



## **FEATURES OF COMPUTER-ADDICTIVE AND COMPUTER-NON-ADDICTIVE ADOLESCENTS ON ANTHROPOMETRIC INDICATORS.**

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### **Summary**

We have diagnosed 78 adolescents aged 12-14 years. Observations showed that 42% of the respondents revealed the possibility of developing computer addiction and 26% of the respondents revealed pronounced computer addiction. It was found that in computer-dependent adolescents, due to prolonged overstrain of the muscles of the right hand, hypertrophy with the withdrawal of the little finger to the lateral side is observed and on the right side there is a "dome-shaped" brush with the withdrawal of the little finger to the side. In computer-dependent adolescents, asymmetry of the trunk is noted due to the forced posture in front of the computer, followed by the formation of scoliosis.

**Keywords:** computer-dependent adolescents, anthropometric parameters, scoliosis.

## **ОСОБЕННОСТИ КОМПЬЮТЕРНО-АДДИКТИВНЫХ И КОМПЬЮТЕРНО-НЕАДДИКТИВНЫХ ПОДРОСТКОВ ПО АНТРОПОМЕТРИЧЕСКИМ ПОКАЗАТЕЛЯМ**

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### **Резюме**

Мы диагностировали 78 подростков, возраст которых 12–14 лет. Наблюдения показали, что у 42% анкетированных выявляется возможность развития компьютерной зависимости и у 26% анкетированных выявляется выраженная компьютерная зависимость. Установлено, что у компьютерно-зависимых подростков из-за длительного перенапряжения мышц правой кисти наблюдается гипертрофия с отведением мизинца в латеральную сторону и с правой стороны отмечается «куполообразная» кисть с отведением мизинца в сторону. У компьютерно-зависимых подростков отмечаются асимметрия туловища из-за вынужденной позы перед компьютером с последующим формированием сколиоза.



**Ключевые слова:** компьютерно-зависимые подростки, антропометрические параметры, сколиоз.

## **КОМПЬЮТЕРГА УРГАНИБ КОЛГАН ВА КОМПЬЮТЕРГА УРГАНИБ КОЛМАГАН ЁСМИРЛАРНИНГ АНТРОПОМЕТРИК КЎРСАТКИЧЛАРИНИНГ ХУСУСИЯТЛАРИ**

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### **Резюме**

12-14 ёшдаги 78та ўсмир болаларда тадқиқот утказилди. Кузатишлар шуни кўрсатдики, усмир болаларнинг 42% компьютер тобъелиги ривожланаётганлиги ва 26% да яққол компьютер қарамлиги борлиги аниқланди. Компьютерга урганиб қолган ўсмирларда ўнг қўл мушакларининг узоқ вақт чўзилиши туфайли кичик бармоқни ён томонга олиб чиқиш билан гипертрофия кузатилиб, ўнг томонда кичик бармоқни ён томонга олиб чиқиш билан қафт бармоқларнинг "гумбаз шакли"да булиши аниқланди. Компьютерга урганиб қолган усмирларда компьютер олдида қуп утирганлиги сабабли тананинг ассиметрияси, кейинчалик сколиоз шаклланганлиги қайд этилди.

**Калит сўзлар:** компьютерга урганиб қолган усмирлар, антропометрик параметрлар, сколиоз.

### **References**

In the 21st century, computers and the Internet have become indispensable companions of our lives - together they are an inexhaustible source of information, entertainment and communication. But there is another side, it concerns the younger generation - children and adolescents[7].

The Internet has become a powerful environmental factor, under the influence of which the personality of modern children and adolescents is formed. According to sociological surveys conducted by the Public Opinion Foundation, it is the adolescents and young people who are the most active Internet users[1,2]

From this point of view, a new disease "computer addiction" has appeared, which has nothing to do with an infection, but is spreading around the world at the speed of an epidemic [8,9]. The term "computer addiction" defines a person's pathological predilection for working or spending time at a computer. Adolescents, due to the age





immaturity of the personality and the instability of its structure, are most vulnerable to various kinds of negative influences [3,5]. The negative consequences of adolescents' excessive enthusiasm for the Internet cover all spheres of his life. Difficulties arise in educational activities, communication problems with peers, conflict in the family increases, general infantilization of the personality is noted [9,10]

Physical signs of computer addiction are represented by disorders of the eyes (impaired vision, display syndrome, dry eye syndrome), the musculoskeletal system (curvature of the spine, posture disorders, pain in the back; carpal syndrome, frequent headaches, insomnia, change in sleep patterns, daytime lethargy, neglect of personal hygiene), digestive system (malnutrition, chronic constipation, hemorrhoids) movements, such as excessive use of the keyboard [4,6]. If on time not notice changes in your child's behavior, then spending a lot of time in front of the computer can lead him to computer addiction [1,3].

With computer addiction as a result of a sedentary lifestyle, changes in metabolic processes are observed that directly affect the parameters of physical development and anthropometric parameters of parts of the human body [9,10]. The available data do not allow a deep assessment of the indicators of physical development in children and adolescents with computer addiction. For this reason, the morphometric characteristics of the body should be studied at the modern level.

**The purpose of our study** is to study the anthropometric parameters of children and adolescents suffering from computer and telephone addiction and compare the data obtained with those of healthy children.

### **Materials and Methods**

The study was conducted at school No. 29 in the city of Bukhara. The computer addiction of adolescents was determined using a special test - the questionnaire of K. Young.

Adolescent children (78) were divided into 2 groups: I - control group, computer-independent (28 adolescents - less than 50 points) and II - group, adolescents with computer addiction (50 adolescents, 31 of them with a high degree of addiction - 51-79 points, and 19 - with a very high degree of dependence - 80 points and above).

Body weight was measured on medical scales. A standard-type stadiometer was used to measure standing height. Chest circumference was measured with a meter tape. The anthropometric parameters of the upper extremities were measured. Statistical





processing of the obtained results was carried out using standard methods of variation statistics using the tables of R.B. Strelkova (1986).

### **Research Results**

Observations showed that 42% of the respondents revealed the possibility of developing computer addiction and 26% of the respondents revealed a pronounced computer addiction. The parameters of physical development in children of the II-group are noticeably behind the data of computer-independent children (I-group), where the growth of adolescents of the I-group ranges from 138 to 162 cm, on average -  $143.2 \pm 0.7$  cm, body weight - from 35 to 60 kg, on average -  $43.5 \pm 0.7$  kg, and the circumference of the chest varies from 61 to 94 cm, on average -  $78.0 \pm 0.95$  cm, and in adolescents of the II - group, growth is in within -126-154 cm, on average -  $138 \pm 0.98$  cm, body weight - from 32 to 46 kg, on average -  $38.0 \pm 0.6$  kg, and chest circumference ranges from 60 to 95 cm, in average -  $71.1 \pm 1.2$  cm.

In 19.0% of adolescents of group II, there is a curvature of the spine (scoliosis) to the right and 4.8% to the left. The length of the upper limb on both sides ranges from 58 to 73 cm, on average -  $66.5 \pm 0.53$  cm, and the length of the lower limb varies from 75 to 88 cm, on average -  $80.1 \pm 0.75$  cm. upper and lower limb asymmetry is not detected. And along the circumference of the shoulder, forearm and fingers, there is a lag of these parameters on the left side and hypertrophy of the muscles of the right hand (holds the mouse with the right hand).

### **Conclusion**

The study found that computer addiction not only affects the functional systems of a person, but also leads to a lag in the physical development of a young organism. Due to irregular nutrition, skipping meals, they show signs of a lag in physical development.

Computer-addicted adolescents have asymmetry of the torso due to a forced posture in front of the computer, followed by a transition to scoliosis.

In computer-dependent adolescents, morphometric changes in the upper limb, especially the right hand, are observed due to the control of a computer mouse (due to prolonged overstrain, the muscles of the hand acquire a forced shape) and a “dome-shaped” hand is noted on the right side with the little finger abducted to the side.





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