

## SOCIAL AND EDUCATIONAL CHARACTERISTICS OF THE HEALTH STATUS OF PUPILS – SPORTSMEN

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**Annotation.** *Purpose:* to analyze the biomedical and social determinants of health and hygiene of pupils athletes. *Material:* the study involved 60 athletes 12-15 years and their peers (n = 60), which are not involved in sports, as well as parents of schoolchildren. Comprehensive study was conducted using questionnaires by the "copy - a couple." *Results:* it was found that young athletes have less influence adverse biological factors than their peers. Systematic sports distract students from passive pastime and regulate rational mode of the day. Food of young athletes has the following features: Custom mode, high multiplicity meal predominance in the diet of vegetables, meat and dairy products. Found that most of the families of pupils athletes have sufficient material level and adequate housing. At the same time, parents of the ordinary students are more prone to the spread of harmful habits. Psychological climate in families of pupils is low conflict. Medical support is stable, but not sufficient. More than half of the families of pupils - athletes perform medical advice given extra hygiene knowledge. *Conclusions:* the students who participate in sports is a specific social-demographic group. The main factor of social and pedagogical state of the family is the attitude of the parents to the child's health.

**Key word:** *health, factors, pupils, sportsmen.*

### Introduction

Health of children and teenagers is an urgent problem of first importance as far as it determines the future of country, genofond of nation and economic potential of society; along with other demographic indicators it is a sensitive barometer of social-economic development of country. Significance of this problem is outlined by Constitution of Ukraine, which declares human being, its health and life the highest social value of state 1, 4].

Recent years there have been existing steady trend to worsening of school age children's health. With entering comprehensive schools health indicators of children start progressive reducing owing to influence of unfavorable and school risk factors [2, 5, 6].

Main ways of this problems' solution are determined by National doctrine of development of education, by Laws of Ukraine "On pre-school education", "On General secondary education", "On extra-school education", "On protection of childhood"; by Concept of positive motivation's formation and healthy life style of children and youth, which undoubtedly prove priority of preservation of pupils' physical and psychic health, education of conscious attitude to own health and health of citizens as the highest social value [6, 7, 9,11].

Involving of pupils in sport circles and children-junior sport schools is substantially significant for realization of strategy of pupils' health progressing. Initial position of health-related functioning of such establishments shall be understanding of social-pedagogic, medical-biologic and hygienic aspects of organization of pupils' sport loading [3, 8, 9, 12-15].

For working out of scientifically grounded measures, oriented on prophylaxis of diseases, it is necessary to specify factors, which condition appearance of pathology. It is important to remember that junior sportsman endures at the same time influence of two groups of risk factors: traditional, starting from heredity and finishing by ecologic problems and reasons, connected with sport trainings.

Our researches were conducted in compliance with scientific topic of human biology and immunology department of Kherson state university and is a component of topic "Urgent problems of vocational training of modern school teachers", registration number 0198U007532).

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

*The purpose of the work* is determination of social-pedagogic factors of pupils-sportsmen's health.

For achieving of this purpose we had to solve the following *tasks*:

1. Studying of literature, devoted to medical-biologic and social-hygienic factors, influencing on health of junior sportsmen;
2. Working out of questionnaire and questioning of different schoolchildren categories for evaluation of social pedagogic factors of pupils-sportsmen's health;
3. Determination of social-pedagogic characteristics' of pupils'-sportsmen's health.

In our complex research, which was carried out with the help of specially worked out questionnaires by method "copy-pair": we determined medical biologic and social-pedagogic factors, influencing on state of children and teenagers' (who train at sport schools) health. In research 12-15 years old age sportsmen (n=60) took part as well as their peers (n=60), who do not practice sports. Control group consisted of schoolchildren, who practice physical culture as per program of comprehensive schools.

**Results of the research**

Most of the questioned disciples of children-junior schools (90.4%) train 3-6 times a week. 63.2% of pupils-sportsmen have duration of one training 1.5-2 hours. With it 61.6% of sportsmen have one training a day; however 38.4% of sportsmen noted that they have 2 trainings a day. Total duration of junior sportsmen’s trainings is 9-12 hours per week; 86.4% attend only physical culture lessons and practice physical exercises 1-3 hours every week. Tensed rhythm of trainings reduces period of junior sportsmen’s recreation; as a result – 33.6% of them subjectively feel no recreation in days of rest and between trainings (see table 1).

Table 1

*Social-hygienic factors, characterizing health of junior pupils-sportsmen and pupils of comprehensive schools*

Factors	Frequency of sign, %		p
	Pupils-sportsmen	Comprehensive school’s pupils	
Regular being outdoors at first year of life Регулярне	95.0 ± 1.9	82.0 ± 3.4	0.001
Cold-related disease in 1 <sup>st</sup> year of life	24.0 ± 3.8	46.0 ± 4.6	0.001
Violent eating	77.0 ± 3.8	53.0 ± 4.5	0.001
Quantity of eating per day (four and more)	46.0 ± 4.6	22.0 ± 3.7	0.001
Family diet (prevailing of milk, meat or vegetables)	76.0 ± 3.8	52.0 ± 4.5	0.001
Everyday eating of vegetables and fruits	35.0 ± 4.3	6.0 ± 2.1	0.001
Everyday TV watching more than 2 hours	27.0 ± 4.0	55.0 ± 4.4	0.001
Using of alcohol by parents (I time a week and more)	31.0 ± 4.1	51.0 ± 4.5	0.003
Duration of child’s sleep 8-9 hours a day	72.0 ± 4.0	48.0 ± 4.5	0.001

Very often junior sportsmen start training, feeling tiredness (28.8%), with weakness and symptoms of disease (accordingly 6.4% and 6.8%), with absence of desire to train (12%). It is reflected in self-feeling and health of sportsmen; in this connection 5.6% appraise their state after trainings as unsatisfactory and 4.8% subjectively connect worsening of health with starting of sport functioning.

When studying sleeping we determined that 19% of children, who practice sports, have duration of sleep less than eight hours, 72% - eight-nine hours, 9% - more than nine ours. When answering question: “Why do you practice sports?” 30.4% of children-junior sports schools’ disciples put on first place wish to be physically healthy, 12.8% want to be physically attractive, 8.8% want to maintain workability; 7.2% of sportsmen think that sport distracts them from harmful habits and 3.2% noted that trainings help to remove tiredness. 44% of respondents gave combinations of these answers. Among other motivations to sports the following variants of answers were registered: wish to be known, entering combined team, wish to be a champion, to become a professional sportsman.

In compliance with materials of our researches 0.8% of junior sportsmen smoke; in control group there are 2.7% of smokers. With it 2.4% of smoking sportsmen do it from time to time and their quantity is less than of pupils, who do not practice sports (14.5% smoke from time to time, 2.7% – up to five cigarettes a day and 0.9% – five-ten cigarettes a day).

Most of junior sportsmen (85.6%) and 69.1% f comprehensive schools pupils think that smoking influences negatively on health (p<0.01), only 24.0% of sportsmen and 8.2% of comprehensive schools’ pupils know that smoking worsens mental and physical workability; 3.2% of junior sportsmen and 8.2% of comprehensive schools’ pupils answered that smoking does nor influence on health substantially.

85.6% of junior sportsmen and 86.4% of comprehensive schools pupils do not use alcohol; 11.2% of sportsmen and 5.5% of pupils use alcohol use alcohol once a month; one time per every two week alcohol is used by 1.6% of sportsmen and 4.5% of pupils. Most frequently junior sportsmen use alcohol “in company”, “for better mood”, “for better communication”; sometimes alcohol is used for releasing tiredness.

Detail analysis of frequency, starting of using alcohol and its dozes did not show substantial distinctions between pupils, who did not practice sports and sportsmen.

In case if medical aid is required, only 12.0% of disciples of children-junior sports schools address medical-physical culture dispensary, 72.8% - address local polyclinics and 14.4% - practice self-treatment. It conditions demand in increasing of qualified medical aid to pupils-sportsmen on base of medical centers of sport-educational establishments.

Medical biological factors, such as parents’ health, heredity and other play important role in formation of children’s health. It is known that in families, in which children have different somatic diseases, parents confidently oftener suffer from chronic diseases.

Acute respiratory diseases during pregnancy period of mothers were registered for 9.0% of their children – members of main group and for 19.0% of children from control group (p< 0.05). As it was stated by the research 24% of junior sportsmen and 46% of comprehensive schools’ pupils suffered from acute respiratory diseases in first year of life (p<0.001). Regular being of child outdoors was noted by 95.5% of sportsmen’s parents and by 82.0% of comprehensive schools pupils’ parents (p<0.001). So, junior sportsmen endure less influence of negative medical-biological factors.

Children's way of life is closely connected with parents' way of life. In childhood and teenagers' age habits and value orientations are formed; just in this period it is necessary to form such way of life, which would facilitate strengthening of health. In this aspect much depends on personal example of adults, their behavior, on their relations with a child.

As a result of the research we found that as on the moment of child's birth 34% of mothers, who educate children-sportsmen, belonged to categories of workers by social status (in control group – 15.0%;  $p<0.001$ ), 53% – belong to office workers (in control group – 60.0%), other were students (5.0%), housewives (6.0%), unemployed (2.0%). Analysis of social state of junior sportsmen's parents showed the following: 51.0% of fathers were workers (in control group – 16.0%;  $p<0.001$ ), 39.0% - office workers (in control group – 65%;  $p<0.001$ ), other – military officers and students.

The fact that parents' social state and educational level in main group is lower than in control is also interesting. For example 34.0% of mothers and 45.0% of fathers from main group and 48.0% of mothers and 64.0% of fathers in control group ( $p<0.05$ ) have higher education and not finished higher education. The obtained data witness that most of families in main and control groups are rather trouble-free in material aspect and have satisfactory living conditions.

It is known that parents harmful habits, such as smoking and taking alcohol, negatively influences on children's health. As per our research expansion of harmful habits is rather high. For example 12.0% of parents of junior sportsmen smoke, 31.0% of sportsmen's parents and 49.0% of pupils, who do not practice sports, use alcohol one time every two weeks and oftener ( $p<0.001$ ). Only 3.0% of families, who breed child - sportsman recognize that alcohol is the reason of conflicts. Actually there are much more problems, connected with taking alcohol in families and its is noted by other researchers. Besides, both parents and teenagers bent to conceal dependence on alcohol. It should be noted that with arranging of full psycho-emotional contact we received more informative data about alcohol taking.

The health of children and teenagers, who practice sports, to large extent depends on daily regime: rational eating, regular sleep and rest, being in the fresh air, correct organization of trainings.

As a results of the research we stated that in families with junior sportsmen violent eating is more frequent than in families with pupils-not sportsmen (77 against 53.0%  $p<0.001$ ). But quantity of daily eating of junior sportsmen is higher. 46.0% of pupils-sportsmen and only 22.0% of pupils-not sportsmen have meal four and more times a day ( $p<0.001$ ).

High physical load intensifies metabolism that is why eating of young sportsmen shall not only compensate significant energetic and plastic losses, which are peculiar for young organism, but also facilitate increasing of sport workability and acceleration of recreational processes after trainings and competitions. It was found that according to this rule, vegetable, meat and milk food is taken by pupils-sportsmen confidently oftener than by their peers – not sportsmen (accordingly 76.0 and 52.0%;  $p<0.001$ ), fresh vegetables and fruits are daily taken by 35.0% of sportsmen and only by 6% of pupils-not sportsmen ( $p<0.001$ ).

Junior sportsmen spend confidently less time watching TV (more than 2 hours) than pupils of control; group) accordingly 27 and 55%;  $p<0.001$ ). It witnesses that systemic practicing of physical culture and sports facilitate distraction of children from passive wasting of time and help to observe more rational daily regime.

It is also interesting to study influence of factors, connected with school environment, on teenagers' health.

In our research we have not found confident distinctions between educational progress of comprehensive schools' pupils and pupils-sportsmen. However 4% of sportsmen's parents noted that teachers consider behavior of their children to be unsatisfactory.

It is known that psychological climate in family, family relationship, can render both positive and negative influence on indicators of children's and teenagers' health. In 9% of junior sportsmen's families and 15% of pupils-not sportsmen's families often conflicts appear. Episodic conflicts appear accordingly in 72% and 54% of families. There were no conflicts in 19% of sportsmen's families and in 31% of families of pupils-not sportsmen. The most often reasons in families of junior sportsmen is explosive character of one of parents (36% against 24%,  $p<0.05$ ), material troubles (21% against 34% accordingly,  $p<0.05$ ), difficulties, connected with breeding of child - 19% of sportsmen's parents and 28% of parents of children-not sportsmen.

It should be noted that 63% of sportsmen's parents evaluate family relationship as good and open, 4% - as troublesome; in control group - accordingly 47% and 13% ( $p<0.05$ ).

With studying of medical supervision it was found that 53% of the questioned form sportsmen's families seek medical advice only in case of child's heavy disease, with it – 39% - only in second day of disease. Recommendations of medical workers concerning treatment of children are completely followed only by 51% of sportsmen's families and 28% of families with children-not sportsmen ( $p<0.001$ ). Main reasons of ignoring of medical recommendations were: deficit of time– 14.0%; absence of belief in medical specialist– 11.0%; absence of required medicine – 6.0%. Among other reasons of ignoring of medical advices (20%) were: high price of medical preparations, material troubles. It should be stressed that 31% of main group families practice self-treatment, which is one of main reasons of incorrect application of medicine and often reduce health of junior sportsmen. Also attracts attention the fact that 5% of main group mothers and 8% of control group mothers abandon hospitalizing of child even if symptoms of disease are present.

22% of sportsmen's mothers and 9% of not-sportsmen's mothers seek for medical advice systemically by own initiative ( $p<0.001$ ).

Among reasons of dissatisfaction with medical aid the most often were long waiting in queue for doctor's consultation (30,0%). We registered great number of complaints on indifferent attitude of medical personnel (14.0% in

main group and 24.0% in control) as well as on insufficient qualification of doctors (14.0% and 8.0% accordingly). Medical activity in tested groups is on different levels and, as a rule, depends on type of family and place of residence. Leading principle of determination of disadvantaged family, from the point of view of district doctor, is family's attitude to own child's health, wish and possibilities of parents to create optimal conditions for child's development and desire to follow doctor's recommendations.

For example in 61% of sportsmen's families parents confidently oftener carry out regular control over organization of daily regime and eating (against 21% in control group). Most of questioned (66% of main and 65% of control group) consider their knowledge on prophylaxis of children's disease to be sufficient. Among sources of medical knowledge sportsmen's parents called mass media (43%), friends and relatives – (43%), popular medical literature – 26% and 10% accordingly.

It is rather remarkable that question "when medical knowledge were received" was answered by equal quantity of parents (32-33%) both of main and control groups : "after childe caught disease". It witnesses about low prophylaxis work of centers of maternity and childhood protection, about low quality of population's hygienic education, formation of healthy life style.

#### Conclusions:

1. Generalizing results, we can note that schoolchildren's health is formed under influence of groups of factors, which can be classified as mega-, macro-, meso-, and micro-factors. Mega-factors are those, which influence on health of all population of the Earth. Macro-factors – cover country, society ethnos, state, i.e. factors, which determine directions of socialization of people, living in certain countries, in case if mass media are involved. Meso-factors are conditions of socialization of big groups of people, who are divided by type of locality and place of residence (region, city, village), by their belonging to certain sub-cultures. Micro-factors are factors, which directly influence on definite individuals. They include families, groups of peers, educational establishments, public, governmental, religious organizations, micro-society. Such structuralizing of factors permits to determine interconnection of individual and public health, total dependence and inter-determinative character of all levels of their manifestation.

2. The highest influence on quality and way of life as well as on pupils and pupils-sportsmen's health is rendered by micro-factors. Just under their influence in the process of socialization of child (pupil) certain social orientation is formed, as well as individuality, certain style of life, certain attitude to own health and health level.

3. The process of socialization, in which formation of healthy life style takes place and certain health level is achieved, is realized as social-psychological and social-educational mechanisms. Social-psychological mechanism is represented by imprinting, inheritance, existential pressure, identification and reflection. Social-educative mechanism includes certain kinds of interaction: institutional, traditional and inter-personal.

4. Junior sportsmen endure less influence of negative medical-biological factors than their peers. Systemic trainings distract pupils from passive spending of time and regulate rational daily regime. Junior sportsmen's eating has the following signs: violent regime, high quantity of taking meal, prevalence of vegetable, meat and milk in diet.

5. Most of sportsmen's families have sufficient material level and satisfactory living conditions. At the same time parents of pupils-not sportsmen are characterized by high level of harmful habits. Psychological climate in sportsmen's families is low-conflict, relationship are open and friendly. Medical supervision is stable but not sufficient. About half of families of pupils-sportsmen follow medical recommendations, receive additional hygienic knowledge. Substantial group of parents does not follow medical advices owing to deficit of time and material troubles. Leading factor of social pedagogic state of a family is attitude to health of own child, desire and possibility to create optimal conditions for child's development, wish to follow hygienic recommendations.

Thus, schoolchildren, who practice sports, are specific social demographic group and, accordingly, have peculiar indicators of health as well as conditions of life and life style, which shall be considered, when working out scientifically grounded system of organization measures oriented on strengthening of health of this contingent.

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