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# Internet-Addiction of Adolescents: Diagnostic Problems and Pedagogical Prevention in the Educational Environment

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#### **ABSTRACT**

The relevance of the study is due to the emergence of new Internet-addictive strategies of behavior among adolescents. The use of existing of psychodiagnostic of methods on revealing behavioral addictions children and adolescents from the virtual space does not give valid results. This leads to uncontrolled development in the teenage years mechanism of pathological addictive behavior on the basis of which can then easily be navigated to chemical addictions (smoking, alcoholism, drug addiction). Despite the seemingly harmlessness of internet addiction, they became the first step in the addiction personality and pose a threat to state security. The purpose of this article is to explore the possibilities of psychodiagnostics Internet-addictive behavior among pupils, as well as the need to update pedagogical prevention of addictive behavior in the educational environment. The leading method of the research is the analysis of psycho-pedagogical literature and legal acts in the field of prevention of addictive behavior, psychodiagnostic methods. In the article, there is an attempt to justify the need for increasing a conceptual model of coping prevention for all types of addictive behavior. It is shown that at the stage of pedagogical prevention it does not make sense to develop various programs of prevention of drug using, nicotine, smoking blends, alcohol, gaming and Internet addictions. The single purpose of preventive educational activities is the formation of adaptive coping strategies and coping resources of adolescents and young people that are at the heart of personality's resilience. Results of the study showed that the method for the diagnosis of Internet addiction does not detect those adolescents who already have symptoms of adaptation disorder. They were discovered by us on the basis of a study of strategies of coping behavior of pupils.

**Keywords:** Internet-addiction, pedagogical prevention, addictive behavior, resilience of a personality, coping strategies, personality resources

#### State of the literature

- Diagnostics of Internet addiction is carried out on the basis of specially developed methods, which are based
  on direct questions on the identification of psychological signs of this type of addiction, however, the
  practice shows that adolescents are trying to hide from the surrounding the fact of being on the Internet,
  often they do not realize the amount of time spent on the net, which makes the diagnostic results unreliable.
- The topics of the use of the unified coping prevention model for all types of addictions simultaneously has
  been studied little, as the prevention of Internet addiction is carried out as a separate area of preventive
  pedagogical activity, which reduces its effectiveness significantly.
- The majority of the research on the prevention of Internet addiction is based on the informational approach, which suggests the expansion of adolescents' knowledge in this area and does not rely on the development of personal resources and the resilience of schoolchildren.

#### Contribution of this paper to the literature

- It is proposed to use a conceptual theoretical model of coping prevention dependence on psychoactive substances to prevent any kind of addictive behavior in a teenage environment.
- Psychodiagnosis of Internet addiction should be based on studying models of coping behavior of adolescents and analyzing the level of development of their personal resources.
- The program of forming the resilience of an individual based on the development of adaptive coping strategies of adolescents and their coping resources is used in the preventive pedagogical activity with the adolescent school children.

#### INTRODUCTION

#### Relevance of the Problem

Today teenagers are the most active Internet users who widely use possibilities of modern gadgets. They very often choose addictive behavior strategy for problems solution, the range of which has expanded considerably. This is due to the increase in the number of Internet-addictive among children and youth.

Under addictive, C. P. Korolenko & T. A. Donskih (1990) understood the behavior in which a person has the desire to escape from reality by artificial changes in the midst of his mental state by taking certain substances or long-term fixation of attention on certain activities in order to obtain intense emotions, particularly pleasure. The authors pointed out, therefore, on the existence of not only chemical (smoking, alcoholism, drug addiction, substance abuse), but also non-chemical (gambling, workaholism, fanaticism, and others.) types of addictions. Scientists noted that the growth of deviant behavior in virtual reality contributed to the phenomenon of anonymity and lack of established general laws and norms of behavior in cyberspace. This facilitated the feasibility of known types of deviations (aggression, sexuality, communication and other addictions.) without fear of liability engagement and receiving punishment (Korolenko, 2012; Mendelevich, 2013; Ozkan & Yildirim, 2016; Kamalova & Raykova, 2016; Vlasova, Kirilova & Curteva, 2016). However, the Internet promoted the development of new forms of addictive behavior: 1) computer addiction; 2) net compulsions; 3) information overload; 4) cybersexual addiction; 5) cyber-relation addiction. The latter is shown depending on communication in social networks, forums, chats, group games and teleconferences that leads to the replacement of real family members and friends for the virtual (Young, 2000).

# **Explore Importance of the Problem**

According to A. Yu. Egorov (2005), the phenomenon of Internet-addiction refers to a group of behavioral addictions (gaming, sex, love, communication, etc.), and the Internet is only the most affordable and easiest means of their implementation, rather than the object itself. The author calls them behavioral because the object of addiction becomes the behavioral pattern, but not a psychoactive substance.

However, V. D. Mendelevich (2003), developing the concept of an addictive person, considers the relationship as a personal quality that is at the heart of the establishment of any form of addictive behavior. The author notes, that it is impossible to distinguish fundamental differences and specific personality or character traits that predispose to alcoholism, smoking, drug addiction or overvalued fascination with gambling, virtual reality (internet). The scientist talks about the existence of basic characteristics of addicted individuals, which are common to all forms of addictive behavior. As the addictive personality V. D. Mendelevich (2003) highlights the infantilism that appears at Internet-addiction to search for comfort and satisfaction out of the real world. As the essential characteristic of a personality, prone to addictive behavior, out of personality disorder the scientist considers suggestibility and imitation, prognostic incompetence, rigidity and stubbornness, naivety, curiosity and search activity, perfectionism, self-centeredness, the brightness of the imagination, impatience, risk tolerance and "taste of danger", and the fear of loneliness.

According to ICD-10 (1994) the versatile features of any addictive syndrome, including internet-addiction, can include six components: 1) expressed need for fixing the attention on communicating in chat rooms, social networks, computer games; 2) violation of the ability to control the start and the end of the session and time spent on the network; 3) a physiological withdrawal state when it is impossible to access the Internet, check e-mail; 4) evidence of tolerance (habituation) and the constant increase in working time in the virtual space; 5) progressive neglect of alternative interests in real life; 6) continue to carry out activities, in spite of the obvious harmful effects.

Thus, V. D. Mendelevich & R. G. Sadykova (2003) argue that there is a single universal mechanism of pathological addictive behavior. The formation process of a specific type of addictive behavior (drugs, gambling, food, sex, cybercommunicative) is mostly spontaneous. Addictive personality is a frame with strung-based fetishes. This may explain the comorbidity of some forms of addiction when some species of addictions of a personality are easily transferred to others or coexist.

The study of this problem in narcology and psychology plays an important role to address the issue of the content of the primary pedagogical prevention of addictive behavior in the educational environment. Obtained under the direction of V. D. Mendelevich (2003, 2013) results give us the right to assume that today's stage of pedagogical prevention does not make sense to develop various programs of prevention of drug, nicotine, smoking blends, alcohol, gaming and Internet addictions. The single purpose of preventive pedagogical activities becomes the formation of adaptive coping strategies and coping resources of a person of teenagers and young people that are at the heart of personality's resilience (Kirillova & Shubnikova, 2012; Egorov & Golenkov, 2005; Asadullin et al., 2016).

The value of personal resources and the adaptive strategies of coping behavior for preventing of Internetaddiction is confirmed by research of psychologists and narcologists. V. A. Loskutova (2004) notes that for the majority of patients with Internet-addiction it is characterized by a «failure complex» (low self-esteem, dissatisfaction with yourself), immaturity, egocentricity, lack of responsibility, a low level of communicative and self-regulation in the real life. A. Yu. Egorov et al. (2005) found that Internet-addicted adolescents are characterized by problems with communication, loneliness, low self-esteem, tendency to avoid problems and responsibility for their behavior, leaving for the virtual world from oneself and problems in real life. The authors note that these personal characteristics contribute to the involvement in Internet-addiction, being risk factors for social exclusion and contribute to the transition in the chemical addictions. M. I. Drepa (2010), N. V. Dmitrieva & O. V. Dubrovina (2010) point out that the prerequisites for the development of a virtual addiction is a partial resolution of the identity crisis that manifests itself in the conflict between self-identity and offered social roles (infantilism) as well as the intimacy crisis with the leaving for psychological isolation. V. L. Malygin (2010) and V. L. Malygin et al. (2011) as the main features of Internet-addiction define the following: the impossibility of subjective control over their activities in the virtual space; signs of maladjustment, which are manifested in violations of interpersonal relationships, health, work and study in the real life. In addition, the author points out that adolescents with Internet-addiction are characterized by helplessness, the inability to cope with life's difficulties, they have signs of alexithymia, the lack of development of communication skills, disturbed perception of bodily aspect of the individual self. A. Weinstein (2015) clearly indicates that adolescents with Internet-addiction use ineffective coping strategies with difficult life situations, they often reveal problems in interpersonal communication. Internet-addiction can be seen as leaving (avoiding) solving the problems of life, and from oneself.

In our opinion, it is necessary to expand the conceptual theoretical model of coping prevention of psychoactive substances addiction, developed by N. A. Sirota & V. M. Yaltonsky (2003). Although initially it was designated as a conceptual model of coping psychoprophylaxis of adolescents' psychosocial disorders (Sirota & Yaltonsky, 2001). This model can be used to prevent any kind of addictive behavior among adolescents.

Expansion of the coping prevention model for all types of addiction allows us not to disperse its efforts on certain areas of prevention (drug addiction, alcoholism, smoking, internet-addiction, gambling) and to achieve a high degree of efficiency of pedagogical prevention of addictive behavior in the educational environment on the basis of the formation of the teenagers' resilience (Shubnikova, 2013).

#### Literature Review

There is a need for the development of the Internet addiction psychodiagnosis content as a form of addictive behavior. A. Weinstein (2015) notes that the procedure for the Internet-addiction diagnosis are modified questionnaires for the detection of a substance addiction.

However, the problem lies in the fact that, in response to direct questions, people often hide their addictions, give socially desirable answers. The same situation exists when examining adolescents' notorious questionnaire «Do you smoke? ». More than once it is shown that the effectiveness of such a diagnosis is negligible. Even I. N. Pyatnitskaya (1995) in her review of the development of drug addiction in the past and present wrote that the surveys, questionnaires do not provide reliable results, and the obtained results do not correspond to the real situation.

Today in Russia, one can use surveys to psychodiagnose teenagers for Internet-addiction: test «Internet-addiction» by K. Young (2000), «Test by K. Young for Internet-addiction» adapted by V. A. Burovaya (Loskutova, 2004), «Scale of Internet-addiction by Chen» adapted by V. L. Malygin & K. A. Feklistov (2011) and others. They all represent a certain set of questions to which respondents were asked to answer.

The reliability of the results doubts again. Let's pay attention to the signs of Internet-addiction described by the scientists. K. Young (2000) refers to these symptoms: passion for the Internet based on changes in your mood; the difficulty of interpersonal communication in real life (family, school, friends); the need to conduct in the virtual space more and more time; time management problems; a lie about the time spent on the network.

M. Orzak (1998) considers euphoria while in the virtual space as psychological symptoms of Internet-addiction; neglect of the same passions; violation of emotional communication with friends and relatives; a sense of meaninglessness, irritability during activities not related to the Internet, and in consequence, the deterioration of the results of learning and work in real life; inability to control the amount of time spent on the Internet; desire to lie to relatives about the network time and visited sites.

So, there is a contradiction: on the one hand, scientists have concluded that people with Internet-addiction are losing control over the time they spend in virtual reality, and, on the other hand, in each of these questionnaires questions about the amount of time spent on the network are highlighted:

- Do you often notice that you spend more time online than you intended?
- Do you try to hide the amount of time you spend on the web?
- Do you say to yourself: "Just a minute", sitting on the network? (Young, 2000);
- Is the time increased for searching on the net?
- Do you spend online more than 3 hours a day? (Loskutova, 2004);
- I notice that more and more time I began to spend on the web;
- I'm staying online for a longer period of time than intended, although I had planned to just "check for a minute":
- Over the last 6 months I have spent a lot more time on the network;

- I try to spend less time on the Internet but unsuccessfully (Malygin, 2011).

That is, the time spent on the network, is one of the characteristic signs of Internet-addiction, but teenagers often do not track the period of being in the virtual space, therefore, they cannot say precisely how many hours they were online. After all, the network time flows in a different way and also brings pleasure.

However, there is another point on which we would like to draw attention. V. A. Loskutova (2004) notes that Internet-addicts, for that matter, and other persons who are prone to other addictions, usually take a defensive position and hide from others, friends, family members the amount of time spent on the web, and what they are doing and what sites they visit. They are afraid of condemnation of addictive implementation a nd realize their actions are not socially approved. Criticality assessment of addicts for their behavior decreased or eliminated. K. Young (2015) herself noted that patients in the early stages of treatment deny or try to minimize the problem of Internet-abuse, cannot fully appreciate the consequences that they can cause in real life.

Thus, we believe it is important to conclude that Internet-addiction psychodiagnostics based on the tests and surveys cannot be considered fully reliable. Moreover, these diagnostic tools, because of psychological features of the age, cannot always be used for adolescents. Following the conceptual model of coping prevention of addictive behavior in the educational environment, the framework of psychodiagnostics should be based on the study of coping behavior of adolescents and the level of development of their personal resources, which are the factors of protection against all types of addictive behavior.

# **Analysis of Foreign Researchers**

Internet addiction studies have been conducted for more than 20 years abroad. The first to describe the signs of Internet addiction as a new mental disorder was Young K.S. (1996) in 1996. She was one of the first to compare the Internet addiction with other syndromes and determined that the symptoms of the problem use of the Internet are similar to the criteria for identifying other addictions. They are the following: excessive passion for the Internet, obsessive need to increase the time spent in the net and loss of the behavior control, fatigue and stress in the absence of Internet access, disruption of relationships with surrounding people, problems in the family and at work, stress relief using the Internet. The presence of five of the eight signs indicates the presence of addictive behavior.

M.D. Griffiths (2005) considers the Internet addiction to be a form of behavior addiction. The scientist proposed a model of components peculiar to any kind of dependence: salience, mood modification, tolerance, withdrawal symptoms, conflict with others and with oneself and relapse.

Today a lot of terms are introduced in the field of research of this phenomenon, such as Internet addiction, Internet dependency, Internet abuse, compulsive Internet use, pathological Internet use, problematic or disturbed Internet use. A great number of terms cause a variety of approaches to the consideration of the phenomenon, until now the study of its causes; diagnostic criteria for revealing are still investigated (Tao, Huang & Wang, 2010).

The attempts to understand the nature and causes of Internet addiction have changed the vector of foreign psychological research. In recent years, they are aimed at the revealing of the relationship of Internet addiction and personal characteristics of adolescents and adults.

B.K. Wiederhold (2016) conducted an analysis of research works in which the correlation between the Internet addiction and self-esteem, depression, and helplessness of adolescents in different countries was revealed.

E. Andreou & H. Slovi (2013) has surveyed 384 teenagers from the age of 15 to 18 and found out that the most significant predictors of Internet addiction are the external locus of control, depression and the amount of time spent on the net.

The research conducted by A. Akin & M. Iskender (2011) showed that internal academic locus of control was predicted positively by social self-efficacy. Also, Internet addiction was explained negatively by social self-efficacy and internal academic locus of control and positively by external academic locus of control.

M.L. McNicol & E.B. Thorsteinsson (2017) tried to identify the relationship between styles of coping behavior and Internet addiction. Adolescents in the nonproblem Internet user group had lower rumination and higher selfcare than adolescents in the problematic and addicted group.

The research of L. Milani, D. Osualdella & P. Di Blasio (2009) has allowed to confirm that there is a relationship between the problematic use of the Internet by adolescents and dysfunctional strategies of their behavior. In addition, they have shown the problems in the field of interpersonal relationships.

D. Kardefelt-Winther (2014) remarks that despite the large number of conducted studies, they have not yet led to a qualitative result and a unified position in the consideration of Internet addiction. The scientist has developed a model of a compensatory use of the Internet. The essence of this model is to justify the fact that people go online to cope with difficult life situations and relieve tension.

As practically all researchers note, the absence of a theoretical justification of the reasons and many existing approaches to understanding Internet addiction reduce the effectiveness of its prevention and treatment in children and adults.

#### MATERIALS AND METHODS

#### **Research Methods**

To test the hypothesis and solve research problems we used a complex of mutually complementary methods: 1) theoretical - analysis of the literature, normative and legislative acts in the field of pro-prevention, study and generalization of innovative pedagogical experience, classification, analysis, synthesis, etc.; 2) empiric - pedagogical supervision; psychodiagnostic methods, socio-psychological training.

#### **Psychodiagnostic Methods**

For psychodiagnosis addictive behavior of adolescents we used the test «Internet addiction» K. Young (2000). The purpose of the method is the identification of three levels of human interaction with the Internet: 1) not addictive behavior – high level of control over their activities in the virtual space; 2) the average level of addictive behavior begin to appear some problems associated with the excessive enthusiasm of the world wide web, reduced control over them; 3) addictive behavior – the loss of control over their actions on the Internet, the emergence due to this significant social and personal problems that manifest in maladjustment of the person. Also we used the method «Coping Inventory for Stressful Situations (CISS) of by N. Endler and D. Parker (1990) (adapted variant by T. L. Kryukova, 2007). This methodology is designed to determine the dominant coping strategies and models of coping behavior.

#### **Experimental Research Base**

Our experimental work was carried out at school № 12 in Cheboksary City, the Chuvash Republic of Russia. 120 teenagers of the 7-8th grade (the average age - 13-15 years) took part in it.

## Stages of the Research

The study was conducted in three stages:

- At the stage of the ascertaining experiment the psychodiagnostics of Internet-addiction level of adolescents was carried out and the model of their coping behavior; we analyzed the results;
- At the stage of the forming experiment a program of pedagogical prevention of addictive behavior on the basis of the formation of the teenagers' resilience was developed and implemented;
- At the stage of the control experiment the psychodiagnostics of Internet-addiction and model of coping behavior of adolescents was again carried out; a comparative analysis of the results of the ascertaining and control experiments; conclusions of the study were made.

#### RESULTS

## The Ascertaining Experiment

An experimental study was at school № 12 in Cheboksary. The study involved 120 teenagers of the 7-8th grade at the age of 13-15. Selection of the class was made based on the comments of parents and the class teacher about the enthusiasm of schoolchildren for social networks and other Internet resources.

In the first stage of the study, we used the «Internet-addiction» test by K. Young (2000). Processing of K. Young's test results has shown that in the class there are 66 pupils (55%) who are able to control themselves while Internet surfing, 54 pupils (45%) have some problems associated with excessive Internet-addiction, and none of the teenagers with high level of Internet-addiction that can cause significant problems in human life.

The results can be explained by the following reasons: first, perhaps among surveyed teens there are those who have fully formed Internet-addiction, because for the detection of this level one should answer to all 20 test questions "yes, often", on the other hand, adolescents may not fully appreciate the problem, since losing control of time, and underestimate the problems encountered in real life.

Then we held the method «Coping Inventory for Stressful Situations (CISS)» (adapted variant of N. Endler and D. Parker by T. L. Kryukova) (Kryukova, 2007). This method is designed to determine the dominant behavioral coping strategies. After analyzing and comparing the results, it was found that 24 teenagers (20%) have a model of adaptive coping behavior. They are characterized by a balanced use of age-appropriate coping strategies, with a predominance of motivation to achieve success on the motivation of avoiding failure and readiness to actively confront environment. 72 pupils in the class (60%) use the model of pseudoadaptive coping behavior. These pupils use both passive and active basic coping strategies. They often turn for the help of relatives in problematic situations, looking for support from others. 24 teenagers in the class (20%) have a model of dezadaptive coping behaviors. These children are more likely to use passive coping strategies than active. They are not prepared to actively confront the environment; there is a domination of the motivation of avoiding failure, a negative attitude to the problem treating it as a threat; the protective nature of the behavior. As the main coping strategy there is «Avoidance». The last two categories of adolescents are at risk because they do not know how to solve their own problems, avoid those solutions that can lead to addictive behavior.

Comparative characteristics of the results shows that according to the test «Internet-addiction» there are 54 teenagers who are at risk of Internet-addiction. However, analysis of coping behavior strategies of this class indicates that there are more adolescents with pseudoadaptive and dezadaptive models of coping behavior (96 pupils). That is, in the class there are adolescents who have symptoms of addictive personality, but we were not able to identify them by the test «Internet-addiction». Apparently, either a different kind of addictive behavior is developing, or they hide or control features of their behavior in virtual reality.

#### The Forming Experiment

On the basis of the results we developed a program of adolescent personality resilience formation. Prevention program of Internet-addictive behavior consists of training sessions aimed at creating an adaptive coping model, increased personal resources. With the teenagers were held lessons on the following topics: «Strategies for of overcoming difficult life situations», «The training problem resolution and decision making», «The structure of my personality», «The attitude to itself, self-esteem, personal growth and development. The value of personality», «The concept of the meaning of life and personal values. Setting goals in life», «Formation of skills of self-care and protection of the Self», «Self-confidence», «The skills of self-regulation and control their emotions», «The development of communication skills and conflict resolution» and others (Shubnikova, 2015).

**Table 1.** Results of diagnostics of level of Internet addiction of adolescents before and after forming experiment, %

Levels	Before the experiment	After the experiment
Not addictive behavior	55,0	80,0
Average level of addictive behavior	45,0	20,0
Addictive behavior	0	0

Table 2. Results of diagnostic models coping behavior of adolescents before and after forming experiment, %

Models coping behavior	Before the experiment	After the experiment
Adaptive	20,0	40,0
Pseudoadaptive	60,0	45,0
Dezadaptive	20,0	15,0

# **Experimental Verification of the Effectiveness of Pedagogical Prevention Program of Internet-Addiction**

At the control experiment, we used again the «Internet-addiction» test by K. Young (2000). Analysis of test results showed that in the class the number of teenagers has increased who are able to control themselves while Internet surfing, up to 96 pupils (80%). The number of adolescents decreased who have problems with excessive Internet-addiction, up to 24 teenagers (20%) (**Table 1**). None of them have high-level of Internet-addiction as it causes significant problems in human life.

Then we held the method «Coping Inventory for Stressful Situations (CISS) » (adapted variant of N. Endler and D. Parker (1990) by T. L. Kryukova) (Kryukova, 2007). After analyzing and comparing the results, it was found that 48 pupils (40%) have a model of adaptive coping behavior. 54 teenagers in the class (45%) have a model of pseudoadaptive coping behavior. 18 pupils in the class (15%) have a model of dezadaptive coping behavior (**Table 2**). The last two categories of adolescents are at risk because they do not know how to solve problems, avoid those solutions that can lead to addictive behavior.

Comparative characteristics of the results shows that the test «Internet-addiction» by K. Young (2000) identified 24 teenagers who are at risk of Internet-addiction. However, the analysis of coping behavior strategies of this class shows that the level of pseudoadaptation and dezadaptation is much wider. The number of teenagers with pseudoadaptive and dezadaptive models of behavior has decreased after the program, up to 72 (60%). They are at risk and in need of further psychological and educational assistance.

#### **DISCUSSIONS**

We have analyzed the methods and forms of work that are being offered by scientists to prevent and treat Internet-addiction. The study of V. A. Loskutova (2004) shows that we should not only be limited to elimination of this type of Internet-addiction correction. The objectives of the treatment of people with Internet-addiction are self-esteem and self-identity increasing, increasing of subjective control level, communication, social adaptation. M. I. Drepa (2010) offered to introduce students to the concept, causes and mechanisms of development, clinical signs of Internet-addiction. Beside this, A. A. Antonenko (2014) represented to young people the using of the virtual space, a portrait of Internet-addict, discussed the features and problems of gamers with them. The inefficiency of the information approach has repeatedly been shown in scientific studies on the prevention of substance addiction. It is proved that this type of prevention is often transformed into a hidden advertising of addictive behavior and is not effective (Shubnikova, 2014).

The results in the studies of M. I. Drepa (2010), A. A. Antonenko (2014) in many ways, in our opinion, are due to the inclusion of subjects in the program related to the formation of adaptive strategies of coping behavior and personal development resources, such as adequate self-esteem («I-concept»), self-confidence, empathy, emotional and social competence, self-regulation and others. K. Young (2015) believes that the basis of the treatment

should not be a model of therapy based on the termination of addictive agent usage. It is much more productive to use a three-way approach that involves behavior modification, cognitive restructuring, and harm reduction therapy to solve problems associated with Internet-addiction.

#### **CONCLUSION**

We have found that Internet-addiction diagnosis and prevention of adolescents causes difficulties in the practical teaching activities. For the diagnosis of this type one uses questionnaires which, because of these reasons, have a low degree of reliability of the results. We have shown that it is necessary to use a conceptual theoretical model of coping preventing for a substance abuse in order to prevent any kind of addictive behavior among adolescents. Expansion of the coping prevention model of all types of addictive behavior allows us not to disperse its efforts on certain ways of prevention (drug addiction, alcoholism, smoking, internet-addiction, gambling) and to achieve a high degree of efficiency of addictive behavior pedagogical prevention in the educational environment on the basis of a common goal - the formation of viability of teenagers. Following the conceptual model of addictive behavior coping prevention in the educational environment, the framework of psychodiagnostics should be based on the study of the model of coping behavior of teenagers and the level of development of their personal resources.

#### RECOMMENDATIONS

The article is valuable for teachers, social workers and psychologists of educational organizations, dealing with the prevention of addictive behavior of children and youth, the development of technology and the implementation of programs of preventive pedagogical activities.

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# **REFERENCES**

- Akin, A., & Iskender, M. (2011). Internet addiction and depression, anxiety and stress. *International Online Journal of Educational Sciences*, *3*, 138-148.
- Andreou E., & Slovi, H. (2013). The association between Internet user characteristics and dimensions of Internet addiction among Greek adolescents. *International Journal of Mental Health and Addiction*, 11, 139-148.
- Antonenko, A. A. (2014). *Internet-addiction of adolescents of computer games and online communication: clinico-psychological characteristics and prevention* (PhD Thesis). Moscow State University of Medicine and Dentistry named after A. I. Evdokimov, Moskow.
- Asadullin, R. M., Teregulov, F. Sh., Koletvinova, N. D., & Egamberdieva, N. M. (2016). Fundamental and Applied Education A New Look. *International Electronic Journal of Mathematics Education*, 11(1), 23-33.
- Dmitrieva, N. V. & Dubrovina, O. V. (2010). *Virtually identical addictive personality*. Ishim: Ishim State Pedagogical Institute named after P. P. Ershov.
- Drepa, M. I. (2010). *Psychological prevention of Internet-addiction of students* (Cand. PhD Thesis). Pyatigorsk State Linguistic University, Pyatigorsk.
- Egorov, A. Yu., & Golenkov, A. V. (2005). Behavioral addictions. Bulletin of Chuvash University, 2, 56-69.
- Egorov, A. Yu., Kuznetsova, N. A., & Petrova, E. A. (2005). Personality characteristics of adolescents with internet-addiction. *Mental health issues of children and adolescents*, 2, 20-27.
- Endler, N. S., & Parker, J. D. A. (1990). *Coping Inventory for Stressful Situations (CISS): Manual*. Toronto: Multi-Health Systems.
- Griffiths, M. D. (2005). A «components» model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10, 191-197.

- International Classification of Diseases (10th revision) (1994). Classification of behavioral and mental disorders. In Y. L. Nuller, & S. Y. Tsirkin, (eds.), *Clinical descriptions and guidelines for diagnosis*. St. Petersburg: Adis.
- Kamalova, L. A., & Raykova, E. (2016). The Quality and Criteria of Evaluation of Educational Work at the Universities of Russia at the Contemporary Stage. *International Electronic Journal of Mathematics Education*, 11(1), 71-79.
- Kardefelt-Winther, D. (2014). A conceptual and methodological critique of internet addiction research: towards a model of compensatory internet use. *Computers in Human Behavior*, 31, 351-354.
- Kirillova, T. V., & Shubnikova, E. G. (2012). The resilience of an individual as the basis for the primary prevention of ad-dictive behavior. *Bulletin of the Chuvash State Pedagogical University named after I.Y. Yakovlev, 1-2, 79-83.*
- Korolenko, C. P., & Dmitrieva, N. V. (2012). Addictology. Moscow: Institute of consulting and system solutions.
- Korolenko, C. P., & Donskih, T. A. (1990). Seven ways to disaster. Novosibirsk: Nauka.
- Kryukova, T. L., & Kuftyak, E. V. (2007). Questionnaire of ways of coping. Journal of Practical Psychology, 3, 93-103.
- Laconi S., Rodgers, R. F., & Chabrol, H. (2014). The measurement of Internet addiction: A critical review of existing scales and their psychometric properties. *Computers in Human Behavior*, 41, 190-202.
- Loskutova, V. A. (2004). *Internet-addiction as a form of non-chemical addictive disorders* (Cand. PhD Thesis). Novosibirsk State Medical Academy, Novosibirsk.
- Malygin, V. L. (2010). Internet-dependent behavior of adolescents. Clinic, diagnostics, preventive maintenance. Moscow: Education Arsenal.
- Malygin, V. L., Feklistov, K. A., Iskandirova, A. S., Antonenko, A. A., Smirnova, E. A., & Khomeriki, N. S. (2011). Internet-addictive behavior. Criteria and methods of diagnosis. Moscow: Moscow State Medical-Dental University.
- McNicol, M. L., & Thorsteinsson, E. B. (2017). Internet addiction, psychological distress, and coping responses among adolescents and adults. *Cyberpsychology, Behavior, and Social Networking*, 20, 296-304.
- Mendelevich, V. D. (2003). *Drug addiction and comorbid conduct disorder (psychological and psychiatric aspects)*. Moscow: MEDpress-inform.
- Mendelevich, V. D. (2013). Features of deviant behavior on the Internet. Practical Medicine, 1(66), 143-146.
- Mendelevich, V. D., & Sadykova, R. G. (2003). The addictive behavior of both psychological and psychopathological phenomenon (the diagnosis and differentiation problems). *Journal of Clinical Psychology*, 2, 153-158.
- Milani, L., Osualdella, D., & Di Blasio, P. (2009). Quality of interpersonal relationships and problematic Internet Use in adolescence. *CyberPsychology & Behavior*, 12, 681-684.
- Orzack, M. H. (1998). Computer addiction: what is it? Psychiatric Times, 15, 8-12.
- Ozkan, A., & Yildirim, K. (2016). Comparison of conventional and computer aided drafting methods from the view of time and drafting quality. *Eurasian Journal of Educational Research*, 62, 257-272.
- Pyatnitskaya, I. N. (1995). The development of drug addiction in the past and the present. *Questions of narcology, 3,* 75-94.
- Shubnikova, E. G. (2013). Theoretical approaches to the study of the structural components of the personality viability as the basis for the prevention of addictive behavior. *Russian Humanitarian Journal*, *1*, 14-20.
- Shubnikova, E. G. (2014). Methodological analysis of the approaches and models of addictive behavior prevention in the educational environment. *Social pedagogy in Russia, 4,* 22-29.
- Shubnikova, E. G. (2015). *Pedagogical prevention technology of addictive behavior of children and youth: a monograph.* Moscow: Contemporary Education.
- Sirota, N. A., & Yaltonsky, V. M. (2003). Prevention of drug addiction and alcoholism. Moscow: Academy.
- Sirota, N. A., Yaltonsky, V. M., & Viderman, N. S. (2001). Prevention of drug addiction of adolescents: from theory to practice. Moscow: Genesis.
- Tao, R., Huang, X., Wang, J., Zhang, H., Zhang, Y., & Li, M. (2010). Proposed diagnostic criteria for Internet addiction. *Addiction*, 105, 556–564.

- Vlasova, V. K., Kirilova, G. I., & Curteva, O. V. (2016). Matrix Classification of Information Environment Algorithms Application in the Educational Process. *International Electronic Journal of Mathematics Education*, 11(1), 165-171.
- Weinstein, A. (2015). Internet-addiction: diagnosis, comorbidity and treatment. *Medical psychology in Russia: an electronic scientific journal*, 4(33), 3.
- Wiederhold, B. K. (2016). Low self-esteem and teens' Internet addiction: what have we learned in the last 20 years? *Cyberpsychology, Behavior, and Social Networking, 6,* 359-359.
- Young, K. (2000). Diagnosis Internet-addiction. World of Internet, 2, 24-29.
- Young, K. (2015). Clinical aspects of internet-addictive behavior. *Medical psychology in Russia: the scientific e-journal,* 4(33), 2. Available at: http://mprj.ru
- Young, K. S. (1996). Internet addiction: the emergence of a new clinical disorder. *CyberPsychology & Behavior*, 1, 237-244.
- Zeleeva, V. P., & Shubnikova, E. G. (2016). Prevention of addictive behavior based on the formation of teenagers' resilience. *International journal of environmental and science education*, 11(8), 2015-2023.

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