

## COMPARATIVE ANALYSIS OF THE LEVEL OF PHYSICAL HEALTH OF STUDENTS OF ECONOMICS SPECIALTIES

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**Annotation.** The results of the study of the level of physical health of students of economics specialties were conducted. The study involved 636 students. It was used the method of assessing the level of physical health G.L. Apanasenko. Defined by the functional state of the organism in terms of cardio-respiratory and muscular systems, which are formalized in quantitative terms (points) and are associated with the level of individual health. It was stated that the vast majority of students have low rates with the steady tendency to deterioration over the period of study. Found that physical education classes do not fulfill the full recreational function. Self-improvement gives little impact or affect the health of students. The necessity of developing the content of a sports-oriented technology of physical education students on the basis of volleyball and aimed at improving the professional-applied physical fitness.

**Keywords:** analysis, student, health, economic, specialty.

### Introduction

Main preconditions of development of different human life activity sides are health and healthy life style. Exactly these criteria are responsible for the level of citizens' participation in social-civil measures, full-fledged fulfillment of their social targets, active participation in such forms of life activity as civil, social-domestic and so on. This problem is especially urgent for students. Observance of healthy life style plays important role in student's life, as far as it is a guarantee of future self realization and progressing in all spheres of life, starting from mental and up to physical.

World health protection organization (WHPO) determines that human health is not absence of diseases and physical defects, but it is a state of harmony of physical, psychological and social health. Doctor of medicine, professor G.L. Apanasenko, understands health as an organism's state, with which such level of energetic potential is ensured that it permits improvement of human self-feeling and efficient fulfillment of person's biological and social functions [1].

Physical development is in the base of physical preparation for future labor activity. It is the base for improvement of all vital functions of organism, necessary motion qualities, abilities and skills. Alongside with it, development of production, automation of production, creation of continuous technological processes, implementation of automatic control systems, electronics, cybernetics, increase of speed and efficiency of actions, change the character of productive labor. Portion of manual labor and physical load reduce, portion of mental activity increases in total balance of working hours. All these bring to further increasing of special requirements, which are set forward to human organism to specialist's physical level [2,7,8].

To-day successful obtaining of higher education is possible only under condition of availability of sufficiently high level of health that is why consideration of peculiarities of life style, in particular physical activity and positive attitude to physical culture and sports activity – is an important element of organization of students' physical education [3].

By the data of medical examinations and special questionings nine from ten students have health abnormalities, up to 50% of students are observed at clinics, every fifth student is a member of special health group or is free from attending physical culture classes. For example as per data of World health protection organization, only 5% of population of Ukraine practice health improving trainings, while in Japan – 80%, in USA – 70% [6,11,12].

Great number of authors registered increment of nervous-psyche disorders, diseases of cardio-vascular system of persons, who most time are in "sitting" position [5]. Their emotional resistance, attention functions, thinking and memory weaken.

Reduced motion activity, which is seen in limiting of space and strength characteristics of movements, negatively reflects both: in the state of functional systems and in organism's activity in general; it causes untrained state of organism and is harmful for functional and physical state. Such state is followed by changes in regional blood circulation [4, 9, 10].

The existing, at present, organization of physical education at HEEs is not sufficiently effective for increasing of health and physical levels and does not fulfill to full extent health improving function for most of students.

The research has been carried out as per plan of scientific complex work of physical culture' theory and methodic department of Sumy state pedagogical university, named after A.S. Makarenko, which was approved by Institute of scientific-technical and economic information of Ukraine, Kyiv, state registration number 0111U005736.

### Purpose, tasks of the work, material and methods

*The purpose of the research* is to study and analyze somatic health level of girl students of economic specialties of HEE "Ukrainian academy of bank business of National bank of Ukraine" (UABB) and Sumy state university (Sum SU).

In order to research the level of somatic health of girl students of economic specialties of HEE "Ukrainian academy of bank business of National bank of Ukraine" (UABB) and Sumy state university (Sum SU) we used the

method of somatic health evaluation, developed by G.L. Apanasenko. Selection of this method was conditioned by the fact that it permits to evaluate organism's functional state in complex way, by indicators of cardio-respiratory and muscular systems, which are expressed in quantitative units (points) and are connected with level of individual health. Methodic of research was composed of determination of anthropometric and functional indicators and their indices.

*Organization of the research.* Girl students of 1<sup>st</sup> – 4<sup>th</sup> years of study on economic specialties at two HEE: UABB – 214 girl students and SumSU – 412 girl students took part in the research.

**Results of the research**

Results of comparative characteristics witness that absolute majority of both HEEs' girl students has low level of somatic health. As it can be seen in table 1, height of UABB girl students is within

1.68±0.07 m, and Sum SU – 1.68±0.07 m correspondingly. Mean weight of UABB girl students is 66.03±4.93 kg, of Sum SU girl students - 65.33±5.06 kg, correspondingly. Vital capacity of lungs of UABB girl students is 3478.31±400.44 ml, of SumSU - 3477.69±384.73 ml.

Table 1  
*Combined table of anthropometric and physio metric indicators of girl students of economic specialties of UABB and SumSU*

Indicators	UABB (n=214)		SumSU (n=412)	
	Static indicators			
	X <sub>avr</sub>	σ	X <sub>avr</sub>	σ
Height (m)	1.68	0.07	1.68	0.07
Mass(kg)	66.03	4.93	65.33	5.06
VCL(ml)	3478.31	400.44	3477.69	384.73
Dynamometry of hand (kg)	33.18	8.78	32.62	8.85
HBF (b.p.m.)	74.10	3.49	74.01	3.25
BP <sub>s</sub> (mm merc. col.)	120.55	2.93	120.55	3.00

The examined force of hand is in average for girl students of UABB 33.18±8.78 kg, for Sum SU – 32.62±8.85 kg correspondingly. HBF of UABB girl students is– 74.10±3.49b.p.m. of SumSU– 74.01±3.25 b.p.m. BP of UABB students is– 120.55±2.93 mm merc.col. and of SumSU students – 120.55±3.00 mm merc. col.

Thus, ISH of UABB students is 0.30 points and for girl students of SumSU it is– 0.42 points. It is possible to make conclusion that ISH (index of somatic health) of Sum SU girl students exceeds indicators of UABB girl students by 0.12 points. The calculated ISH values point, that the level of somatic health of both HEEs' girl students is low (ISH ≤ 3 points) (see table 2).

Table 2  
*Combined table of somatic health of girl students of economic specialties of UABB and SumSU*

Indicators	UABB (n=214)		SumSU (n=412)	
	Static indicators			
	X <sub>avr.</sub>	points	X <sub>avr.</sub>	points
Mass index (kg p. m <sup>2</sup> /)	23.59	-0.56	23.39	-0.60
Vital index (ml p.kg)	53.13	0.41	53.69	0.42
Power index (%)	50.58	-0.29	50.38	-0.28
Index of Robinson (conv.un.)	89.33	0.24	89.22	0.37
Martinet's test (sec)	155.78	0.50	153.42	0.51
ISH		0.30		0.42

The fulfilled research gives also information about level of somatic health of 1<sup>st</sup> – 4<sup>th</sup> years economic specialties' girl students of SumSU.

For example, from the tested quantity of SumSU girl students 14% (81) have low level of somatic health, 20.95% (22) girl students have level lower than middle, 1.9% (2) persons – middle level. Levels higher than middle and

high were not registered at all. With examining of 2<sup>nd</sup> year girl students of SumSU the following results were obtained: 89% (89) girl students have low level, 10% (10) girl students – level lower than middle and 1% (1) person – middle level. Among 3<sup>rd</sup> year girl students 88.68% (94) persons have low level, 11.32% (12) persons – have level lower than middle. With studying 4<sup>th</sup> year girl students of SumSU the following results were obtained: 89.11% (90) persons – low level 10.89% (11) girl students, who have level of somatic health lower than middle.

Thus, if to compare the obtained results of the research we can make conclusion that absence of higher than middle and high levels of somatic health is common for girl students of both HEEs. Concerning middle level, the quantity of UABB girl students with such level of somatic health is nearly two times higher than at SumSU. At the same time percentage of low level of somatic health of UABB is higher than it is at SumSU. By percentage correlation indicator of SumSU is higher than it is at UABB by 3.07% concerning level lower than middle (see fig.1).

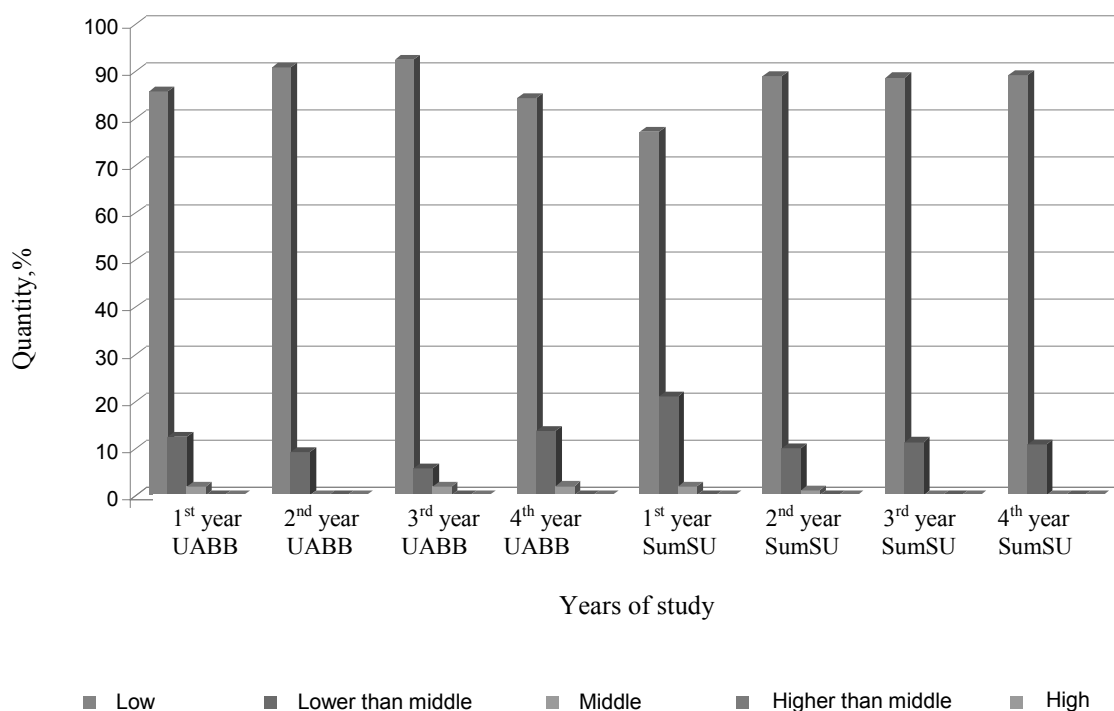


Fig.1. Comparative characteristics of somatic health levels of UABB and SumSU girl students

### Summary

So, as results of our research show somatic health level of students is in general very low. 98.6% of UABB girl students have low and lower than middle levels and 99.27% of SumSU girl students. Only 3 girl students in every HEE have middle level of somatic health. Index of somatic health of UABB girl students is 0.3 points and the same of SumSU girl students is 0.42 points. It says that the tested contingent of girl students of economic specialties of UABB and SumSU is characterized by low level of somatic health.

Considering all above said a conclusion can be made that absolute majority of girl students have low indicators, which, in spite of certain percentage fluctuations, have steady trend to worsening during period of study. I.e. physical education classes and independent improvement of girl students' motion qualities give either insignificant results or absolutely do not influence on students' state of health.

*The prospects of further researches:* with the help of analysis and generalization of scientific-methodic literature, sociological methods and method of health state's determination by G.L. Apanasenko, physiological methods, testing, pedagogical experiment and methods of mathematical statistics to develop sports-oriented technology of physical education of girl students of economic specialties on the base of volley ball, which would be directed on improvement of professional-applied physical preparedness. Practical significance will be in implementing of the developed sports-oriented technology of girl students' physical education on the base of volley ball into practice of economic HEEs' functioning.

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