of health aerobics in the educational process of female students in high school and universities: Suetina (rhythmic gymnastics); Starkova (dance aerobics); Shtykh (step aerobics); Fanigina, Shkola (aqua aerobics); Trofimova et al., (fitness aerobics); Kryuchek et al. (sports aerobics); Chernenko (fitball-aerobics); Ilnytska (Pilates, yoga); Zinchenko, Bala (cheerleading) et al. A significant amount of scientific work is devoted to the study of the development of physical qualities by means of fitness aerobics, for instance: determined the rational parameters of physical activity in the system of classes for students, using combined aerobics (Fomenko, 2019); effective influence of modular technology for the development of motor skills (Otravenko et al. 2021), etc. Thus, the versatility of fitness aerobics is proved both in terms of content and in the variety of methodological approaches. But, despite numerous scientific studies, the problem of forming motivation for physical education classes for high school girls remains relevant. Also, a relevant problem is finding the latest and most effective additional learning tools, which could diversify the content of physical education programs, satisfy the interests of students and better influence the solution of the problem of development of their physical qualities.

Therefore, there is a need to develop methods of using physical education aerobics in physical education classes for girls, who have chosen a certain type of health aerobics as a type of their motor activity in physical education classes and their introduction into the curriculum of general secondary education establishment. The method of using fitness aerobics in the physical education classes of high school students will be theoretically substantiated and developed; the content of planned independent fitness classes, which were used as an additional reserve of motivation and increase in weekly physical activity, has been improved, and data on the use of fitness aerobics to increase the level of physical fitness of high school students and motivation for physical education will be supplemented.

#### 2. MATERIALS AND METHODS

The aim of the study is to develop a method of using fitness aerobics during physical education classes as a tool for forming motivation in high school girls to physical education classes.

The study was conducted in the 2020–2022 academic year (108 working weeks) on the basis of Kharkov Specialized School  $N_{2}$  33. The study involved 25 students of  $10^{th}$ – $11^{th}$  grades. The organization of the study included three main stages. The first stage conducting surveys and surveys among high school students, as well as determining the level of their physical development, general and special physical fitness. The second aimed at developing and implementing methods of using fitness aerobics during physical education classes in the educational process of high school students. At the third conducted to determine the effectiveness of the method of using aerobics in physical education classes and the formation of motivation for physical education with the help of fitness aerobics.

The research methods were as follows:

- analysis of scientific and methodical literature to identify the relevance of the problem;
- pedagogical observation to identify the strengths and weaknesses of the level of physical fitness of students;
- pedagogical experiment to compare the results of the experimental groups and the proposal of a methodology to increase the level of physical fitness of students;
- pedagogical testing to obtain reliable information about the levels of physical fitness in different periods of the experiment;
- methods of mathematical statistics for mathematical processing of the obtained research results.

#### 3. RESULTS AND DISCUSSION

Analysis of scientific and methodological literature shows that school physical education is a pedagogical process of personality education, the specific content of which lies in learning to move, purposeful development of motor abilities and mastering special knowledge in the field of human motor activity (Griban et al., 2018). School physical education is an important means of physical, social and spiritual development of student youth. Implementation of the system of school physical education is carried out at the expense of the subject «Physical Culture». Its main purpose is: formation in students a stable motivation to maintain their health, physical development and physical fitness; harmonious development of natural abilities and mental qualities; the use of physical education in the organization of a healthy lifestyle (Krutsevych, 2008).

Physical education as an educational field at the present stage is developing rapidly and is constantly updated with new data from methodological, medical, social, psychological and pedagogical research. At the same time, nowadays it is necessary to further improve the system of physical education, increase its effectiveness in the comprehensive development of every citizen of Ukraine on the basis of personality-oriented pedagogical paradigm (Zhamardiy et al., 2019; Shkola et al., 2020).

One of the means of versatile physical education and development is fitness aerobics. The work of (Fomenko, 2019; Shkola et al., 2020; Zhamardiy et al., 2021) contributed to the spread and popularization of this type of fitness. During aerobics classes expressive movements are mastered, the idea of aerobic movement, the ability to experience feelings when performing exercises is formed. The motor abilities of girls are expanding, and her experiences are enriched with positive emotions, make life emotionally rich. Slim figure, correct posture, energetic gait, plastic movements form an incomplete list of qualities nurtured by aerobics, which makes a girl beautiful (Otravenko et al. 2021). The inability to hold their body properly affects not only the appearance of girls, but also the condition of their internal organs. Postural disorders lead to deterioration of the organs and systems of the growing organism, especially affecting the functions of the musculoskeletal system, cardiovascular, respiratory and nervous systems. Defective posture can cause moral distress. Exercise is the most effective way to prevent and eliminate posture defects.

Recently, for therapeutic purposes, medical experts recommend fitness aerobics. The main reason for this advantage is the emotionality of these exercises, they have a positive effect on the mental sphere of a person with health problems. Children are more likely to engage in fun exercises than exercises consciously known as therapeutic. That is why fitness aerobics should be considered as the most important means of a mandatory set of physical culture and sanative activities for high school students during physical education classes (Shkola et al., 2021). Senior school age is a time of direct preparation of a growing individual for life as an adult, for choosing a profession and performing social functions. Fitness aerobics is a unique fusion of existing fitness systems. According to the functional purpose of aerobics can be divided into sanative, sports and applied. In turn, sanative aerobics includes general developmental exercises for all parts of the body. Swinging and circular movements of arms, legs, tilts and turns of the torso, head, squats and lunges, exercises in different positions: stops, sitting and lying. These exercises are combined with types of walking, jumping, running, dancing exercises, exercises with objects. Choreography exercises, the simplest elements of acrobatics and other means are also used.

The integrity and dynamism of these exercises in organic connection with music create a unique technique of exercises that are perceived as dance movements. Depending on the set of aerobics, classes can be mainly dance, athletic or mixed. Girls especially need and like such types of physical activity in which flexibility, coordination, beauty and dancing movements are revealed and formed. They are easier to tolerate physical activity, characterized by rhythmic and frequent alternation of tension and muscle relaxation (Krutsevych, 2008; Kornosenko et al., 2020). Thus, the teacher's use of appropriate pedagogical and psychological techniques in the learning process contribute to the improvement of the educational process. Taking into account motivations, needs, goals, psychological readiness gives students the opportunity to self-disclosure, self-realization and self-affirmation, achieving harmony of body movement and understanding of this need. The practical application of this gives significant results in conducting physical education classes with aerobics.

The use of elements of fitness aerobics is provided by the school curriculum as part of aesthetic education in the process of physical education. It states that in the lessons of fitness aerobics, high school girls must learn exercises without a subject and with objects, exercises with elements of acrobatics, which are performed to musical accompaniment. Such lessons are held at the junction of choreographic art together with aerobic exercises, which contributes to the harmonious development of the personality of schoolgirls. Strong arguments in favor of aerobics are its availability and effectiveness. Its accessibility, first of all, is that its content is based on exercises familiar to everyone. It is possible to pass to more difficult elements and to employment with subjects after systematic employment, having consistently mastered movements typical for aerobics. We should start with simple and accessible elements. Aerobics does not require a lot of special equipment, which is very important for their organization.

Summarizing all the above, it should be noted that the most effective tools that are aimed at developing the personality of students of general secondary education are aerobics; the importance of the teacher's use of

general pedagogical techniques in conducting classes has been proved. Aerobics as a system of physical exercises has excellent opportunities in shaping the personality of schoolgirls, because they especially need and like such types of physical activity in which flexibility, coordination, plasticity, beauty and danceability of movements are revealed and formed. They are easier to tolerate physical activity, characterized by rhythmic and frequent alternation of tension and muscle relaxation or frequent changes in body position. The use of aerobics in the physical education of female students is not only possible but also necessary in the formation of physical culture of the individual. In order to find out the attitude of high school students to different types of physical activity, we conducted a survey. During the survey, the peculiarities of girls' motivation for physical culture and health-improving activities and their sports preferences, the attitude of the girls themselves to physical education lessons and aerobics were determined. The generalized results of this study are presented in table 1.

	Table 1. Attitudes of 10 -11 grade students to	Grade of respondents		of
N₂	Questions and answer options	10 <sup>th</sup>		group of
		grade	11 <sup>th</sup> grade	
		Number of re	spondents	ge %)
		n = 11	n = 14	era, Is (
			ne answer to	ave se girl
		the question (quantitative		nodjo
		indicators)	(quantitutive	The average response schoolgirls (%)
1	2	3	4	5
1.	What is your favorite way to spend your leisure time?	•	•	
a)	With friends.	6	8	56
b)	Watching TV shows.	2	0	8
c)	With a computer.	2	3	20
d)	Exercise.	1	3	16
2.	Do you do physical culture and sports activities outside	of lessons?		
a)	Yes.	4	1	20
b)	No.	5	10	60
c)	Sometimes.	2	3	20
3.	Do you like physical education lessons?			
a)	Yes.	8	13	84
b)	No.	0	0	0
c)	Some parts are not to my liking.	3	1	16
4.	What do you like to do most in physical education class	es?		
a)	General developmental exercises.	1	1	8
b)	Sports games.	6	3	36
c)	Aerobics or gymnastics.	2	10	48
d)	Athletics.	2	0	8
5.	Do you find it difficult to exercise in physical education	classes?	-	
a)	Nothing comes out.	0	0	0
b)	It is very tiring	2	4	24
c)	I can do everything	9	10	76
6.	What motivates you to attend physical education classe	s?	•	
a)	Exercise is good for your health.	11	14	47
b)	I like the style of conducting.	5	2	25
c)	For a positive mark.	9	14	28
7.	Do you regularly exercise during physical education classes?			
a)	Yes.	9	8	68
b)	No.	2	6	32
8.	If you miss physical education classes, for what reason?			
a)	Only if I'm sick.	11	11	88
b)	No mood to engage.	0	3	12
c)	If I'm not interested.	0	0	0
9.	Would you like to change something in physical education classes?			
a)	Yes.	8	6	56
b)				
c)	No. Sometimes.	2	5 3	28 16

Analysis of the table data shows that the largest number of schoolgirls prefer to spend time with friends, namely 56 % of respondents (group average) and computer entertainment, as reported by 20 % of respondents. Small percentage (8 %) of schoolgirls spend their leisure time watching TV (Table 1). It should be noted that only 16 % (group average) of schoolgirls prefer exercise and sports (Table 1, question 2). We see that only 20 % (group average) of schoolgirls are engaged in physical culture and sports activities outside of physical education classes at school. At the same time, only 20 % (group average) of students 84 % (average group rate for the entire sample) have a positive attitude to physical education lessons (Table 1, question 3a), while 16 % of girls said they did not like everything in physical education classes.

Analysis of the answers to the question about the complexity of the tasks performed by students of 10<sup>th</sup>-11<sup>th</sup> grades during physical education classes, showed that the majority of girls 76 % (group average) performs well. However, it should be noted that 24 % (group average) of students indicated that they are very tired during their performance (Table 1, question 5).

The materials of the study also allowed to determine the main motives for students to attend physical education classes (Table 1, question 6). It is established that the most important factor motivating students to attend physical education classes is the desire to improve their health. This motive was preferred by 47 % of schoolgirls. Another important motive for attending physical education classes for girls of  $10^{th}-11^{th}$  grades is to get a positive grade. About 28 % (average group rate) of the surveyed students preferred this motive, and only 25 % of the surveyed girls like the style of lessons (Table 1, question 6).

To the question «Do you regularly exercise during physical education classes?» 68 % (average group rate) of girls gave a positive answer (Table 1, question 7). Thereby confirming the seriousness of thier attitude to physical education lessons. According to the results of the study, the main reasons that cause students to miss physical education classes are various diseases, as indicated by the vast majority, namely 88 % (group average), of students in  $10^{th}$ – $11^{th}$  grades. It was found that among the reasons that cause students to miss physical education classes is the lack of mood to exercise, which was confirmed by 12 % of girls. It is noteworthy that there were no girls who did not like to engage in physical culture (Table 1, question 8).

During further analysis, we learned that 56 % (group average) of girls want a change in the style of physical education lessons, and 28 % (group average) do not want any changes, they are satisfied with everything (Table 1, question 9). Thus, the above analysis of the results of students' responses to their attitudes to physical education lessons showed that the number of willing girls who would like changes in physical education lessons is much greater than those who are satisfied. In order to determine the prerequisites for the use of aerobics in physical education classes in general secondary education, which is one of the tasks, we conducted an additional study. In the course of this study, the attitude of  $10^{th}$ – $11^{th}$  grade students to aerobics was determined (Table 2).

Table 2: The attitude of students to aerobics				
		Grade of respondents		of
		10 <sup>th</sup> grade	11 <sup>th</sup> grade	group of
N⁰	Questions and answer options	Number of respondents		age (%
J1≌	Questions and answer options	n = 11	n = 14	The average response schoolgirls (%)
		Results of the answer to		av onse olgi
		the	question	L'he respo schoo
		(quantitative indicators)		T] re scl
1	2	3	4	5
1.	What do you know about aerobics?			
a)	Nothing.	0	0	0
b)	Very little.	7	11	72
	Aerobics is a good sport that has a positive effect on the			
c)	development of physical qualities, develops	4	3	28
	expressiveness and plasticity.			
2.	Would you like to do aerobics during physical education classes?			
a)	No.	0	0	0
b)	Partially.	2	7	36
c)	With pleasure.	9	7	64
3.	What exactly attracts you to aerobics?			
a)	Nothing.	0	0	0
b)	Special aerobic exercises.	6	3	36
c)	Work with objects or without them.	12	10	88
d)	Opportunity to express your feelings through movement.	7	6	52

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e)	The fact that classes are held to music.	13	7	80
f)	Demonstration performances.	6	б	48
4.	Why haven't you done aerobics before?			
a)	I'm not interested in it.	0	0	0
b)	I did not know about its existence.	0	0	0
c)	There was no opportunity.	11	14	100
d)	I did aerobics.	0	0	0
5.	What do you expect from aerobics?			
a)	Physical and moral satisfaction.	11	8	76
b)	Beauty and grace.	12	13	100
c)	Self-realization.	4	8	48
d)	Improving well-being.	0	0	0
e)	Discovering new talents.	7	11	72

Analysis of the materials of the study showed that 72 % (group average) of the surveyed girls have little information about aerobics as a sport. At the same time, 28 % of them indicated that they really like aerobics (Table 2, question 1). The analysis also found that 36 % of girls would like to do aerobics in class sometimes, while 64 % (group average) would enjoy it (Table 2, question 2). The analysis of the respondents' answers showed that the vast majority of girls indicated that aerobics classes are especially attractive to them with exercises accompanied by music. Also 88 % (group average) noted that aerobics attracts them to work with objects; while 52 % of respondents believe that they will be able to express their feelings through movement; 36 % of girls are attracted to special aerobic compositions. It is also positive that there were no girls who were not attracted to aerobics at all (Table 2, question 3).

To the question «Why haven't you done aerobics before?» all girls (100 %) answered that they did not have such an opportunity to do aerobics before (Table 2, question 4 c). When planning the pedagogical experiment, we asked what the girls expect from aerobics. The results of the answers showed that all 100 % of girls strive for beauty and grace, 76 % (average group rate) of girls want to get physical and moral satisfaction, 72 % of girls will try to discover new talents (Table 2, question 5 a, b, e).

The above analysis of the results of students' answers allowed us to make the following generalizations. First, 60 % of schoolgirls have a low level of motivation to exercise, but there is interest in new and interesting types of physical activity. Secondly, according to 80 % of girls, aerobics is one of the tools that is popular among schoolgirls due to its availability and the combination of physical exercises and musical accompaniment, which is the basis for the use of aerobics in the process of physical education of girls. Thirdly, 64 % of girls said that they really like aerobics and they would be happy to do it during physical education classes. During the pedagogical experiment it was found that the dominant motives that motivate students to exercise are awareness of the positive impact on their health, as indicated by 52 % of students, as well as the style of lessons, this motive was preferred by 44 % of students (Table 3). While before the experiment, the main motive for the students was to get a positive mark.

Nº	Questions and answer options	Results of the answer indicators)	to the question (quantitative	
• •-		Stages of pedagogical experiment		
		At the beginning of the experiment	At the end of the experiment	
1.	Do you do physical culture and sports activities outside of lessons?			
a)	Yes.	20	48	
b)	No.	60	20	
c)	Sometimes.	20	32	
2.	Do you like physical education lessons?			
a)	Yes.	60	72	
b)	No.	0	0	
c)	Not everything.	40	28	
3.	What motivates you to attend physical education classes?			
a)	Exercise is good for your health.	28	52	

# Table 3: The attitude of schoolgirls of 10<sup>th</sup>-11<sup>th</sup> grades to physical education lessons at the end of a pedagogical experiment

b)	I like the style of conducting.	20	44	
c)	For a positive mark.	52	4	
4.	Do you regularly exercise during physical education classes?			
a)	Yes.	68	84	
b)	No.	32	16	
5.	Would you like to change something in physical education classes?			
a)	Yes.	56	12	
b)	No.	28	72	
c)	Sometimes.	16	16	

Analysis of the results shows that during the pedagogical experiment among high school girls, the priorities that motivate them to exercise have changed significantly. For example, if before the beginning of the pedagogical experiment the number of girls who indicated that they are regularly engaged in physical culture and sports activities as extracurricular activities was only 20 %, then at the end of the experiment there were already 48 % of such students. According to the analysis of our research, during the pedagogical experiment the number of female students who began to like physical education lessons increased by 12 % and amounted to 72 % (Table 3). During the pedagogical experiment it was found that the dominant motives that motivate students to exercise were awareness of the positive impact on their health, this was indicated by 52 % of students, as well as the style of lessons, this motive was preferred by 44 % of students (Table 3). While before the experiment, the main motive for the students was to get a positive mark. It is also important to note that at the end of the pedagogical experiment, the number of students who systematically began to exercise increased by 16 % totaling 84 % from all participants. During further analysis, we found that at the end of the pedagogical experiment, the number of students who want to change something in physical education classes has a positive effect on the formation of high school students to regular exercise.

#### 4. CONCLUSIONS

Analysis of scientific and methodological literature shows that the process of physical education of schoolgirls needs to be improved. The amount of physical activity does not meet the norm, which ensures the optimal level of health, due to the shortcomings of the organization of physical education in general secondary education. The reason for the low motivation of students to physical education classes, experts say, in particular, the lack of choice of classes, their dissatisfaction with the content of school physical education. Changes in the content of lessons can increase the motivation for physical education classes. Analysis of the data described in the literature and introduced into the lessons of the elements of different types of aerobics allowed us to conclude that aerobics is accepted for school physical education lessons with high school students.

According to the results of the girls' survey, it was found that in general schoolgirls had a low level of motivation to exercise, however, there was an interest in new and interesting types of physical activity. Aerobics is one of the tools that is popular among schoolgirls due to its accessibility and the combination of physical exercises and musical accompaniment. This forms the basis for the use of its tools in the process of physical education of girls and a motivator for physical education.

In order to determine the impact of our methodology aimed at improving the lessons of physical culture and motivation for the lessons themselves, during the formative part of the experiment, a second study was conducted. The results of this study show that the number of girls who regularly started attending physical education classes increased by 20 % totaling 88 % from all participants. It is also important to note that after the introduction of aerobics in physical education classes, the number of students who began to enjoy physical education classes increased to 96%, while before the introduction of the method their number was 84 %. The results of the experiment also showed that in comparison with the data at the beginning of the students' motivation to attend physical education classes to get a positive assessment, then, at the end of the formative experiment, the students went to physical education classes because they liked the style of the lessons and in order to improve their health and level of physical fitness.

Further research in this area should be aimed at a deeper study of pedagogical methods of physical improvement of students of general secondary education through various types of aerobics.

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