

Physical and psycho-sensory abilities as the basis of motivation of students to systematic section classes in the system of physical education of HEI

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Purpose: to develop practical recommendations for students of KhSAC, concerning the choice of sports section taking into account the level of their psychophysiological and motor abilities.

Material & Methods: theoretical analysis and generalization of scientific and methodical literature, pedagogical testing, methods of mathematical statistics.

Results: statistically significant interrelations of psychological indicators with indicators of motor abilities of students, who took part in the research, are revealed by results of the research. Differences of results of the pedagogical testing of students of different specialties are found, practical recommendations which allow students of KhSAC, taking into account their desires, psychological and motor abilities, to choose the sports section corresponding to them, are developed.

Conclusions: individual properties of students of KhSAC of different specialties are defined on the basis of results of assessment of psychophysiological and motor abilities. Practical recommendations for students of KhSAC are developed, concerning the choice of sports section taking into account the level of their psychophysiological and motor abilities.

Keywords: psychophysiological abilities, sensomotor reactions, specific impressions, pedagogical testing, motor abilities, sports section.

Introduction

Motor activity remains at the present stage of improvement of the system of national education by the effective method of the solution of priority tasks of student's youth, in particular, of effective professional activity, prevention of diseases, active living position. The organization and the maintenance of motor activity are primordial in the achievement of all results that will provide the professional operability and the appropriate level of health [3; 5; 8].

The process of physical education in higher education institutions of unsporting profile is directed, first of all, not to the achievement of high sports results, and to awakening of interest in classes, by means of the chosen sports and complex development of motive qualities. It is necessary to consider potential adaptation opportunities of students, to use optimum their physical and intellectual potential by drawing up programs for physical education in these higher education institutions [3; 7].

Control of movements – the difficult process depending on many factors including – from speed of carrying out nervous impulse on structures of the central nervous system that traditionally belongs to characteristics of psycho-sensory opportunities [2; 4; 5].

Psycho-sensory indicators reflect one of aspects of functional condition of human body [4; 5; 7; 9] which account will allow the teachers, who are carrying out the process of physical education in higher education institution, to recommend to students this or that sports section that, eventually, will favorably affect both vocational training, and their functional and psychological state [3].

The purpose of the research

To develop practical recommendations for students of KhSAC at the choice of sports section taking into accounts the level of their psycho-sensory and motor abilities.

It is necessary to solve *the following problems* for realization of this purpose:

1. To carry out the analytic survey of available scientific-methodical literature concerning physical education of students in higher educational institutions of unsporting profile.
2. To determine the level of psycho-sensory and motor abilities of students of KhSAC.
3. To make the comparative analysis of the results, which were received during the research, and on its basis to develop prac-

tical recommendations for students of KhSAC at the choice of sports section taking into account the level of their psycho-sensory and motor abilities.

Material and Methods of the research

Psycho-sensory methods: definition of simple visual reaction, definition of reaction to the moving object, definition of reaction of the choice from the static objects, definition of feeling of speed, determination of accuracy and speed of reproduction of the set line, tapping-test. The complex of tests by the assessment of sensomotor reactions and specific perceptions, which are developed for tablet computers [1], was used in the research.

Frequency of lifting of hip to the set height (running in place 15 s), the test for definition of muscular strength of stomach, time of performance of complex relay were registered from indicators of physical fitness [6].

Girls of Kharkiv state academy of culture (n=40) have participated in the research, the main group for health reasons, the following specialties: "Modern choreography" – 14 persons, "Information, library and archiving" – 13, "Management" – 13, not having sports categories. The age of girls, who participated in the research, has made $18,3 \pm 0,2$ (years old), height $167 \pm 1,55$ (sm), weight $58,5 \pm 1,72$ (kg).

Results of the research and their discussion

Results of students on psychophysiological tests and tests for assessment of motor abilities were distributed on three groups on the level of performance of test tasks during the research – "High level", "Average level" and "Low level" (tab. 1, 2).

It is noted that results of the pedagogical testing of girls, who go in for modern choreography, are better, than results of girls of specializations "Information, library both archiving" and "Management".

So, the greatest differences in results of assessment of psycho-sensory abilities are noted:

– results of choreographers are better on 17,6%, than results of students of the specialization «Management», and they are better on 17,4%, than results of students of the specialization

«Information, library and archiving» at the execution of the test «Simple visual reaction»;

– results of choreographers are better on 14%, than results of students of the specialization «Management», and they are better on 9,9%, than results of students of the specialization «Information, library and archiving» at the assessment of feeling of speed.

Results of choreographers, which are shown in complex relay, are on better 20,6%, than results of students of the specialization «Information, library and archiving», and they are better on 14,7%, than results of students of the specialization «Management» at the assessment of motor abilities (fig. 1).

The aforesaid demonstrates that motive activity of choreographers assumes the sufficient motor activity, which is connected both with manifestation of precision movements, and with manifestation of certain motor abilities, such as: dexterity, speed, force.

Results of the pedagogical testing of girls of specializations «Information, library and archiving» and «Management» concede to results of choreographers, and it is connected with the fact that professional activity of librarians and managers does not assume special motive skills.

The correlation analysis is carried out for the determination of interrelations between indicators of psycho-sensory and motive abilities. Statistically significant correlation communications at the assessment of simple motility and force ($r=0,37$), simple motility and dexterity ($r=0,4$), simple visual reaction and frequency of lifting of a hip to the set height in running on the place for 15 s ($r=0,33$), simple visual reaction and dexterity ($r=0,3$), reaction to a moving object and power abilities ($r=0,4$), reaction to a moving object and frequencies of lifting of a hip to the set height in running on the place for 15 s ($r=0,36$), reactions to a moving object and dexterity ($r=0,34$), result in the tapping-test (30 s) and power abilities ($r=0,33$) are revealed.

The correlation analysis confirms the interrelation of psycho-sensory indicators with indicators of motive abilities of the students who participated in the research.

Practical recommendations, which will allow the students of KhSAC, taking into account their desire, psycho-sensory and motive abilities, to choose the sports section corresponding to them are developed on the basis of the comparative analy-

Table 1
Indicators of psycho-sensory abilities of students of KhSAC (n=40)

№	Psycho-sensory tests	High level	Average level	Low level
1	Simple motility (quantity of times)	>28,3	28,3–25,0	<25,0
2	Resistance to the forcing-down signals (%)	>88,1	88,1–77,6	<77,6
3	Simple visual reaction (ms)	<203,6	203,6–238,5	>238,5
4	Reaction of the choice (ms)	<548,0	548,0–665,9	>665,9
5	Reaction to a moving object (ms)	<13,9	13,9–29,4	>29,4
6	Accuracy of reproduction of the set line (mm)	<324,4	324,4–541,9	>541,9
7	Speed of reproduction of the set line ($\text{mm}\cdot\text{s}^{-1}$)	>94,4	94,4–56,5	<56,5
8	Feeling of speed (ms)	<35,0	35,0–76,0	>76,0
9	Tapping-test (10 s)	>81,0	81,0–62,6	<62,6
10	Tapping-test (30 s)	>231,0	231,0–177,4	<177,4

sis of the received results. In particular, classes by sports and rhythmic gymnastics with a primary orientation are recommended to students who have the low level of psycho-sensory and motive abilities for the development of motive abilities. The students, who have the sufficient level of development of motive abilities, but the low level of development of psycho-sensory abilities, can be recommend among sections which are cultivated in KhSAC, classes by table tennis and volleyball. The students, having the high level of development of psycho-sensory abilities, but the insufficient level of development of motive abilities, can be recommend classes in gym. The students, who have rather high level of development of both psycho-sensory and motive abilities, can be offered classes in such sections: chess, checkers.

Conclusions

1. Despite of numerous researches in the system of physical

education of students, the data, which would recommend indicators of abilities to certain sports for students of unsporting educational institutions, are not observed in literature.

2. The given results of the research revealed the considerable advantage of physical and psycho-sensory abilities of students of the specialization modern choreography.

3. Practical recommendations for students of KhSAC for definition of types of sports sections are developed on the basis of the analysis of literature, practical experience and materials of the research: sports (not contact), rhythmic gymnastics, shaping.

Prospects of further researches are connected with more detailed analysis of the process of physical education in KhSAC and search of ways of increase in interest of students in classes in sports sections of higher education institution.

Table 2
Indicators of motor abilities of students of KhSAC (n=40)

No	Assessment of motor abilities	High level	Average level	Low level
1	The test for assessment of muscular strength of press (quantity of times)	>27,6	27,6–21,3	<21,3
2	Run with high lifting of a hip (quantity of times)	>45,1	45,1–36,8	<36,8
3	Complex relay (s)	<8,3	8,3–9,6	>9,6

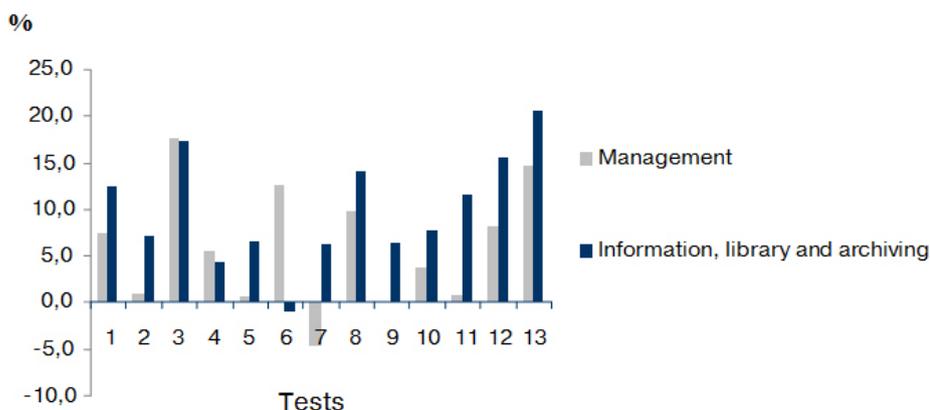


Fig. 1. Differences of results of pedagogical testing of students of the specialty “Modern Choreography” from results of testing of students of specialties “Management” and “Information, Library and Archiving”: 1. Simple motility. 2. Resistance to the forcing-down signals. 3. Simple visual reaction. 4. Choice reaction. 5. Reaction to a moving object. 6. Accuracy of reproduction of the set line. 7. Speed of reproduction of the set line. 8. Feeling of speed. 9. Tapping-test (10 s). 10. Tapping-test (30 s). 11. The test for assessment of force of muscles of press. 12. Run with high lifting of a hip. 13. Complex relay.

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