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Original Article

Orienteering to optimize the psychophysical wellbeing of young teens (13 to 14-year-old)

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Abstract:
Available research suggests that the learning process in a state-of-art school is a multifaceted phenomenon, characterized by students' cognitive capacity to embrace and process a plethora of information within a short span of time; technicalization and innovation of education; and consequently, without any doubt, it strongly affects students' psycho-emotional and psychophysical wellbeing. *Purpose***:** theoretically prove and develop a complex program of enhancing positive effect of orienteering on young teens' (13-14-year-olds) psychophysical wellbeing and experimentally verify its effectiveness. *Material and methods:* Judging the validity of the study, the authors provided a clear and precise description of the research methods as followed: theoretical analysis, generalization of the body of specialized and documentary evidence, pedagogical, sociological, anthropometrical, physiological, psycho-physiological techniques, methods of sickness rate assessment, evaluation of health status, and method of mathematical statistics. *Results.* According to the results of psycho-physiological test on the nervous system response, valid outcomes were measured, that both EG female and male students differ ($p<0.05$) from CG female and male students, assessing the extent to which the groups were varying in visual-motor response speed, reaction to sound, cognitive reflection and decision making. This fact points out the presence of high-speed component determining high efficiency detection and involving EG students' visual, conceptual, and visuomotor tracking. EG male and female students' results of Romberg's test are higher ($p<0.05$) and meet age requirements.
Keywords: physical education, psychophysical wellbeing, orienteering, students/young teens, improvement, psychophysical training, program, syllabus.

Introduction

The learning process in a state-of-art school is a multifaceted phenomenon, characterized by students'cognitive capacity to embrace and process a plethora of information within a short span of time; through technicalization and innovation of education; and consequently, without any doubt, it strongly affects students' psycho-emotional and psychophysical wellbeing (Tomenko, 2013; Romanchyshyn, 2015). Accordingly, it might gravely contribute tostudents' chronic fatigue, morbidity, reduced mental performance, incoherence of psycho-emotional responses, poor coping strategies in the conditions ofincrease in the academic load, and their poor physical health (Sainchuk, 2013; Briskin 2013, 2016).

The top priority of Ukraine's state policy and world organizations' goal is to fosterteenagers' healthand well-being practices, therefore, confirmation of an attentional priority to this problem is evidenced by the implementation of relevant programs and projects, namely, National Strategy for improving motor activity 2025 "Physical Activity – Healthy Lifestyle – Healthy Nation" (elaborated in response to the sustainable development Strategy 'Ukraine-2020' with the aim of creating the conditions for Wellness physical activity and healthy lifestyle for the formation of citizens' health as the highest social values in the state), Healthy Out-of-School Time (HOST). Importantly, the syllabi/curricula take into account that survey of children's health tracks a range of related health determinants – children's qualitative genetics, backgrounds and environments, external factors affecting their growth as well as their cognitive and psychosocial development throughout their school years, intensified by pedagogical and educational innovation technology development.

Considering the topicality of taking new drastic steps in improving young teens' health outcomes and developing their psychophysical wellbeing indices, it should be emphasized, that integrated tools to address effectively the problem-under-study have been widely researched in various fields by scholars from different countries (Briskin, 2015; Karatnyk, 2015;Tomenko, 2013; Redmond, 2010). Furthermore, our strong conviction is the conclusion that push-pull factors of the development of a sufficient and competent workforce in physical culture are core knowledge in the domain of social psychology, pedagogy and andragogy; awareness of

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peculiarities and methods of correction and rehabilitation training in different groups; professional competence; as well as ability to organize smooth running of studies; develop socializing skills; be in command of personal and interpersonal conflict and collision; and in addition, organize and manage various mass sport and team events for students (Zoriy, 2014; Pityn, 2013). This perspective is supported by the relevant academic literature in the domain of creating health-conscious culture and promoting young teens' developmental characteristics of psychophysical wellness (Klus, 2011; Galan, 2015). Many theorists, however, have argued that,in the result of intensive training loads and low locomotor skills, school-age children gradually develop emotional and volitional disorders, leading to markedly reduced activity, physical and cognitive performance, and consequently, these problems tend to have a strong impact on their learning skills (Klus, 2011; Galan, 2015).Therefore, research shows how imperative are benefits of Physical Education, incorporated in the comprehensive school curriculum, for optimizing young teens' mental and physical development. This study provides relevant information on the importance of a regular, vigorous and spirited physical activities and sports games as the most affordable and appropriate means of improving students' psychophysicalwellness, the most effective form of students' recreation, and motivationof their desireto undertake the locomotor activity (Andreeva, 2002; Pityn, 2013; Briskin Y., 2016) Present-day reality proves thatorienteering has a high rate ofhealth-improving training as well as effective physical exercise and intellectual stimulation (Korol, 2013; Briskin Y., 2014; Khimenes, 2016). Orienteering is defined as race activities over rough terrain, combiningboth physical and mental abilities. This kind of sport involves complex operations and processes to meet the challenges of purposeful movement in unfamiliar terrain and requires navigation using amap and a compass.

Significantly, there is an even stronger emphasis on the factthat for the present there aren't any scientifically grounded approaches to investigating the problem on orienteering as an integral part of Physical Culture for young teens' (13-14-year-olds) to optimize their psychophysical wellbeing. Such statement stipulates for topicality and relevance of the thesis, dedicated to solving the problem, which is of vital theoretical and practical importance foroptimizing and improving Physical Education program for young teens.

Purpose of the research

Theoretically prove and develop a complex program of enhancing positive effect of orienteering on young teens' (13-14-year-olds) psychophysical wellbeing and experimentally verify its effectiveness.

Materials &methods

To judge the validity of our study we'd rather provide a clear and precise description of the research methods as followed: theoretical analysis, generalization of the body of specialized and documentary evidence, pedagogical, sociological, anthropometrical, physiological, psycho-physiological techniques, methods of sickness rate assessment, evaluation of health status, and method of mathematical statistics.

The method of teacher's observation was conducted at the prime stage of our experiment as a means of familiarizing with the problems under study, enabling to elucidate what specific issues should be targeted. Pedagogical method, based on effectiveness ofcreating the culture of motor activity, attempted to discover physical preparedness by determining the level of the students' basic physical characteristics development. To assess young teens' (7^{th}-8^{th} grade of the secondary school) physical fitness level we made use of the control exercises from the manual "Physical Culture" for pupils of 5^{th}-9^{th}grade" (edited by T.O.Krutsevych, 2009). Constative pedagogical experiment was done to detect and evaluate psychophysical indicators of the students of the 7^{th}-8^{th}grade. Forming pedagogical experiment revealed efficacy of the suggested positive effect of orienteering on young teens' (7^{th}-8^{th} grade) psychophysical wellness.

The purpose of questionnaire was to test young teens' (13-14-year-olds) key motifs and preferences during their extra-curricular activities. The results revealed basic somatometric indices of young teens' morphological status through anthropometric investigations. The physiological method was completely focused on young teens' cardiac-vascular and respiratory systems indicators. Psychophysiological methods were conducted to determine young teens' rate of reaction, speed of information processing, memory span, mental capacity and static balance. Sickness rate was determined through file replication of the students' medical records. Evaluation of young teens' health status was measured owing to G.Apanasenko's method, developed by T.Krutsevych. The methods of mathematical statistics were involved to work the findings out.

Results

The outcomes of our research pointed out that orienteering is an avenue for engaging in developmentally appropriate physical activities designed for young teens to boost their fitness, gross motor skills, and health. The research proved the efficiency of physical extracurricular activitiesas an organizational form of physical education (Andreeva, 2002; Tomenko, 2013). However, the problem of optimizing young teens' (13-14-year-olds) psychophysical wellbeing in extracurricular activities has not been relevantly highlighted, evaluated and theoretically grounded, and it immensely contributes to long-term negative consequences for excellence of young teens' physical education outcomes. Notwithstanding the ample research on optimizing young teens' (13-14-year-olds) psychophysical wellness (Klus, 2011), the focus of our studies revolves around the importance of orienteering and psychophysical training that presupposes the novelty of our investigation. Research has shown that young teens often develop fatigue symptoms during the educational

process. Noteworthy, the number of students suffering for overstrains estimates 53.1%. To achieve it the teens are supposed to be involved in effective recreational activities after intensive studies.It should be emphasized, that the vast majority of students (73.1%), however, enjoy sedative lifestyle, consume energy drinks (38.3%), vitamins and supplements 28.7% to restore their psychophysical balance and enhance their cognitive and physical health. While questioning, our attention was captured by the reality of students' absolute neglecting relaxation, psychophysical training, medical and biological productsand pharmacy, out-of-doors activities for their cognitive, physical and psychological well-being.

Other significant, and mainly defining reasons, restricting students' participation in physical extracurricular activities are: boring and tedious classes (32.7%), inconvenient schedule(26.8%), classes primarily held indoors (21.3%), reduced locomotor activities (9.6%), ignorance of age differences (8.0%), episodic cases (1.6%). From the perspective of spending spare time, computer games and social networking are domineering (57.4%), as well as listening to music (26.5%), watching movies and surfing TV channels (16.1%) take their spare time and devotion. Computer-gaming is likely to be the most time-consuming.

Speaking of preferable gross motor skills development, mentioned by tested young teens, they are as follows: orienteering (32.7%), sport and recreational games (23.1%), cycling (14.2%), tourism/hiking (9.9%), dancing (13.6%); skateboarding and rollerblading (6.5%). In terms of orienteering teens' attention is captivated by different focal points: informal communication (40.7%), going in the wild/nature immersion (25.6%), psycho-emotional release (16.0%), achieving high performance and excellence (9.7%), spending free time in a more meaningful and productive way (8.0%). Evaluating and measuring young teen's anthropometric indices, we came to the conclusion that female students' body mass and chest circumference indices as well as male students' length, body mass chest circumference are lower ($p<0,05$) than anthropometric standards.

With regard to positive and negative influence of exercise stress with different intensity on a body tolerance we addressed to the index or test of Rufye. According to the test,while investigating a physical working capacity we detected functional indices of reaching tolerance threshold to physical loads, and comparing estimated results we can point out that 52.2% of the 7th-grade female students showed satisfactory adaptation– 44.8% and adaption failure – 3%. Meanwhile, the 7th-grade male students showed satisfactory adaptation – 66.7%, and adaption failure – 5.6%. Noteworthy, in contrast to the 8th-grade male students, the female students displayed negative tendency. As far as the 8th-grade male students showed normal adaptation – 60.6%, satisfactory adaptation – 39.4%, yet, female students showed normal adaptation – 37.2%, satisfactory adaptation – 62.8%.To conclude, the majority of students' estimated results were normal and satisfactory.

While estimating psychophysical wellbeing indices of the 7th-8thgrade students such as the speed ofvisual attention and motor response, reaction to sound, cognitive reflection and decision making, Romberg's test, mental speed test – on how quickly students are able to process information and make decisions based upon that information,attention span, we draw to the conclusion that their results are quite satisfactory, though tend to improve. On carrying out investigation on physical health wellness the following parameters are estimated, and predominately, young teens' health status is satisfactory, no data has found evidence of teens with good health. "Safe level" of somatic health was tested in 7th grade female students – 3.0% and male students – 22.2%, as well as 8th grade female students – 7.4 %, and male students – 19.3 %.The assessment shows the increasing number of teens with low level of physical activity.

Importantly, 7th-8th grade students were detected to be exposed to frequent sickness and morbidity and the tendency to its increase is traced according to disease classification. Young teens are reported to frequently suffer from the spread of respiratory system diseases. Of 324 of tested students 41.6% suffered from acute respiratory infections per year. The average number of missed classes of the seventh and eighth grade students was $\overline{x}$ = 5.7; S = 3.7; Me (25%; 75%) = 5.0 (4.0, 7.0) days and maximum was15-16 days. Apropos, estimated results of the constative experiment were made of use as constituent componentsin developing complex program to enhance positive effect of orienteering on young teens' (13-14-year-olds) psychophysical wellbeing.

Aiming to verify expediency of incorporating orienteering into extracurricular physical activities for secondary schools for a targeted group – young teens – a survey by questioning was done. Recently, investigators have demonstrated top priority extracurricular physical activitiesand organized sporting benefits and its increase, especially with young teens (94.0%), inasmuch as its current level and motivation is quite insufficient and, accordingly, does not facilitate teens' psychophysical wellbeing.

These data may conclude that the most crucial reasons of young teens' unwillingness to demonstrate their desire and commitment to get involved in extracurricular activities at school are the following: outdated and worn equipment (85.0 %); scarce resources and equipment (83.0%); unsatisfactory participation in extracurricular physical activities (82.0%); lack of interest and impetus in high extracurricular school activities (81.0%). According to scholars and analysts, top criteria of effectiveness,namely, facilitating students' intensive locomotor activity (82.0%), fostering interest in regular physical activity at school (80.0%), promoting healthy lifestyle (79.0%), sporting to improve cognitive (78.0%) and enhancing psychophysical performance indices (79.0%) prove to be crucial in encouragingextracurricular school activities in physical education. Moreover, orienteering, being involved in out-of-school activities, is considered to be quite expedient, specifically regarding the problem of optimizing young teens' (13-14-year-olds) psychophysical wellbeing (75.0%), correlation ratio ($W = 0.75$, $p<0,05$) that testifies to substantial consensus among experts.

Significantly, pilot project (syllabus) involves techniques and their effects, pedagogical terms of authors' individual approach to introducing orienteering as an integral part of physical education for young teens. Orienteering and exercise for bodily activity is to be incorporated in the physical education curriculum as the major learning outcomes for students, since the program considerably differs from the current curricular framework in specific methods and techniques,concerning development of vitally important psychophysical qualities of young teens. Thoroughly chosen and content-centered orienteering training exercises laid the grounds for orienteering syllabus. We consider orienteering as an intellectual, perceptual and motor skills system, requiring speed running, navigation skillfulness, using a map and a compass, what to a great extend, fosters shaping of many aspects of adolescent development.

Therefore, the consistency of both syllabi has been driven by common goals and objectives of young teens' sports and recreation activities. The comparison was not difficult to attain, as long as overall research findings regarding EG (Experimental Group) and CG (Controlled Group) students' indices had a slight difference. While investigating and estimatingyoung teens' physical development indicators, namely, length of a body, body weight, chest circumference, thickness of subcutaneous fat, muscular strength and tone, female and male students of EG don't seem to make considerable difference ($p>0,05$), compared with CG students. It should be emphasized that during the pedagogical experiment the positive dynamics of indicators characterizing the physical development of schoolchildren both EG and CG students is definitely traced.

A cornerstone of estimation of young teens' adaptive capacity and improving stamina arethe indices of the functional state of their cardiovascular and respiratory systems. (tab.1) According to comparison-group study, it was detected that the reduction of diastole phase of EG students after experiment meets the age requirements and is significantly lower ($p <0.05$) if compared with CGstudents.

Table 1. Indices of the cardiovascular and respiratory systems of the students of EG and CG before and after educational experiment (n = 52)

Investigated indices	Results before the experiment EG(n=26)		Results after the experiment EG(n=26)		p	Results before the experiment CG(n=26)		Results after the experiment CG(n=26)		p
	$\overline{x}$	S	$\overline{x}$	S		$\overline{x}$	S	$\overline{x}$	S	
Female students										
Heart palpitations beats per minute	88,8	9,88	82,1	4,32	<0,05	89,6	10,83	89,3	9,25	>0,05
Blood pressuresystolic т., mm Hg.	105,6	9,10	107,3	2,14	>0,05	104,4	5,91	106,2	5,71	>0,05
Blood pressurediastolic., mm Hg.	77,2	5,12	78,3	4,02	>0,05	70,1	10,68	75,4	8,34	>0,05
Lung vital capacity, ml	1,6	0,57	2,2	0,36	<0,001	1,9	0,37	2,0	0,42	>0,05
Test of Shtangec	47,7	5,20	48,2	4,11	>0,01	49,1	5,12	49,4	5,76	>0,05
Test of Genchi	26,1	1,80	28,4	1,39	<0,05	25,6	1,50	26,9	1,45	>0,05
Male students										
Heart palpitations beats per minute	89,2	7,94	84,2	5,16	<0,01	89,8	9,58	88,6	7,22	>0,05
Blood pressure systolic mm Hg.	110,2	9,42	114,4	7,56	>0,05	115,4	3,10	116,5	5,67	>0,05
Blood pressure diastolic mm Hg	78,2	4,25	78,5	4,16	>0,05	82,2	9,28	80,1	10,45	>0,05
Lung vital capacity, ml	1,9	0,16	2,4	0,12	<0,05	2,0	0,18	2,2	0,19	>0,05
Test of Shtange	49,2	11,88	49,8	6,12	>0,01	48,9	11,91	49,2	11,46	>0,05
Test of Genchi	27,1	2,10	28,7	1,19	>0,05	27,9	0,28	28,2	0,78	>0,05

The index of EG students' lung vital capacity (LVC)is significantly higher ($p<0.05$) to compare with CG students. Evidence-based results of individual changes, characterizing female students' somatic health, testify to EG students' higher level improving 33.3%, while CG students' only 13.3%. As for the male students' somatic health, EG students improved its level to 26.7%, whilst estimated CG only 6.7%. Higher results of EG students' physical health in comparison with those of CG students, were achieved by statistically higher results ($p <0.05$) of Rufye index, the index of Robinson and life index (tab. 2).

Carrying out the pedagogical experiment we can present the following statistically significant data. According to the results of psycho-physiological test on the nervous system response, valid outcomes were measured, that both EG female and male students differ ($p<0.05$) from CG female and male students, assessing the extent to which the groups were varying in visual-motor response speed, reaction to sound, cognitive reflection and decision making.This fact points out the presence of high-speed component determining high efficiency detection and involving EG students' visual, conceptual, and visuomotor tracking. EG male and female students' results of Romberg's test are higher ($p<0.05$) and meet age requirements. In terms of cognitive

performance, it detected ($p<0.05$) better average capacity of short-term memory and cognitive flexibility of EG students. After the experiment EG students demonstrated better performance and reduced overfatigue symptoms.

Obtained data are quite sufficient to support the conclusion that orienteering role in human health has been quickly recognized and provides a perspective on orienteering in the context of higher function of young teens' nervous system.

Table 2. Overall indices of physical health and physical fitness of EG and CG students before and after the educational experiment(n=52)

Investigated indices	Results before the experiment EG (n=26)		Results after the experiment EG(n=26)		p	Results before the experiment CG(n=26)		Results after the experiment CG(n=26)		p
	$\bar{x}$	S	$\bar{x}$	S		$\bar{x}$	S	$\bar{x}$	S	
Female students										
Index of Rufye	10,6	1,85	8,4	0,15	<0,05	9,6	1,94	9,5	1,34	>0,05
Robinson Index W/CP.	93,5	11,38	88,1	7,23	<0,05	100,3	14,19	97,0	9,55	>0,05
Vital index, ml/kg-	46,8	12,73	49,8	7,12	<0,05	46,7	9,46	46,9	9,32	>0,05
Strength index, %	40,1	14,31	48,8	9,52	>0,05	41,4	13,26	49,1	9,57	>0,05
Velocity index	3,0	0,39	3,7	0,18	<0,01	3,1	0,20	3,6	0,27	<0,05
Endurance Index,	1,3	0,20	2,0	0,06	<0,05	1,2	0,12	1,6	0,18	>0,05
Reactive strength index,	0,9	0,12	1,0	0,08	>0,05	1,0	0,10	1,0	0,12	>0,05
Male students										
Index of Rufye	11,3	2,25	8,5	1,05	<0,05	11,4	1,77	10,1	1,62	>0,05
Robinson Index	105,4	10,59	96,3	9,43	<0,05	110,6	11,34	104,7	11,67	>0,05
Vital index, ml/kg	42,7	10,98	52,6	4,87	<0,05	43,9	8,45	46,0	6,11	>0,05
Strength index, %	46,9	9,56	54,8	10,76	>0,05	46,4	9,32	54,3	9,72	>0,05
Velocity index,	3,0	0,46	3,8	0,32	<0,05	3,1	0,26	3,6	0,54	<0,05
Endurance index	1,4	0,28	2,2	0,11	<0,01	1,4	0,19	2,1	0,13	>0,05
Reactive strength index	1,0	0,11	1,1	0,09	>0,05	1,0	0,03	1,1	0,07	>0,05

The obtained results of physical fitness prove female students of EG indices to be higher ($p<0.05$) in 4x9 m shuttle run, sit-ups per 30 sec. and in 1000 m distance running, than CG female students' ones.

Tracking EG and CG progress, we can state that the results are, in 4x9 m shuttle run –7.6 % to 4 %, sit-ups per 30 sec – 28.8 % to 11.3 %, and 1000 m distance running 2.5% to1.32 %, accordingly to allotment. The analogous tendency is traced in male students' records in4x9 m shuttle run and 1000 m distance running. The EG students' progress is higher than the one of CG students: 4x9 m shuttle run –11.7% and 1.7 % ($p<0.05$), 1000 m distance running – 3.8 % and 1.3 % ($p<0.05$). Nonetheless, there was no evident advantage ($p>0.05$) in scoring the results in sit-ups, chin-ups, angle body from sitting position, standing long jump in both EG and CG students, including sit-ups per 30 sec for male students. Findings of the research on progressed indices, characterizing EG teens' psychophysical wellbeingdemonstrated efficiency of our propounded program on orienteering inclusiveness in physical education curricular.

Discussion

The long-term impact of physical education has been understudied, thus, our research immensely contributed to 'Orienteering' as an avenue for engaging in developmentally appropriate physical activities designed for young teens to develop their fitness, gross motor skills, and psychophysical wellbeing improvement. Moreover, the authors put an emphasis on obtaining completely new data in terms of the problems under study. The outcomes should become a research priority in the school environment to educate students on the importance of maintaining a physically active lifestyle throughout their life span. The research proved the efficiency of physical extracurricular activities as an organizational form of physical education (Andreeva, 2002; Tomenko, 2013). The research proved the efficiency of physical extracurricular activities as an organizational form of physical education (Andreeva, 2002; Tomenko, 2013); incoherence of young teens' physical activity according to somatic norms (Gakman, 2012); spread of teens' chronic somatic and neuropsychic disorders (Vorobjova, 2012); the urgency of fostering interest in regular physical activity (Anderson, 2012; Foran, 2010; Rapp, 2009; Pityn, 2013). The thesis empirical findings summarized and contributed to understanding the importance offostering interest in regular extracurricular physical activity (Zakharina, 2013; Kovaleva, 2013),and peculiarities of young teens' psych-physical wellbeing.

It should be highlighted, that the vast majority of young teens are experiencing overfatigue symptoms throughout the academic year: 'burn-out' – 57.4%, 'delayed sleep-phase disorder' – 81.5%, 'somnolence'-75.9%, 'passivity, boredom, apathy' – 63.6%. What is more, some of the teens are suffering from several overstrain diseases of motor system. Increased fatigue, morbidity, under-sleeping, and constant strain tend to result in either protracted depression or developing chronic fatigue symptoms, consequently, students should be prevented from overdoing and avoid overexertion. To achieve it the teens are supposed to be involved in effective recreational activities after intensive studies. Regrettably, (73.1%) enjoy sedative lifestyle;(38.3%)

consume energy drinks. To make the matter worse, young teens are absolutely ignorant of inevitability of enhancing their cognitive and physical health by psychophysical training and vigorous out-of-doors activities.

Our goal was attained by framing successfulelaborating and putting into practice the suggested program,involving organizational and methodological principles: assistancein decision-making and understanding the value of leading a physically active lifestyle; urgeto improve young teens' physical and emotional wellness; increase their locomotor activity; disclosure of physical activities benefits, affecting both their academic learning and physical activity patterns; facilitationof building harmonious interpersonal relationships and establishing the zone of comfort; push the school administration to create an environment, ensuring proper comfortable conditions for physical exercise; contribute to acquiring knowledge and skills needed to strive for regular physical activities; elaborate and implement out-of-school curricular for physical education for young teens, taking into consideration peculiarities of their development, abilities and environments; arrange orienteering classes, effective at promoting lifetime activity and creating the philosophy of culture and, additionally, introduce psychophysical trainings.

Taking into consideration fundamental principles of physical education and meeting the requirements of the current National Curricular,the pilot programwas launched, focusing on positive effect of orienteering on young teens' psycho-emotional wellbeing. It combinestwo blocks: theory and practice. Theoretical framework includes thorough research of orienteering sports establishment and development, its specific rules and safety guidelines. The research practical part was focused on 4 types of training: tactical, topographic, physical and technical. The conceptual framework was designed around the health-related components of cardiorespiratory fitness, attention switching, critical thinking development, muscular strength and endurance, and flexibility. Training course contains three stages: elementary, evaluating.

Conclusion

To conclude we shall state that significant, and mainly defining reasons, restricting students' participation in physical extracurricular activities are: boring and tedious classes (32.7%), inconvenient schedule (26.8%), classes primarily held indoors (21.3%), reduced locomotor activities (9.6%), ignorance of age differences (8.0%), episodic cases (1.6%). Speaking of preferable locomotor activity, mentioned by tested young teens, they are as follows: orienteering (32.7%), sport and recreational games (23.1%), cycling (14.2%), hiking (9.9%), dancing (13.6%); skateboarding and rollerblading (6.5%). In terms of orienteering teens' attention is captivated by different focal points: informal communication (40.7%), going in the wild or nature immersion (25.6%), psycho-emotional release (16.0%), achieving high performance and excellence (9.7%), spending free time in a more meaningful and productive way (8.0%). Evaluating female students' body mass and chest circumference indices as well as male students' length, body mass chest circumference, we concluded them to be lower ($p<0,05$)than anthropometric standards. Methods of somatoscopy and anthropometry indices of the targeted groups met age/gender norms. With regard to positive and negative influence of exercise stress with different intensity on a body tolerance we addressed to the index or test of Rufye. According to the test, while investigating a physical working capacity we detected functional indices of reaching tolerance threshold to physical loads, and comparing estimated results we can point out that 52.2% of the 7^{th}-grade female students showed satisfactory adaptation – 44.8% and adaption failure – 3%. Meanwhile, the 7^{th}-grade male students showed satisfactory adaptation – 66.7%, and adaption failure – 5.6%. Noteworthy, in contrast to the 8^{th}-grade male students, the female students displayed negative tendency. As far as the 8^{th}-grade male students showed normal adaptation –60.6%, satisfactory adaptation – 39.4%, yet, female students showed normal adaptation – 37.2%, satisfactory adaptation– 62.8%.To conclude, the majority of students' estimated results were normal and satisfactory. Thus, orienteering, being involved in out-of-school activities, is considered to be quite expedient, specifically regarding the problem of optimizing young teens' (13-14-year-olds) psychophysical wellbeing (75.0%), correlation ratio ($W = 0.75$, $p<0,05$) that testifies to substantial consensus among experts.

According to the results of psycho-physiological test on the nervous system response, valid outcomes were measured, that both EG female and male students differ ($p<0.05$) from CG female and male students, assessing the extent to which the groups were varying in visual-motor response speed, reaction to sound, cognitive reflection and decision making. This fact points out the presence of high-speed component determining high efficiency detection and involving EG students' visual, conceptual, and visuomotor tracking. EG male and female students' results of Romberg's test are higher ($p<0.05$) and meet age requirements. In terms of cognitive performance, it detected ($p<0.05$) better average capacity of short-term memory and cognitive flexibility of EG students.

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