

Pedagogical colleges students readiness formation for sport and recreation activity

OLEH ROMANCHYSHYN¹, YURIY BRISKIN², OLEH SYDORKO³, MARYAN OSTROVS'KYY³, MARYAN PITYN²

¹Department of physical education, Brody Pedagogical College named after Shashkevych, UKRAINE

²Department of Olympic, professional and adaptive sport, Lviv State University of Physical Culture, UKRAINE

³Department of water and non-Olympic sports, Lviv State University of Physical Culture, UKRAINE

Published online: December 26, 2015

(Accepted for publication December 6, 2015)

DOI:10.7752/jpes.2015.04125

Abstract:

Modern status of education needs drastic changes of teacher philosophical foundations, expanding the limits of his professional identity, scientific and pedagogical mentality. The strategy of pedagogical education in the field of physical culture involves development and self-development of future teacher. The aim of research: improvement of sport and recreation human resources. According to the structural components of future specialists readiness for sports and recreation activities, its evaluation criteria is the level of formation of value-motivational readiness of students, their cognitive readiness, action-conditioning readiness and functional readiness. Application of the authorial program of the formation of future specialists for sports and recreation activities showed its high comparative effectiveness. Significantly greater changes observed in students of experimental groups, indicating that benefits of the authorial program of students readiness formation for sports and recreation activities over the traditional programs.

Key words: physical education, readiness, students, future specialists.

Introduction

Modern status of education needs drastic changes of teacher philosophical foundations, expanding the limits of his professional identity, scientific and pedagogical mentality. The strategy of pedagogical education in the field of physical culture involves development and self-development of future teacher (Gryvenko, 2011).

Of particular relevance is the problem of formation of professional, capable to carry out sports and recreation activities in the new conditions (Ivanova, 2003; Levunets, 2007), who cares about their health, adheres to a healthy lifestyle, has a proper level of physiological qualities (Maksymchuk, 2007; Namchuk, 2002; Pityn et al., 2014).

However, in most teachers of secondary schools in primary classes (85%) formation of skills for the development of physical culture of children and bringing them to a healthy lifestyle is virtually absent. Methodology of sports events organization, including the participation of parents, have only 15% of teachers; theoretical and methodological readiness of students for physical education and sport is average, and physical training on low level which does not meet modern requirements (Nifak, 2011; Ptystupa, 2014).

Therefore, relevant and appropriate is to overcome the contradiction that exists between the level of social significance of future specialists in sports and recreation activities and the level of the actual availability of personnel for this work, which leads to the existence of important human resources problem of physical education (Gryvenko, 2011; Maksymchuk, 2007; Stepanenko, 2009).

In most researches dedicated to the problem of human resources are studied professional preparation of future physical education teachers and preparation of primary school teachers. Some work related to the preparation of physical education professionals for work in day care and caregivers of preschool children. Only few studies contain certain aspects of student's preparedness to sports and recreation and sports-mass work (Suschenko, 2002). At the same time preparation of specialists for sports and recreation activities in conditions of pedagogical colleges has weaknesses and conflicting data of researchers complicate their practical implementation. Thus, these differences led to the choice of research topic.

The aim of research: improvement of sport and recreation human resources. Research tasks are next:

1. Summarize the modern experience of young specialist's preparation in physical education and define the structural composition of their readiness for sports and recreation activities.
2. Identify the components and criteria for evaluating the readiness of pedagogical college's students for sports and recreation activities.
3. To determine the level of future specialists in sports and recreation activities.

4. To develop and test the effectiveness of the organizational and educational programs and pedagogical conditions of preparation to sports and recreation activities

Methods & material

Analysis and generalization of literature sources and documents, content analysis, sociological (questionnaire, surveys, expert assessment), mathematical modeling (multiple regression model readiness of students for sports and recreation activities), biomedical examination (anthropometric measurements, functional inspection, functional sample), pedagogical (observation, experiment, test of physical fitness), psychological and methods of mathematical statistics.

The study was conducted during 2010-2014 years with students of pedagogical colleges.

Were have analyzes components (value-motivational, cognitive, functional and action-conditioned) and the integral index of readiness of 1,238 students of pedagogical colleges for sports and recreation activities. Based on received data were developed organizational and educational program and pedagogical conditions of student's readiness formation to sports and recreation activities; checked the main principles of the forming experiment.

Generalization of the content analysis results and own teaching experience have enabled us to develop and describe an authorial diagnostic method for determining the level of readiness of students for sports and recreation activities, containing the evaluation criteria and levels of readiness. This methodic is based on understanding semantic load of "readiness" as a complex, multi-level concept. Its components content defined systemic by mechanisms of interaction between dominant tumors and found in indicators that are key to the formation of component characteristics.

Quantitative characteristics of coefficients, significance of the influence on the overall readiness of the student for sports and recreation activities defined by content analysis of relevant literature sources, summarizing experience of training students in schools, and the results of surveys, interviews with teachers, own experience. So, it was created multiple regression model of students' readiness to sports and recreation activities. It was determined from the equation

$$Y = 5,32 - 0,035A - 0,026C - 0,53F - 0,047VM,$$

where: Y – level of student readiness for sports and recreation activities

A – action-conditioned component involves physical training process and physical fitness (the result of preparation process), the ability to plan, organize and carry out sports and recreational activities; activity in extra-curricular activities for physical self-improvement;

C – cognitive component (professional competence) is the number and quality of theoretical knowledge, which is an important component of psycho-pedagogical and medico-biological preparedness of students for future activities, teachers professional skills which ensure the effectiveness of its professional activity;

F – functional component comprises a set of integrated biomedical indicators and indicators of future teachers health; ability to plan, organize, and exercise self-control during sports and recreational activities; possession of different methods and technologies rehabilitation;

VM – value-motivational component - the need for optimal regular physical activity, awareness of its importance in the context of their own lives and professional activities; system of values and meaning settings that lead to a healthy lifestyle.

The use of multiple regression readiness model allowed to clarify the criteria for evaluation of students' readiness to sports and recreation activities. Analysis and generalization of students' readiness components depending on their level gave the right to formulate the characteristics of each level of readiness. Established such limits of 5 levels of readiness: low – 5,005 points and more; lower than average – 4,789-5,004 points; average – 4,573-4,788 points; above average – 4,357-4,572 points; high – 4.356 points or less.

On this basis, conducted a molding pedagogical experiment: studied the outcomes of experimental (authorial) organizational and pedagogical training programs for students of higher educational institutions I - II levels of accreditation for sports and recreational activity. Effectiveness test of pedagogical conditions and students readiness formation system for sports and recreational activity formed using diagnostic control sections that were conducted before and after the molding experiment.

Results and discussion

The effectiveness of teachers' sports and recreation activities depends not only on professional competence and methodical skills, but also on health, physical development, physical preparedness.

However, studies show that primary school teachers, subject teachers, caregivers and preschool teachers and partly physical education teachers have low rates of physical fitness, health and other preparedness components for sports and recreational activity. This necessitates the improvement of students physical education in higher educational institutions of I and II levels of accreditation and justification of pedagogical conditions of preparedness formation for sports and recreational activity (Maksymchuk, 2007; Naumchuk, 2002).

Teachers' readiness for sports and recreational activity integrates the following structural components: value-motivational, cognitive, action-conditioned and functional.

One of the most important components of readiness for sports and recreation activities can be considered students lifestyle. Analyzing the answers to the questionnaire, we found that less than half (only 39.6%) students of pedagogical colleges consider their lifestyle healthy, 20.9% do not see it healthy, 39.3% are hesitant in choosing answers. Attention is drawn to the fact that a significant part of students (39.3%) were convinced or their way of life can be considered healthy - perhaps this is due to lack of sufficient knowledge about healthy lifestyles in these students. We can also assume that these students try to follow a healthy lifestyle, but they cannot always follow it. Please note that at various colleges of the Western region we received same conclusion on the answer to this question.

In the analysis of questionnaire data was found some changes in terms that are integral components of students' readiness for sports and recreational activity, namely:

- reduced educational potential of physical education classes;
- increasing need for fun, to relax;
- frequent complaints about outdated equipment and sports imperfect, their monotony, and at the inflated regulatory requirements;
- independent physical activity at students leisure is irregular, its amount is insufficient to ensure the harmonious physical development;
- number of those who smoke, drink alcohol, increases with each course; as a result, an increasing number of students who do not exercise at leisure;
- figure and health of students rated as slightly higher than the average; level of physical fitness - below the average;
- there is a slowdown in improving the results of students physical fitness;
- recorded significant differences in terms of weight and height index of 4th year students compared to previous years of study;
- Ruffier index characterizes the level of efficiency of the cardiovascular system of male students as one that is at the lower limit of the average level and bordered with a satisfactory evaluation, and women - as satisfactory;
- 4th year students efficiency of the cardiovascular system deteriorates;
- every second student at the end of the day complains on significant fatigue, is indicated high incidence rates observed during year the in students of 1 - 4 courses.

Students of the "Physical Education" department are positively different from the rest of the students of pedagogical college branches with a number of indicators. They recorded the highest relative level of physical development, physical health and physical fitness, satisfactory adaptation potential of cardiovascular system, theoretical preparedness from sports and recreation activities (Table 1), probably because of a larger influence of physical education factors.

Students of this department perceived physical education classes as a professional development opportunity to improve their theoretical and physical fitness. For them is typical regular physical activity, in addition to physical education classes. Meanwhile, students of this department smoke up to 10 cigarettes a day, among them is relatively the largest number of those who consume alcohol daily, and the lowest - those who do not drink alcohol.

Regular physical activity added to the department of "Labor education" is one of the highest. Also among these students is also a significant number of smokers who smoke to 10 cigarettes per day. Frequently, minor disease but they are used to move forward with them, without resorting medical help. Almost for all muscle groups and eyes and significant fatigue at the end of the day was experiencing by students.

Significant fatigue demonstrates the importance of increasing the low level of physical performance of all muscle groups, teaching methods of relaxation and for reducing muscle tone by means of physical education. The level of physical fitness is one of the highest in college, physical health the highest, the theoretical readiness for sports and recreation activities one of the lowest.

Most students of "Initial education" department additional physical activity is sporadic. Almost half of the department students were sick during the year with absenteeism and appeal to doctors for help; most feel significant fatigue at the end of the day almost for all muscle groups and eyes. The level of theoretical preparedness for sports and recreation activities regarding the worst, physical level is also low.

For relatively the smallest number of "Preschool education" department students are typical physical activity in their free time. As a consequence the largest number experiencing significant fatigue at the end of the day almost for all muscle groups and eyes; relatively the largest number of this department students were sick with absenteeism. Adaptation potential of cardiovascular system is intense, physical health level is low, as follows the functional status of the main body systems of these students is relatively weakest. Physical and theoretical preparedness for sports and recreation activities is the lowest.

Although, students of this department relatively are least interested in the possibility of recovery in the employment of physical education classes and show the least desire to improve the constitution, the level of physical fitness, health, etc. and get professional knowledge.

Thus it is necessary to develop a system of measures to interest students and teach them methods of improving health by means of physical education.

Table 1. The indices of students' physical health, adaptive capacity, physical condition and biological age

Indicators Departments	Amount of students	Physical health		Adaptive capacity		Physical condition		Biological age		
		Amount of point ($X\pm m$)	Level	Amount of point ($X\pm m$)	Level	Amount of point ($X\pm m$)	Level	Amount of point ($X\pm m$)	Compliance to passport	
<i>Department comparison</i>										
PhE	52	5,00±0,52	LA	2,08±0,03	satisf.	0,64±0,01	average	39,80±1,00	Higher than passport age	
LE	92	5,68±0,60	LA	2,13±0,03	intense	0,61±0,02		41,90±0,80		
PE	54	2,89±0,47	L	2,12±0,05		0,58±0,02		34,50±1,10		
IE	165	2,27±0,24	L	2,13±0,02		0,60±0,01		33,10±0,60		
PhE-PE	-	$t=3,29^{***}$	-	$t=0,68$	-	$t=2,24^*$		$t=6,36^{***}$		-
LE-PE	-	$t=3,31^{***}$	-	$t=0,22$	-	$t=2,16^*$		$t=5,40^{**}$		-
PE-IE	-	$t=5,67^{***}$	-	$t=0$	-	$t=0$		$t=8,50^{***}$		-
PhE-IE	-	$t=5,45^{***}$	-	$t=1,37$	-	$t=2,11^*$		$t=5,60^{***}$		-
PE-IE	-	$t=1,17$	-	$t=0,22$	-	$t=0,91$		$t=1,15$		-
LE-PhE	-	$t=0,70$	-	$t=1,02$	-	$t=1,07$		$t=1,60$		-
<i>Gender comparison</i>										
Men	91	7,06±0,50	A	2,10±0,03	satisf.	0,64±0,02	A	44,48±0,70	Higher than passport age	
Women	273	2,48±0,21	L	2,13±0,02	intense	0,60±0,01	A	33,86±0,49		
men-wom.	-	$t=8,40^{***}$	-	-	$t=1,21$	$t=2,10^*$	-	$t=12,4^{***}$		
<i>Comparison by years of study</i>										
2 nd course	181	3,10±0,27	L	2,14±0,02	intense	0,60±0,01	A	36,50±0,70	Higher than passport age	
3 rd course	183	4,13±0,36	LA	2,10±0,02	satisf.	0,62±0,02	A	36,50±0,60		
4 th course	181	2,36±0,23	L	2,20±0,02	intense	0,59±0,01	A	34,77±0,77		
2-3	-	$t=2,30^*$	-	$t=1,15$	-	$t=2,5^*$	-	$t=0,00$		
2-4	-	$t=2,00^*$	-	$t=2,52^*$	-	$t=1,16$	-	$t=1,15$		
3-4	-	$t=4,13^{***}$	-	$t=3,80^{***}$	-	$t=3,34^{***}$	-	$t=1,15$		

Notices: 1. Departments IT – Preschool education, IE – Initial education, LE – Labor education, PhE – physical education;

2. * – differences in reliability at $p < 0,05$.

3. ** – differences in reliability at $p < 0,01$.

4. *** – differences in reliability at $p < 0,001$.

5. A – average

6. LA – Lower than average

7. L – low

Consequently, our research found that the level of individual components of students' readiness of pedagogical colleges for sports and recreation activities are low, with years of study at the college there are negative changes, and there are significant differences on a number of value-motivational, functional indicators and physical fitness of students from different departments. The social importance of future specialists' preparedness of this research section requires the establishment and implementation of special measures in the educational process of pedagogical colleges.

On the next stage of the study was developed and justified methodic of measuring and evaluating the results of future teachers training for sports and recreation activities, which made it possible to determine the levels of professional readiness based on the proposed in the thesis indicators and criteria.

Authorial diagnostic method contained multiple regression model of students' readiness for sports and recreation activities, the readiness level of their semantic characteristics and criteria for readiness.

Were defined and characterized levels of readiness of the future teachers of physical education. The components of preparedness were value-motivational, cognitive, action-conditioned and functional components.

On the basis of the literature analysis and practice of physical education defined and justified pedagogical conditions for formation in students from pedagogical colleges readiness for sports and recreation activities: the use of individual-group approach to improve invariant and variable parts of the educational and professional training programs for future teachers; implementation of the program for formation students culture

of health; gradual and systematic use of means and forms according to the stages of students of pedagogical colleges readiness formation for sports and recreation activities; improvement of the "Physical education" course content; development and implementation of a comprehensive discipline "Sports and recreation activities"; improvement of the control quality of readiness for sports and recreation activities of students.

It was found that the readiness formation of future specialists for physical self-improvement is appropriate to carry out following stages: value-orientation, design-constructive, regulation-synthesizing and control-adjustment. Each stage involves the implementation of specific tasks and the use of appropriate forms of educational activities.

As a result of the study it was found that all of the readiness components depend on students' gender (as told in Table 2).

So, there are seen significantly higher levels of value-motivational, functional and action-certified components in male representatives.

Table 2. Comparative characteristics of pedagogical college students' readiness components for sport and recreation activity

Indicators	Readiness components			
	value-motivational	functional	action-conditioned	cognitive
<i>Gender comparison</i>				
Men.(n=91)	3,48±0,04	3,06±0,50	4,20±0,12	3,82±0,05
Wom.(n=273)	3,37±0,02	2,48±0,21	3,60±0,07	3,97±0,04
Men.-Wom.	<i>t</i> =2,3*	<i>t</i> =2,4*	<i>t</i> =2,4*	<i>t</i> =2,1*
<i>Comparison by years of study</i>				
2 nd course (n=181)	3,44±0,03	3,10±0,27	3,97±0,18	3,31±0,02
3 rd course (n=183)	3,37±0,03	3,13±0,36	3,70±0,16	4,32±0,06
4 th course (n=181)	3,39±0,03	2,36±0,23	3,70±0,09	4,29±0,03
2 – 3	<i>t</i> =1,90	<i>t</i> =1,30	<i>t</i> =2,5**	<i>t</i> =15,0***
3 – 4	<i>t</i> =0,47	<i>t</i> =4,13***	<i>t</i> =0,1	<i>t</i> =0,15
2 – 4	<i>t</i> =1,17	<i>t</i> =2,00*	<i>t</i> =1,2	<i>t</i> =27,0***
<i>Department comparison</i>				
PhE (n=52)	3,55±0,03	3,00±0,52	4,29±0,11	3,76±0,07
LE (n=92)	3,40±0,02	2,98±0,60	3,71±0,12	3,72±0,07
IE (n=165)	3,37±0,04	2,27±0,24	3,63±0,09	3,95±0,06
PE (n=54)	3,31±0,04	2,44±0,47	3,52±0,04	4,14±0,05
PhE-PE	<i>t</i> =4,8***	<i>t</i> =3,01**	<i>t</i> =8,00***	<i>t</i> =4,5***
LE – PE	<i>t</i> =3,06**	<i>t</i> =3,2**	<i>t</i> =3,2**	<i>t</i> =4,8***
LE – IE	<i>t</i> =2,3*	<i>t</i> =5,67***	<i>t</i> =1,7	<i>t</i> =2,5*
PhE – IE	<i>t</i> =4,2***	<i>t</i> =9,64***	<i>t</i> =3,6**	<i>t</i> =1,8
PE – IE	<i>t</i> =3,2**	<i>t</i> =1,3	<i>t</i> =1,8	<i>t</i> =2,3*
LE – PhE	<i>t</i> =2,3*	<i>t</i> =2,5*	<i>t</i> =2,5*	<i>t</i> =0,4

Notices: 1. Departments IT – Preschool education, IE – Initial education, LE – Labor education, PhE – physical education;

2. Differences in reliability: * – $p < 0,05$; ** – $p < 0,01$; *** – $p < 0,001$.

Instead, in women students was recorded significantly higher level of cognitive component of readiness for sports and recreation activities.

Our results confirm numerous data of specialized literature about the worsening ratio of students to physical education, regress in students' physical fitness indicators, and thus indicators of health during education at the undergraduate courses.

According to the table in students of 3rd year of study there is close to a significant worsening of the quantities of value-motivational factor and authentic of action-conditioned factor, and on the 4th year study – functional factor. Only in cognitive factor have been positive changes over the years of students teaching, that shows the entry of wider theoretical and methodological knowledge and skills.

Comparison of readiness indicators by departments showed that almost all of its components (except cognitive) is relatively the highest in the department of "Physical Education" significantly lower by the department of "Labor Education" and the weakest at the departments of "Initial Education" and "Preschool education".

Only by level of theoretical and methodological readiness students from departments of "Preschool education" and "Initial training" dominated on students from departments of "Physical Education" and "Labor Education", indicating the relative higher education performance of girls compared to boys. Nevertheless, as in the previous case, amount of knowledge from sports and recreation activities does not directly effect on the participation of students in these events. The biggest changes in amount were observed in the pats of functional readiness component of experimental group students (as told in Table 3).

Table 3. Comparative characteristics of the components of students' readiness of control and experimental groups for sports and recreation activities during the experiment, ($X \pm m$)

Indicators	Readiness components			
	value-motivational	functional	action-conditioned	cognitive
<i>On the beginning of pedagogical experiment</i>				
CG (n=727)	3,42±0,03	3,26±0,30	3,68±0,10	3,87±0,04
EG (n=724)	3,43±0,03	2,48±0,21	3,62±0,09	3,87±0,04
CG-EG	t=0	t=0,08	t=0,01	t=0
<i>At the end of pedagogical experiment</i>				
CG (n=727)	3,52±0,03	3,49±0,32	4,22±0,14	4,03±0,03
EG (n=724)	4,47±0,05	4,21±0,52	4,67±0,15	4,23±0,05
EG beg.-end.	t=2,84**	t=5,18***	t=2,64**	t=1,99*
CG beg.-end.	t=1,44	t=1,95	t=2,03*	t=1,54
CG-EG	t=5,80***	t=8,40***	t=3,51***	t=2,14**

Notices. CG – control group; EG – experimental group

Differences in reliability: * – $p < 0,05$; ** – $p < 0,01$; *** – $p < 0,001$.

Students of control group shift of indicators were close to plausible, but significantly lower (6.59%).

Experimental group students were less likely to complain about fatigue and malaise, their incidence has decreased.

Relatively biggest improvements (22.4% and 23.2%) were observed in action-conditioned and value-motivational component of students' readiness from experimental group.

This is due to the fact that physical activity of students in their free time has increased significantly due to a better ratio of students to their own physical activity and implemented in the educational process measures that we have developed on the basis established in the previous stages of the research.

The lowest (8.5%), but also authentic improvements were observed in the cognitive component. Due to a relatively high baseline of readiness cognitive component was observed small increase.

Significantly greater changes observed in students of experimental groups, indicating that benefits of the authorial program of students readiness formation for sports and recreation activities over the traditional.

As a result, the level of readiness of experimental group students increased by 9,17% and was evaluated at the end of the pedagogical experiment as above average.

At the end of the pedagogical experiment there was a significant difference between the change in the average values of experimental group students and control group students.

As a result, a significant number of students (13.43%) reached a high level. From 26.86% to 31.86% increased number of students that showed above-average level of readiness, from 31.63% to 38.14% increase in the number of students with an average level of readiness. At the same time decreased the percentage of students with low (from 10.00% to 2.52%) and below average (from 20.97% to 14.29%) level of readiness for sport and recreation activity.

As a result of this study were found scientific facts of three grades of novelty: those that improve existing ones, what complement and extend existing, completely new.

Improved data on the components of students readiness structure for sports and recreation activities; about the lifestyle, students needs and motives for physical education, low indicators of physical activity, physical health, physical development and physical fitness of students and their regress over the years of study at the higher educational institutions; ways to improve preparation of human resources for sports and recreation activities and formation of students positive attitude to a healthy lifestyle; the fact that the regulatory requirements that do not match the average level of physical fitness of the current generation of young people significantly impair their motivation to regular attendance of physical education (Pityn et al., 2014; Prystupa et al., 2014; Suschenko, 2002); about application of modern information technologies in educational process that promotes motivation and thus the level of students readiness for sports and recreation activities (Gryvenko, 2011); about student from department of "Physical Education" approach in training to sports and recreation activities (Maksymchuk, 2007; Naumchuk, 2002; Nifak, 2011).

As a result of the study firstly was determined the structure of future specialists students' readiness for sports and recreation activities as part of value-motivational, cognitive, action-conditioned, functional components; first time justified the way to determine and level scale of students of pedagogical specialties readiness for sports and recreation activities, which involves the use of multiple regression equation with consideration the significance of components.

For the first time defined pedagogical conditions and justified their application for the readiness formation of future teachers for sports and recreation activities: the use of individual-group approach in improvement of invariant and variable parts of the educational and professional training programs for future teachers of specialties "Physical Education", "Labor Studies", "Initial training "and" Preschool education " for consistent formation of readiness components of pedagogical colleges graduates for sports and recreation activities in accordance with the requirements of the industry standard of higher education; implementation of students health culture formation program; gradual and systematic use of means and forms according to the stages of students of pedagogical colleges readiness formation for sports and recreation activities; improvement of the "Physical Education" course content; development on the basics of interdisciplinary connection and implementation of a comprehensive discipline "Sports and recreation activities" and its educational and methodological provision; improvement of the control system over students willingness for sports and recreation activities.

For the first time found that for students of pedagogical specialties is typical relatively higher level of motivation to sports and recreation activities and "healthier" lifestyle compared with students of technical higher education institutions.

Established features of value-motivational, cognitive, functional and action-conditioned indicators of students' readiness from different departments of pedagogical colleges; described levels (high, above average, below average, low) of students' readiness for sports and recreation activities.

Conclusion

1. Preparation of qualified specialists that are able to manage on high level the process of physical education of preschool and school age children is one of the important conditions for improving the organization of sports and recreation activities in schools and preschools.

2. Main structural components of future specialists readiness for sports and recreation activities are value-motivation; cognitive, action-conditioned and functional.

A meaningful part of the value-motivational structural component of future specialists' readiness for sports and recreation activities is determined by interest in the formation of a healthy lifestyle; cognitive by professional knowledge and skills; action-conditioned by physical training; functional by physical health status.

3. According to the structural components of future specialists readiness for sports and recreation activities, its evaluation criteria is the level of formation of value-motivational readiness of students, their cognitive readiness, action-conditioning readiness and functional readiness.

Multiple regression model of students readiness for sports and recreation activities determined by the equation

$$Y = 5,32 - 0,035A - 0,026C - 0,53F - 0,047VM,$$

where: Y – level of student readiness for sports and recreation activities

A – action-conditioned component

C – cognitive component

F – functional component

VM – value-motivational component that provides calculated quantitative criteria of students readiness level for sports and recreation activities, according to which the low level is determined by more than 5,005 conventional units, below the average level by indicators within 4,789-5,004 conventional units, average by indicators within 4,573 - 4,788 conditioned units, higher than average level by indicators within 4,357-4,572 conventional units and high - indicators up to 4,356 conventional units.

4. Established that the initial level of readiness for sports and recreation activities and its components in the future specialists is below average ($4,7 \pm 0,01$ cond. units) with a trend for worsening during the study, with substantial differentiation of students in various specialties.

Indicators of individual structural components of future specialists for sports and recreation activities is $3,2 \pm 0,28$; $3,4 \pm 0,03$; $3,7 \pm 0,13$ and $3,8 \pm 0,03$ points for functional, value-motivational, action-conditioned and cognitive components respectively.

5. Application of the authorial program of the formation of future specialists for sports and recreation activities showed its high comparative effectiveness.

Significantly greater changes observed in students of experimental groups, indicating that benefits of the authorial program of students readiness formation for sports and recreation activities over the traditional programs.

It is worth noting that greater changes were recorded in relatively worst developed aspects of students' readiness from experimental group recorded at the beginning of the pedagogical experiment – value-motivational and functional (30,3% and 69,7% against 29% – action-conditioned and 9,3% – cognitive). A significant number of students (18,4%) reached a high level.

From 15,6% to 25,4% increased the number of students that have higher than average levels of readiness, from 35,4% to 40,4% increase in the number of students with an average level of readiness.

However, decreased the percentage of students with low (from 8,5% to 2,1%) and below average (from 26,4% to 13,4%) level of readiness for sports and recreation activities.

Level of readiness of experimental group students increased by 9,1% and after the pedagogical experiment assessed as above average.

References

- Gryvenko S. G. (2011). Prospects of computer technologies use during credit-module education system. *Medical education*, 4(1), pp. 15–16.
- Ivanova G. Y. (2003). Role of physical culture in formation of healthy lifestyle of technical colleges' students. *Pedagogy, psychology and medico-biological problems of physical education and sport. Articles collection*, 5(10), pp. 29 – 34.
- Levinets N. V. (2007). *Formation of professional readiness of future teachers of physical education based on national traditions*. Thesis. National pedagogical university named after Drahomanov, Ukraine.
- Maksymchuk B. A. (2007). *Preparation of future teachers of primary school for sport activity*. Thesis. Vinnytsky state university named after Koczubinsky, Ukraine.
- Naumchuk V.I. (2002). *Professional preparation of future physical education teachers of in process of independent work from sport games*. Thesis. Ternopil state pedagogical university named after Gnatuka, Ukraine.
- Nifak A. (2011). Theoretical basics of didactic integration in sport games. Available at :http://librar.org.ua/sections_load.php?s=culture_science_Свернева
- Pityn M., Zadorozhna O., Briskin Y., Smyrnovskyy S., Semeryak Z. (2014). Technical devices of improvement the technical, tactical and theoretical training of fencers. *Journal of Physical Education and Sport*, 12(3), pp. 337–341.
- Prystupa E., Y. Briskin, M. Pityn (2014). Olympic education and informational society: problem and research. *Zdrowie I Społeczenstwo*, 4(1), pp. 81–88.
- Stepanko A. V. (2009) *Preparation of future primary school teachers for pupils physical education*. Thesis. Ternopil state pedagogical university named after Gnatuk, Ukraine.
- Suschenko L. P. (2002). *Professional preparation of future specialist for physical education and sport: history and prospects [monogr*