INFLUENCE OF STUDY IN HEE ON UBIQUITY AND STRENGTH OF STUDENTS' COMPUTER GAMBLING

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Abstract. _Purpose:_ to clear up effectiveness of learning-education process for counteraction of students' harmful passion to computer games' ubiquity. _Material:_ 1st – 3rd year students (main health group) were the objects of the research. In total they were 952 boys and 523 girls. In 1st year students' academic groups testing was carried out ant the beginning of academic year (October); in academic groups of 1st-3rd year students the testing was at the end of academic year (May). _Results:_ it was found that among 1st year boy students ubiquity of computer gaming as well as time losses, connected with it are higher than among girl students. Educational process is not sufficiently effective in struggle against computer gaming. For girls, this passion is not dangerous in general. In the course of study at HEE, the strength of this passion reduces independent on sex. _Conclusions:_ for increase of educational process's effectiveness and improvement of students' life quality it is necessary to consider personal features of boy students as well as to organize health related measures with the help of health related physical culture means.
Key words: students, learning-educational, harmful habits, computer games, physical culture, healthy life style.

Introduction

Entering the world educational space requires development of new educational standards, implying formation of communicative, personality, regulative and cognitive universal learning actions with active implementation of informational communicative educational technologies in educational process. It was found that at present in pedagogic psychology there is no sufficiently clear idea about computer games' influence on man and what individual-typological features of gamer are connected with his (her) computer activity and choice of game genre. As a result there are no programs of psychological maintenance of students, involved in computer games [5, 7, and 19].

In modern HEEs system of electronic resources exists and is developing. Students use it for fulfillment of additional tasks on curriculum subjects. But the same system provokes students for long term sitting at computer. Working with computer students spend much more time than it is required for fulfillment of their curriculum tasks. As per some opinions influence of electronic recourses on internet addiction and computer gambling can be minimal; modern students just are inclined to spend their time in the Net [3].

Special sector of study of man and informational technologies' interaction is connected with researches of computer addiction, which is interpreted as pathological passion to work or computer games.

Alongside with it information and computerized character of modern society is becoming still more global. As per the data of project "Internet in Russia/Russia in Internet" of fund "Public opinion", by quantity of users Russia is ahead of Australia, Spain, Italy, France, Great Britain and Brazil, taking the third place in the world. In period from 2002 to 2009 the quantity of Internet users in Russia had increased from 8% (8.7 million) to 36% (42 millionof people), and level of daily audience – from 2.1 million to 23.9 million of people. Thus, every third resident of Russia is an Internet user and every seventh attends Internet every day. Alongside with it the quantity of scientific researches, devoted to this addiction constantly growth. The content of these researches is presented from the point of different psychological directions and schools [20].

As on to day, our own researches [13, 14, 27, 32] about influence of study at HEE on students' computer addiction's ubiquity and strength showed that computer gambling has certain threats for students; distracts them from preparation to curriculum classes. Entertainment sites and computer games require a lot of time for passing

all game stages. Al these can result in weakening of educational level; in loss of concentration on important life values. To large extent computer is used by students as mean of entertainment and relaxation with the help of computer games. Students already can not give up computer games before preparation to curriculum classes with the help of Internet. It facilitates increase of ubiquity and strength of students' computer gambling. After long, involving and taking nearly all physical forces computer game, students have no forces and time for studying with the help of electronic resources. In some games students make experiments and develop their fantasy in computer game. It helps them in preparation for creative work in future professional functioning. But in most cases, all time is spent for computer games, giving no use for study and work.

Orzack M.H. outlined the following psychological symptoms of internet addiction and computer gambling: good self-feeling and euphoria with sitting at PC; absence of wish to stop; increase of time, spent at computer, no attention to family and friends; feeling of emptiness, irritability, appearing during any activity, not connected with computer; problems in study [31]. One of main symptoms of already formed internet addiction is complete absorption with Internet. As a result – demand in being in Net as much time as possible [24].

Studying in HEE with usage of electronic resources in reasonable frames can be considered to be normal usage of Internet. From the point of view of Davis R.A., sound Internet users have clear aim and spend reasonable and limited time for its achievement. They do not endure psychological or cognitive discomfort [26]. For them, Internet is only useful tool.

As a result of long term being in Internet, game activity is widely considered to be an important moment of young person's development.

Teperik R.F. and Zhukova M.A. note that disorders in communication with Internet addiction are manifested as deviations in emotional component, reduction of ability to feel partner's emotional state and to understand non verbal communication's aspects [22].

Modern education is not possible without the newest multi-media and interactive computer programs, without electronic storage media. Internet contains both cognitive and entertaining recourses. In this connection, to day scientists speak about internet addiction and computer gambling among students [1, 2, 3, and 9].

It should be also noted that with years students' interest to on-line games disappears and priorities change: school children are more involved in on-line games (15%), than students (5%). Electronic resources render minimal influence on appearing of internet addiction among students. It is connected with the fact that studying at HEE implies concentration of attention on required subjects and mastering of information.

Technical progress results in appearing of students' habits, which are dangerous for human physical and mental health and quickly progress in addictions. There appear habits, which are the so-called "technical drugs". They lead person to virtual reality from reality actual.

Many people spend most of their lives in front of screens of different electronic devises (TV set, PC, notebook and etc.). Long term watching of TV programs (news, shows, serials and so on), passion to computer entertaining technologies worsen eyesight, lead to physical inactivity, reduce workability, memory and attention; worsen person's emotional balance. In the worst case it results in computer or TV addiction. For example, comparatively not long age term "internet mania" appeared. It means internet addiction [13, 14].

For young people, who have not sufficient will power for resistance to addiction, monitor habits are especially dangerous. Study at modern HEEs to large extent is based on usage of computer informational technologies. Student is forced to use computer technologies to have progress in studying. Many students have no idea about safety measures, permitting to save health with it. If student spent his leisure time for "rest" with monitor, he can loose his health and progress in study, as well as success in future professional activity [13, 14].

In this connection study of computer harmful habits' ubiquity and creation of necessary educational technologies are an important task. Such technologies shall exclude appearing and expansion of harmful habits among students and their progressing in addictions.

Implementation of informational-computer technologies in HEE shall solve a number of tasks: optimization of educational process, increase of learning independence, preparation of comprehensively developed graduates. However, in practice, society faces with actual problem: with every day the quantity of people with computer addiction is increasing. For students, computer shall be a necessary electronic device for successful

studying but it is still a mean of communication and leisure. In this connection, students in their researches [3] and scientists speak about internet addiction problem [11, 14, and 18].

"Internet-addiction" is rather a wide term, which means a great number of problems of behavior and control over passions. One of such passions is on-line internet gambling. Conception "computer addiction" also includes computer gambling («Doom», «Quake», «Unreal» and other, strategies of «Star Craft» type, quests [24].

In Russia the problem of internet addiction has been studied only recent decade. For example, Babaeva Iu.D., and Vojskunskij A.E. [2, 10] worked out their criteria of such addiction. Mendelevich V.D. [18] outlined the types of internet addicted personalities. However, psychological characteristics of internet addicted students and the most effective directions to internet addiction's prophylaxis have been studied insufficiently [8]. More over, there are quite a few researches on internet addiction's prophylaxis among students by means of physical culture and sports [13, 14].

By results of questioning, realized by fund "Public opinion", prevailing group of internet users in Russia are young people of age from 18 to 24 years old, representing students. This group makes 48% from total number of internet users. Young generation takes internet as main mean of education and personal communication [20].

For long time Russia was out of the mentioned problem. But suddenly opened internet opportunities involved significant part of youth. Increase of Internet users' quantity of students' age, absence of complex measures of psychological prophylaxis resulted in growth of internet dependence and mass computer gambling [8].

Wide ubiquity of internet addiction in modern society proves demand in detection of addicted persons, in studying of their personalities' psychological characteristics and in working out effective prophylaxis measures as additional health related physical culture [15, 16, 18, 25] and sports [4, 6, 17, 30] trainings.

In foreign countries the problem of internet addiction has been studied for more than 20 years. The quantity of scientific researches, devoted to this problem, constantly increases. They describe the problem from the point of different psychological approaches and schools. American psychologist Iang K.S. [24] noted main pre conditions; a stage of this addiction's progressing; he also offered diagnostic criteria of such addiction. He worked out three-level mode, explaining passion to internet using [24, 28]. Orzack M.H. [31] marked out physical and psychological symptoms, characteristic for internet addiction. Grifiggs M. [29] regarded possibility of internet addiction's formation on the base of other additions. Davis R.A. [26] offered cognitive-behavioral model of pathological Internet usage [8].
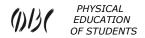
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It should be noted that owing to a number of reasons students are the main internet users. Just in this group of population the risk of internet addiction is the highest. Constant demand in information, high cognitive motivation, high social activity and deficit of time form from students the main group of internet users.

In the course of our research we found certain main contradictions between significant prevalence (48%) of students-internet users (from 18 to 24 years' age) and absence of researches on detection of internet addicted or computer games' persons among them. Besides there is non coincidence between increasing of internet addicted users of students' age and absence of prophylaxis measures by means of physical culture and sports.

Passion to computer games is often regarded by students as threat for development of personality. When students become actual gamers they move aside from understanding of demand to spend time for studying or sports. Gamers often take the role of game character and it often can have negative results. It is often connected with their identification of themselves with negative game heroes. For computer games' addicted persons it is of special interest to involve in virtual life. With it, computer addiction appears, accompanied by insomnia and irritability.

The purpose of the research: to clear up effectiveness of HEE educational process in struggle with computer gaming and to substantiate appropriate tasks for departments and faculties of physical education.

The task of the research is to analyze changes in ubiquity and strength of students' passion to computer games in process of their study at HEE as well as to work out practical recommendations for prophylaxis of such habits with the help of physical culture and sports practicing.

Material and methods

Participants: 1st-3rd year students from Krasnoyarsk were the object of our researches. All they studied "Physical culture" discipline for main health group. In total 952 boys and 523 girls of 1st-3rd year participated in the research.

Organization of the research: In the research we used questioning. The questioning was carried out among 1st year students at the beginning of academic year and among 1st-3rd year students – at the end of academic year. The students were offered to point quantity of hours, spent during one day on computer games and to assess the strength of this habit before entering HEE and in the period of questioning by 10-points scale.

The used by us method of questioning was a subjective one and could not give objective data on the studied problem. Its results depend on many factors: how student can feel duration of time; how strong their motives for actions are; how strong their habits are. Not all of students have sufficiently developed self-consciousness. Besides, not all students have sufficient motivation for giving diligent answers. In our research we rejected the questionnaires, in which we found obvious contradictions in answers to different questions. Besides, we did not consider assessments, in which only 2-3 points were used for estimation of different habits' strength. It illustrated that student did not want to think about objective assessment. May be because of bad knowledge of him. Thus, the data, received by us can be related only to the most advanced students, who have high feeling of responsibility and developed self-consciousness. It is rather probable that students, who have the strongest computer games' addiction, did not participate in the questioning. The questioning gives rather objective data on dynamic of strength of habit to computer games and permits to make well grounded conclusions about effectiveness of HEE educational process in struggle with this bad habit. Besides, just the students with high feeling of responsibility and self-consciousness will successfully graduate from HEE and become highly qualified specialists in different branches. That is why it is important to study dynamic of changes in personality exactly of these students.

Statistical analysis: statistical processing of questioning results included the following: 1) calculation of percentage of addicted students; 2) calculation of percentage of students with dangerously strong habit (7–10 points) and weak habit (1 – 3 points, i.e. not dangerous for transformation in addiction); 5) calculation of percentage of with weakened or increased habit as well as students, who gave up the habit or gave way to this habit during studying; 6) assessment of confidence by Student's t-criterion (with level of significance not less than 0.05). The received data were processed with the help of statistical functions of Microsoft Excel.

Results of the research

Main results of students' questioning are given in tables 1–3. The questioning showed that boy students spend on computer games much more time than girl students (see table 1). Among boys ubiquity of this habit is higher than among girls (see tables 1, 2). At the end of academic year ubiquity of computer games habit is noticeably lower than at the beginning among boys. However, at the 2nd year of studying it grows to initial level. At the end of 1st – 3rd year 20 – 25% of boys spend on this habit more than two hours a day. It is dangerous for their physical and mental health.

HEE educational process is not sufficiently effective in struggle with computer games habit among 2nd – 3rd year students as well as in reduction of addiction danger among 1st and 2nd year students.

Table 1. Distribution of students by time losses (hour/day), connected with computer games

Year, sex	N*	Mean Hour/day	No, %	< 1 ,%	1–2,%	2–4,%	> 4 ,%
Male, beginning	217	1.8 ± 0.1	20	24	23	23	11
Female, beginning	185	0.5 ± 0.1	69	16	8	5	3
1m*	465	1.3 ± 0.1	30	30	22	10	9

Year, sex	N*	Mean Hour/day	No, %	< 1 ,%	1–2,%	2–4,%	> 4 ,%
2m	122	1.7 ± 0.2	20	30	25	12	13
3m	146	1.3 ± 0.1	18	36	25	14	5
1f	198	0.6 ± 0.1	55	31	6	5	4
2f	114	0.4 ± 0.1	58	32	4	2	2
3f	106	0.4 ± 0.1	52	36	8	4	0

Notes: N –total volume of sample; Male, beginning, Female, beginning – boy and girl students, questioned at the beginning of 1st year; 1m, 2m, 3m, 1f, 2f, 3f – boy and girl students, questioned at the end of 1st, 2nd and 3rd years.

Table 2. Ubiquity of students' computer games habits and their strength

Characteristics	Male, beginning	Female, beginning	1m	2m	3m	1f	2f	3f
Total, %	80	31	70	80	82	45	42	48
7 – 10 points, %	19	14	30	40	19	21	24	13
1-3 points, %	45	64	38	28	45	68	60	75
N1*	174	58	327	98	119	89	48	51

Notes: N1 – volume of samples of students, who have computer games habits.

Among girl students ubiquity of this habit is much higher than at the beginning of studying. Next years it does not change. If at the beginning of studying at HEE every third girl played computer games then, at the end of academic year it was every second. However, most of girls spend less than one hour a day for computer games at the end of academic year. It means that for girls this habit is not dangerous. It is proved by the fact that 25% of girls assess the strength of this habit as 7-10 points at the end of academic year (see table 2). It can be regarded as addiction. But most of girls regard their habit as weak (1-3 points by 10 points' scale, see table 2).

Table 3. Dynamic of students' computer games' strength in HEE (volumes of samples N1, see table 2)
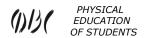
Indicators	1m	2m	3m	1f	2f	3f
Increase of habit's strength, 0–10 points	−1.4 ± 0.2	−1.7 ± 0.3	−1.9 ± 0.3	−1.4 ± 0.4	−1.6 ± 0.5	−1.7 ± 0.3
Habit's weakening, %	52	55	63	56	65	69
Habits' increase, %	12	7	10	17	11	4
Gave up the habit, %	16	11	21	29	32	53
Gave way to habit, %	1	1	2	3	3	0

During studying at HEE the strength of habit reduces in all students, independent on sex: ion 3rd year boys – to larger extent than in 1st year boys, with significant difference. Percentages of such students increase with increase of studying period in HEE (Students of both sexes) for 3rd year students they are higher than for 1st year students). Among 3rd year girl students more than half gave up computer games habit. Their share is much higher than among 1st and 3rd year girl students.

Discussion

Analysis of the research's results and special literature showed the presence of tendency, connected with students' involuntary involvement in internet addiction and computer gambling. It is resulted from certain influence of peculiarities of modern educational system, using electronic recourses. It proved our assumptions about the presence of such problem.

On the base of our research's results we worked out practical prophylaxis recommendations for teachers, aimed to students' distraction from such habits with the help of more useful practices of physical culture and sports. Such trainings are recommended to be realized in the following directions:

1. Everyday analysis of approaches to prophylaxis of addicted behavior, connected with computer gambling. It serves as psychological prophylaxis of further expansion of this harmful habit. As a result student will be more informed about the following: mechanisms of computer gambling's influence on personality, mechanisms of the habits' progressing, methods of personal self-assessment, after effects of long term playing computer games.

2. Work out principles of correct behavior, connected with computer usage in academic classes, and recommend them.

3. Facilitate development of individual system of resistance to negative after-effects, connected with students' passion to computer games.

4. Form motivation for healthy life style.

5. Facilitated familiarization with alternative, more useful students' activity.

6. Realize measures for prophylaxis of students' internet addiction and computer gambling as well as to help them in their social-moral recovery. It is necessary to create conditions for formation of demand in healthy life style and practicing of physical culture and sports in this group of students.

7. Teach students to understand and realize what happens with man under progressing of computer gambling.

8. Organize support of students, who are games addicted. Provide required assistance in overcoming of depression and anxiety.

9. Social adaptation of students to resistance to negative influence of computer addiction and form vitally important skills of taking decisions on healthy life style's practicing.

10. Ensure positive emotional background at curriculum classes on physical culture and on trainings in sports circles and competitions.

In our substantiation of practical recommendations we based on the received by us results of our own researches [13, 14, 27, and 31]. Besides, we based on assumption that computer addiction can appear as a result of long term playing computer games and certain personal conditions: for example, when relation to own game level is connected with personal life status as well as with possibility to pass all game levels through certain kind of meditation.

Penetration in virtual world does not permit to return to reading books. Computer civilization with helmet, glasses, key board and joystick involves minds of youth. In virtual world of two or multi side communication young people create their own virtual world independently. Team game is a mean of a kind of life, a mean to pass away from uncontrolled reality. In their virtual reality every young person is sure that he is a winner. It is exactly the danger of computer addiction.

Formation of computer addiction is influenced by psycho-emotional factors. Virtual world is inevitable and it is a reality. Students shall be trained to adapt to such reality. New opportunities of education are inevitably connected with computer usage, as well as electronic recourses and internet. Fatigue after curriculum classes is compensated by the so-called "virtual pillow", which can help to avoid difficulties of studying, work and life in general. Just in computer games student's personality reaches unprecedented heights in own self assessment of own potentials. Sometimes it is strengthened by material stimuli as money prize for victory in computer game. It can result in the highest degree of computer game addiction.

The task of modern HEE teacher is not to admit mass escape to virtual world of computer games, when practicing curriculum classes with internet usage. Mass escape to multi media world has not been possible yet. However it is important not to reduce total computerization of HEE education to absurdity. It is necessary to use computers reasonably, without progressing of bad habits, internet addiction; computer gambling and audio-visual addiction.

In opinion of Sokhan' L.V. "human way of life is a system of stable, typical for the given social demographic group means, forms and kinds of life activity". It is a peculiar picture of how young people live in conditions of their social historic being. As per prognosis of a number of scientists, the quantity of students, related to special health group can reach 50% from total quantity. Unfortunately this trend will preserve in the nearest 10–15 years. In this case total losses of work power will be more than 10 million people in 2006–2015 (in average 1

million every year). At stage of students' period healthy life style is the most important social factor, enduring all levels of modern society. It influences on main spheres of society's life [21].

HEE physical culture departments shall implement new forms of computer addiction's prophylaxis. Physical culture instructors shall have new attitude to creation of motivations and conditions for healthy life style. If youth will be instilled with sports practicing, all acute problems (drugs addiction, alcoholism, internet addiction, computer gambling) will also be solved. The main components shall be motor functioning, rational eating, giving up harmful habits, general hygiene, hardening, giving up long term working with computer.

Students' satisfaction with health state is much higher, when practicing sports actively. It also strengthens resistance to harmful computer habits. We can state that in respect to students' and youth's health there still exist deficit of information about harmful habits (including computer addiction). It is connected with deficit of medical statistic of their indicators. Such situation is conditioned by the fact that student's way of life is pre determined by its contradictory position in society.

In teacher's reasonable professional functioning it is necessary to keep balance in usage of time for fulfillment of electronic tasks. It is important not to give students any chance to distract for entertaining sites or games. It is very important to use achievements in computer sphere without any harm for health and psyche; to distract from harmful computer habits by means of physical culture. Our own researches [12, 13, and 14] were devoted to recreation and preservation of youth's health on the base of physical exercises and healthy life style. As prophylaxis of computer addiction it is very important to use sports practicing. It is proved by many other researches [4, 6, 14, and 16].

From general postulates of morality, peculiar virtual ethic principles in computer world outcome. During curriculum classes with electronic recourses teachers can orient students for certain ethic values and develop their correct understanding of good and evil.
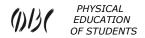
Social virtual world influences on virtual values, formed in students. In computer games propaganda of healthy life style can be built in as well as importance of sports practicing. It is necessary to find such games, which would lead students to sports circles and real sports practicing. Young man shall be facilitated to transform from strong and successful in virtual world into physically strong person in real world. Thus, computer games will render positive social effect: motivate youth for active life style. Computer games shall facilitate increase of students' motor functioning, no matter how paradoxically it is. Our morality has not been yet adapted to virtual world.

In our opinion the following key moment is of extreme importance: modern HEE education shall use computers and interest to computer games in positive sense [11, 23]. Besides, it shall direct the wish to long term work with computer in required by society direction.

Thus, the content of health related physical education can imply a number of knowledge and skills, which shall be mastered by students with prevailing orientation on health related, generally developing and sport-recreational tasks; on independent overcoming of computer addiction. The priority attention shall be paid to formation of physical, psychic and social-moral health; to personality-oriented approach in system of individual choice of physical culture activity's means for overcoming of computer addiction. It is very important to use physical culture instructors so that to use knowledge and physical culture means for students with different degree of computer addiction.

Conclusions

1. In order to increase HEE educational process's effectiveness in health improvement of students' way of life it is necessary to detect and consider personal features of boy students. These features are risk factors of computer addiction.

2. The work of physical culture and sports faculties results in some reduction of computer addiction probability in students.

3. Physical culture and sports faculties and departments shall take additional measures on students' health improvement for reduction of computer addiction's ubiquity. Organized and independent physical culture trainings can facilitate it.

4. For HEE teaches it is necessary to do all the best for change of students' attitude to own health and way of life. Besides, it is necessary to instill students with positive attitude to reading, art and sports. It permits to eradicate harmful habits, including computer addiction.

5. Teachers shall organize curriculum classes with electronic recourses so that not to provoke progressing of students' computer addiction.

Conflict of interests

The author declares that there is no conflict of interests.

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