

## ANNUAL GROWTH IN THE LEVEL OF GENERAL PHYSICAL TRAINING OF ADOLESCENTS 14-15 YEARS

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**Abstract.** *Experimental lessons of physical education in IX class, organized by combining the method of the game and competition, ensure a positive annual rate the level of general physical training adolescents 14-15 years, both in relation to the initial testing, and compared to the control group, which shows their effectiveness for this contingent of pupils.*

**Keywords:** *Adolescents, motric testing, general physical preparation, annual growth rate, physical education lessons, game and competition method.*

**Actuality:** For 14-15 years pupils, learn at the end of the secondary cycle, the lessons of “physical education” are particularly needed, they will help them to improve the driving qualities of the base (resistance, strength, détente, skillfulness, suppleness, movement speed) required for continuing educational or vocational route and effective integration into society [2, 4]. But, upon arriving at this, they exhibit a weak interest towards the lessons of physical education, this attitude, being largely determined by the biological changes that take place in their body, of sexual maturation, characterized by extensive functional indices of fluctuations and instability of physical capacity [5, 6]. In this context, to enhance the motivation of adolescents regarding the respective attendance lessons, the teaching strategies used by teachers of physical education, should be adapted to the particularities of the morphological, functional and motive of students, being selected mainly the methods and means of training approved and accepted by the students [3, 7]. The game and the competition method, used in the context of physical education lessons with students’ backgrounds, It offers freedom of movement, but also the possibility of demonstrating their individual capacities in public, what corresponds to their interests, being attractive to them [8].

**Hypothesis:** It was assumed that the combination of the game method with the competition

within the experimental physical education lessons in class IX will improve the annual growth in the level of general physical training of pupils of 14-15 years, in comparison with the control group.

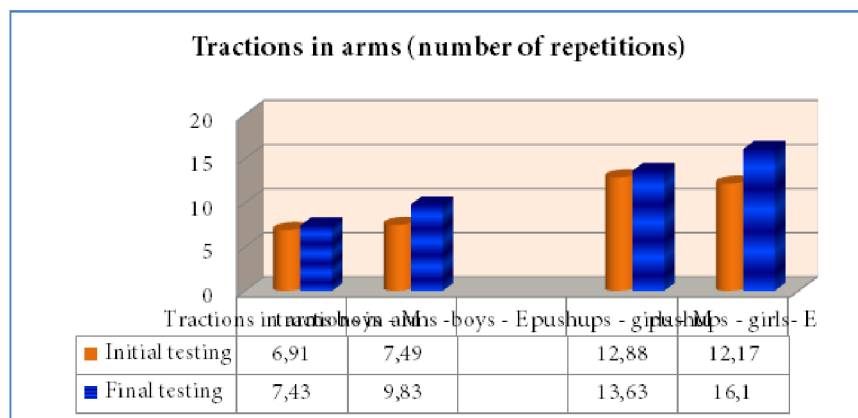
**The aim of the research** is to monitor the dynamics of the annual general physical training of adolescents from ninth grade, engaged in physical education lessons organized by combining the method of the game and competition or performed traditional.

**Research methods:** Pedagogical tests were carried out in accordance with the “technological driving test Sheet”, drawn up for the purpose of unification of requirements and rules by all teachers of physical education in the country [1, p.62-66]. The driving qualities of the students were evaluated twice a year: in October and the first half of the month of May. Scientific researches have been conducted in theoretical high schools “Pro Succes” and “M. Sadoveanu” of Chisinau, on a contingent of 48 students. Through comparative analysis of experimental results with those of batch control group were formulated conclusions concerning the influence of physical education lessons on a level of general physical development of adolescents 14-15 years. Comparative analysis of the results was made using parametric criterion: t Student.

**The results of the research's:** *Fixed bar pull-ups.* From initial testing, strength of boys from both groups, body weight of whom vary within the limits of 48-51 kg, was flawed, in the control group  $6,91 \pm 0,87$  repetitions, and at the experimental  $7,49 \pm 0,56$  repetitions, the difference between them being insignificant in terms of mathematical-statistical ( $t=0,56; P>0,05$ ). At the end of the research the results obtained by the boys in

the experimental lot have been improved and reflect a low level of environmental labour and the

witness batch has changed unessential, being assessed with the grade - "very low" (Figure 1).



**Fig. 1. The annual growth rate for the year of assessment-test**  
 "Traction in arms" (boys) and "Pushups" - girls, number of repetitions

*Push-ups:* From initial testing, the average values recorded at the girls in the control group shows no significant differences, compared with the experimental lot, constituting  $12,88 \pm 1,11$ , and  $12,17 \pm 1,28$  repetitions, ( $t=0,42$ ;  $P>0,05$ ), the force of being assessed as "very low". At the end of the experiment, the number of push-ups of girls in the control group increase marginally compared to the average values from initial testing ( $P>0,05$ ), just before the  $13,63 \pm 1,18$  repetitions, the force of the one being low and the average student results from the experimental presents differences compared with average values of initial test ( $t=3,45$ ;  $P<0,01$ ), being in the environment  $16,10 \pm 1,36$  repetitions, what is an average level of arms force.

*Jog shuttle 3 x 10 m* within which to evaluate the speed and coordination of movements, allowed us to appreciate these qualities in students in the experimental and control groups. The initial testing of the boys from the experimental and control groups the average values of the group amounted to  $8,17 \pm 0,41$  sec and  $8,10 \pm 0,33$  sec, the results in question being deemed "very low". At the end of the experiment, the running speed of the boys from the control group increased, reaching the value of  $8,78 \pm 0,53$  sec, and in the experimental lot almost not changed in relation to the initial figures, constituting  $8,02 \pm 0,64$  sec, ( $P<0,05$ ).

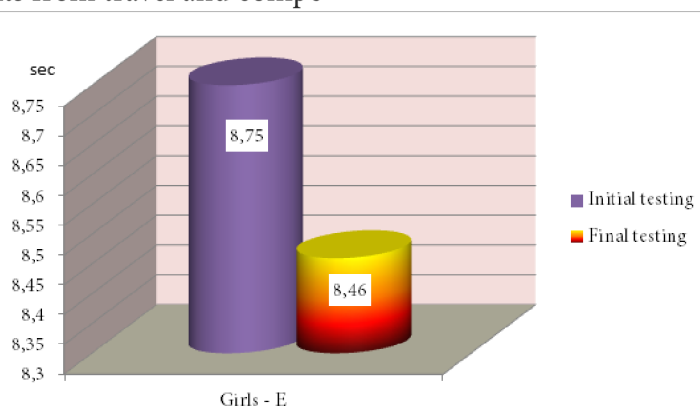
Average values at initial testing group for girls in experimental and control groups constituted  $8,80 \pm 0,20$  sec and  $8,75 \pm 0,11$  sec, being rated with "low", and not truthful they differed between they ( $t=0,22$ ;  $P<0,05$ ). At the final testing, the average group for girls in the experimental lot had been  $8,46 \pm 0,13$  sec (Figure 2), being smaller than that recorded in the initial testing  $8,75 \pm 0,11$  sec, this difference being significant statistically ( $t=3,05$ ;  $P<0,01$ ).

The final result of the test was determined with the "average" rating. Thus, the speed of movement and coordination of movements from the experimental lot girls exceed the driving possibilities of the girls from the control group, which shows that they have engaged more actively in various games, and have perfected continuously throughout the school year the respective qualities.

*Bending forward.* Initial testing of the boys from the experimental and control groups (Figure 3) shows that between the average values of the group there is a true difference, they are  $9,15 \pm 0,86$  cm and  $9,29 \pm 0,23$  cm, ( $t=0,19$ ;  $P>0,05$ ), being evaluated with the qualifier "medium low". At the final the boys from both groups had improved, although the results differently. Those in the control group showed an average result of  $10,12 \pm 0,32$  cm, appreciated as average level of suppleness body, and those of the experimen-

tal lot recorded indices  $12,716 \pm 0,64$ , the difference between these values being truthful to the materiality threshold of mathematical-statistics  $t=2,87$ ;  $P<0,05$ , what denotes a high level of physical training. It demonstrates that systematic participation by adolescents from travel and compe-

tition within the lessons of physical education has contributed to increasing the mobility of all joints of the body, and the elasticity of muscle tendons and ligaments, which led to the final results, when compared with those in the control group.

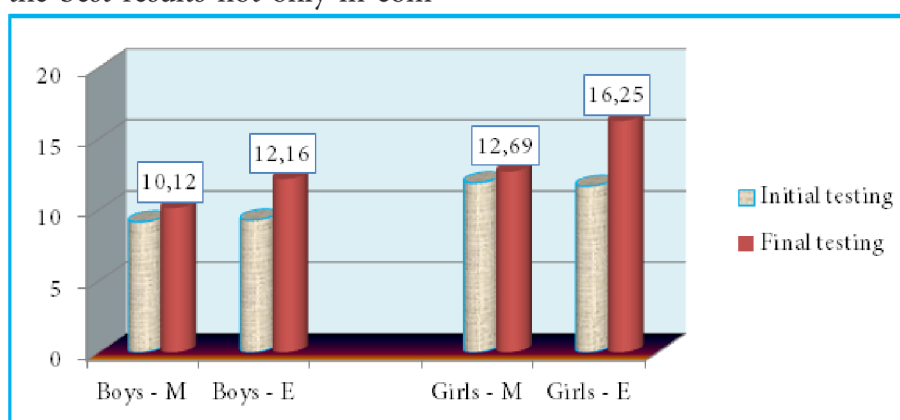


**Fig. 2.** The annual growth rate of the test results, “Jog shuttle 3 x 10 m” at the girls in the experimental lot, sec

At the girls in the control group mean values increased in the annual rate from  $11,92 \pm 0,31$  cm to  $12,69 \pm 0,45$  cm, that is 6%, “medium low” to “medium”, the difference between the average values of the group being insignificant ( $t=0,83$ ;  $P>0,05$ ).

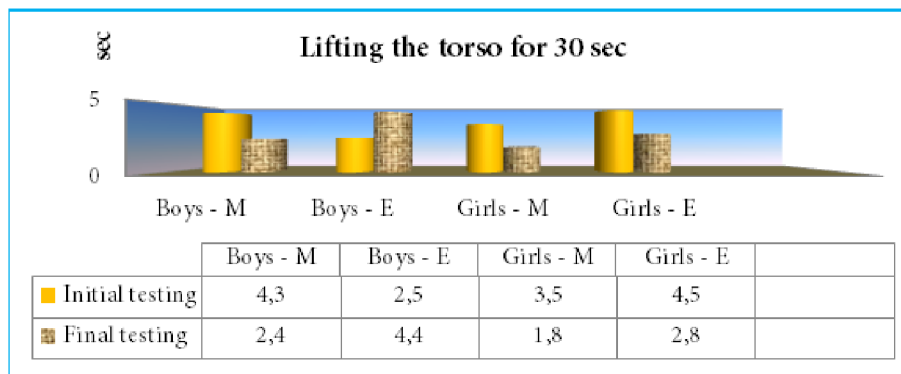
At the average of the results of the experimental group improved clearly from  $11,67 \pm 1,24$  cm till  $16,25 \pm 1,19$  cm ( $t=4,16$ ;  $P<0,01$ ), increase accounting for 39%, which expresses an increased training level from low level to one upper. It follows that the schoolgirls of the experimentally demonstrated the best results not only in com-

parison with their colleagues from the control group ( $t=2,12$ ;  $P<0,05$ ), but also with boys their age. It demonstrates, in our view, that the method of the game combined with competition method, implemented in the experimental lot had secured a greater increase in softness, students compared with those in the control group, who participated in regular physical education lessons organized in accordance with traditional methods. The weaker results are specific to the boys from the control group.



**Fig. 3.** Annual growth rate of adolescents testing results of 14-15 years old in the “Bending forward”, cm

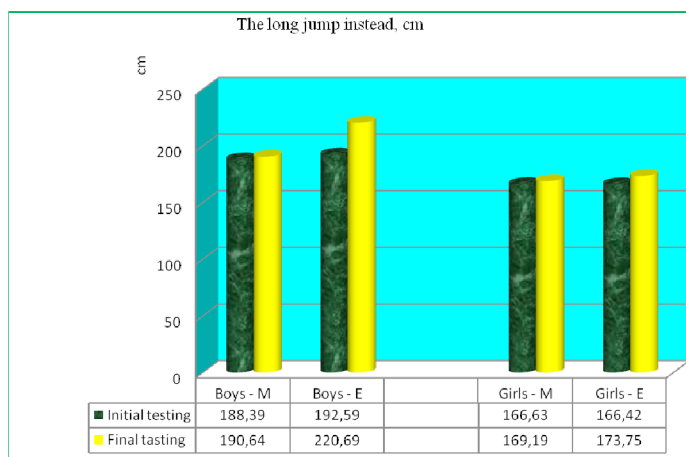
*Lifting the torso for 30 sec.* The average values of experimental and control group, are shown in Figure 4. specific group, students from both groups, exper-



**Fig. 4. The annual growth rate of the results of the testing of adolescents 14 to 15 years in the "Lifting the torso for 30 sec", the number of repetitions**

From initial testing, the average values of the witness batch group and experimental differed not truthful, which refers to both girls and boys. However, the results are much higher than those for proven, they being the average for boys from the control group  $24,48 \pm 0,87$  liftings for 30 sec, and for girls-only  $19,18 \pm 1,22$  liftings for 30 sec, with 21% less. But if you compare the level of

their general physical training at "Driving Tests to diagnose the level of general physical training of pupils" [33, p.65], then if he's one of the boys, and girls-one medium low, which denotes that the appraisal and comparative analysis of the results of boys and girls is necessary to take into account not only the absolute figures, as well as the assessment of their educational practice.



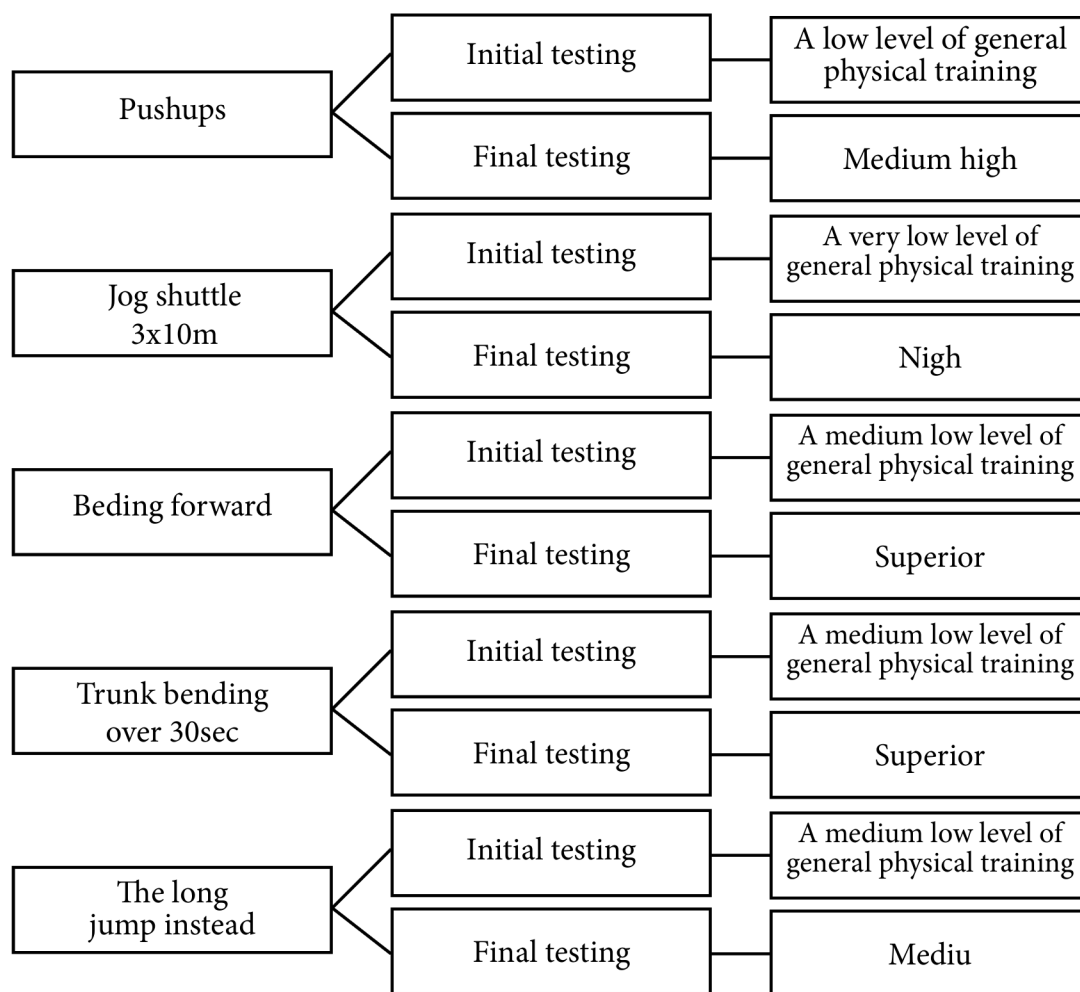
**Fig. 5. Annual growth rate of adolescents testing results from the experimental and control groups in the "long jump instead", cm**

The final results of the test sample are students at this higher as initial ones, having a positive annual rate. The boys from control group, the results were improved by about 3%, the changes being insignificant in terms of mathematical-statistical

( $t=0,89$ ;  $P>0,05$ ), and in the experimental lot-12%, to  $t=3,63$  and  $P< 0,001$ , being appreciated as a high level of driving training. The girls in the control group, the final results were increased by 10%, compared to the original figures ( $t=1,96$ ;

$P > 0,05$ ), and in the experimental lot-29% ( $t = 4,27$ ;  $P < 0,01$ ), what demonstrates that the experimental lot girls reacted best to physical exercises used in the lessons, they have enhanced the qualities of force, speed and special endurance, their degree of preparation being appreciated as superior. The results of the trials have progressed most

rapidly in people who originally had the lowest level of readiness, but have expressed interest in the games, which confirms once more the idea that methods of education selected correctly, in line with the interests of students, provide substantial growth in the level of physical training of the students.



**Fig. 1.6. Annual growth in the level of general physical training of girls in experimental group**

*The long jump instead.* The average value of initial testing group of boys from the control group was  $188,39 \pm 4,31$  cm, and détente was assessed as “low average”, and in the experimental group average was  $192,59 \pm 7,24$  cm, which meant an average level of development of this quality (Figure 5).

The difference between these results is insignificant in terms of mathematical-statistical ( $t = 0,5$ ;  $P > 0,05$ ), but however it exists in terms of

obtaining the highly regarded general physical training level of the student. In this context it is worth attention in analysis of the index dynamics relevant lots.

The average value of this clue has grown in both the dynamics of the school year lots of boys, tapping into the Group witness the level of  $190,64 \pm 5,11$  cm, What is insignificant in relation to the initial numbers ( $t = 0,55$ ;  $P > 0,05$ ), and in the experimental-level  $220,69 \pm 6,15$  cm. Experimental

batch index to reflect an increase in final testing of the truthful both in relation to the initial testing ( $t=4,62; P<0,001$ ), and compared to the control group ( $t=3,76; P<0,01$ ). Because the size of their respective body boys has increased significantly over the course of the school year, we predict that increasing détente was caused by increasing the sizes of the legs, which are elongated in this age, what has influenced the result. Thus, the final testing, the manifestation of détente in the control group was rated average rating, and in the experimental lot with superior. We predict that the improvement in the lot of true détente experimental is not just a product of the natural growth of the organism, but the outcome of the implementation of the method in the merge with the competition.

Girls in both groups had initial values tested, close the group average figures representing respectively  $166,63 \pm 35$  cm 3, and  $166,42 \pm 2,47$  cm. The values question reflected an average low of détente in both groups. In the dynamics of education the distance travelled by the girls jumping on the spot grew, respectively, up to  $169,19 \pm 3,26$  cm in control group and to  $173,75 \pm 3,19$  cm in experimental group. The most progress was registered in the experimental lot, the difference in the values of the original tooth and final being truthful to the materiality threshold of mathematical-statistics  $t=2,91; P<0,05$ , and the detention girls being rated “superior” rating. In assessing the level of schematic way physical training in general, the annual experimental boys and girls are thus (Figures 6, 7).

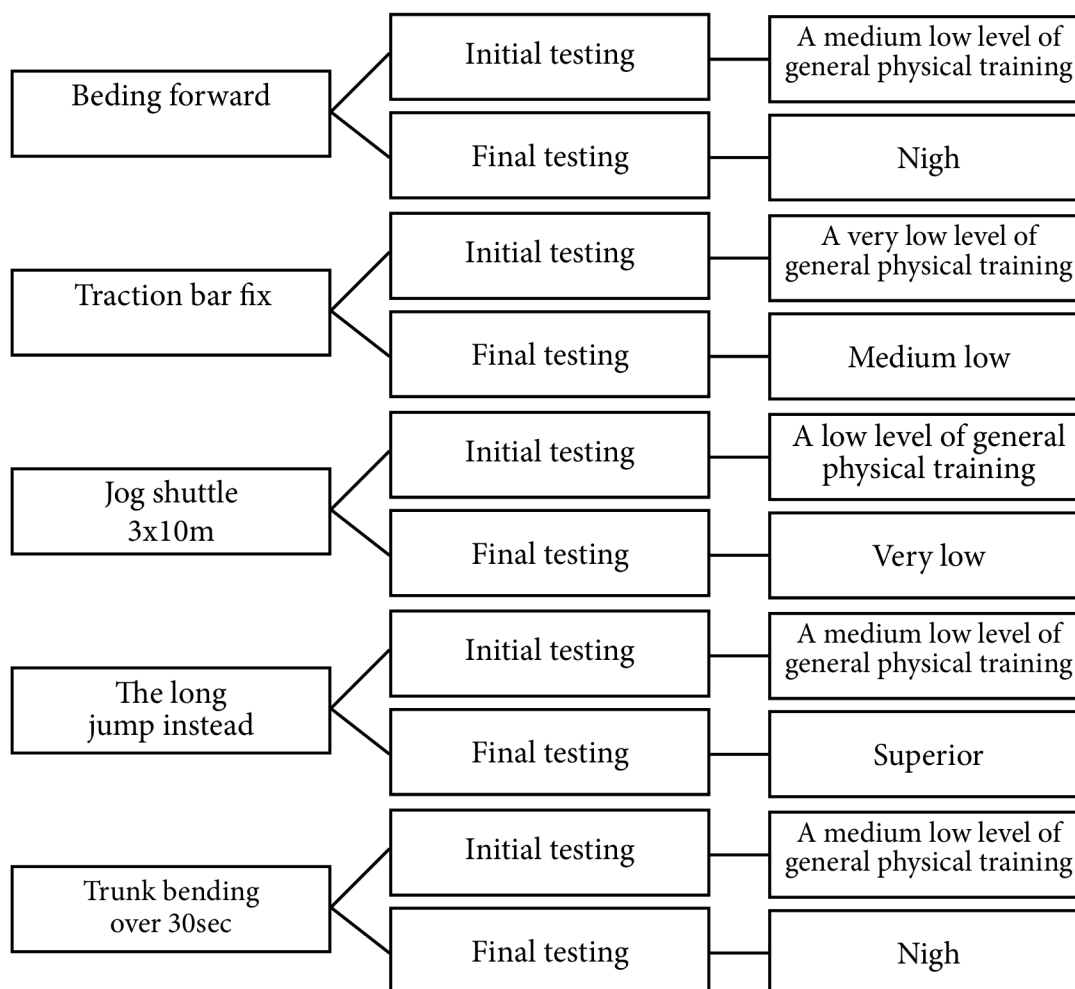


Fig. 7. The annual rate of training boys in general experimental group



### Conclusions:

The experimental lessons organized by combining the method with the competition contributes to the improvement of the level of general physical training of adolescents in relation to the control group.

The positive dynamics of indices general physical training of boys from the experimental lot manifests itself at the end of education by increas-

ing the force of truthful and manpower trunk, resistance, special endurance and détente of body relative to the initial figures, as well as in relation to the control group.

At the end of the school year the girls of the experimental lot and enriched they driving qualities tested it all, including the qualities of speed and coordination of movements, which is an advantage in comparison with boys.

### References:

1. Grimalschi T., Boian I. Educația fizică. Ghid de implementare a curriculum-ului modernizat pentru treapta primară și gimnazială. Chișinău: Liceum, 2011. p. 62-64.
2. Kondakov V. Despre necesitate perfecționării sistemului de lecții de cultură fizică în școlile medii de cultură generală în contextul tehnologiilor pedagogice moderne. În: Teoria și arta educației fizice în școală, 3/2014, p. 38.
3. Moroșan R., Delipovici I., Moroșan I. Motivația elevilor din clasa IX –a privind frecventarea lecțiilor de educație fizică la început de an școlar. În: Materialele Conferinței Științifice Internaționale „Cultura fizică și sportul într-o societate bazată pe cunoaștere”, Chișinău, 2015, p.117-120.
4. Богатырев В.С., Циркин В.И. Снижение уровня физической подготовленности выпускниц средних школ. В: Теория и практика физической культуры, 2000, №2, с.14-16
5. Tulchinsky T., Varavicova E. Nouă sănătate publică: introducere în sec. XXI /traducere din engleză de A. Jalbă, P. Jalbă/. Chișinău: Ulysse, 2003. 744 p.
6. Казин Э.М., Блинов Н.Г., Литвинова Н.А. Основы индивидуального здоровья человека. Москва: Владос, 2000. 122 с.
7. Щетинина С.Ю. Мониторинг удовлетворения школьников уроками физической культуры. В: Ученые записки университета им. П.Ф. Лесгафта, 2007, №5, с. 100.
8. Ханбекова С.П., Ханбеков Р.А. Развитие интереса к занятиям физической культурой и спортом через сочетание традиционного, игрового и соревновательного методов. <http://nsportal.ru/shkola/fizkultura-i-sport/library/2011/12/21/razvitie-interesa-k-zanyatiyam-fizicheskoy-kulturoy-i> (accesat la 15.08.2016)