

Psychological Factors of Overcoming Nonchemical Addictions

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Abstract: This comprehensive study delves into the escalating issue of nonchemical addictions, spurred by technological advancements. It thoroughly examines psychological factors and intervention strategies for these addictions, focusing on their development, influence on human behavior, and psychocorrection processes. Aiming to discover effective methods for correcting and preventing addictive behavior, the study incorporates a theoretical analysis of existing scientific approaches, characterizing various nonchemical addictions such as Internet and gadget use, gambling, and others. It scrutinizes the origins, proliferation, and interplay of these addictions with an individual's psychoemotional state, lifestyle, and external environment, underscoring the destructive nature of addiction on physiological, emotional, and social levels. A key component of the research is an empirical investigation among teenagers, a highly susceptible group, to assess gadget addiction levels, causative factors, and impacts. This research not only elucidates the essence and variety of nonchemical addictions and their correlation with mental health but also provides valuable insights into prevention and overcoming strategies. The practical significance of this study lies in its potential application for recognizing addiction signs and formulating effective management programs.

Key Words: Psychoemotional state, psychocorrection, types of addiction, preventive care, dependent behavior

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Nonchemical addictions, like Internet and gadget addiction, gambling, and others, have become increasingly prevalent, particularly in the digital age. These addictions impact various aspects of life, including mental and emotional health, social relationships, and productivity. For instance, excessive Internet use can lead to social isolation, anxiety, and depression. Gambling addiction often results in financial hardship and strained relationships. The prevalence of these addictions varies, but they are notably high among younger populations, especially with the rise of digital technologies (Ronzhes, 2023). For example, The Entertainment Software Association reports that at least one person plays video games in two thirds of American households, demonstrating the broad appeal of online gaming. More over two billion people play video games globally; that number is expected to rise to over three billion by 2023. According to a 2021 evaluation, 3.05% of people worldwide suffer with gaming disorder (Guenther, 2023). As a result, there are presently 60 million individuals suffering with gaming disorder. The widespread impacts underscore the need for effective prevention and intervention strategies (Bonchuk, 2016). Addictive behavior is an attempt to escape from reality by changing one's mental state, which creates an illusion of safety and psychoemotional comfort. Today's registry of behavioral addictions counts approximately thousands of addictive "agents" that provoke the formation of addiction diseases (Dufynets et al., 2023;

Mudryk, 2022). In the modern world, pathological forms of addictions are becoming more and more common, so there are more people who need psychological help to overcome them in order to preserve mental health, prevention, and the formation of a harmonious personality (Uludag, 2023).

The problem of addictive behavior is that it has a destructive nature and is a consequence of the desire to receive positive intense emotions through the use of certain substances, such as alcohol, drugs, tobacco, or through a specific activity, such as a passion for gambling or computer games, the Internet, eating disorders, resulting in a loss of control over one's life, impulses, and actions. Addictions can destroy a person and negatively affect his close environment (Pushkar, 2012; Splytska, 2023b). The problem of addiction, its prevention, and coping factors are actively studied by psychologists, sociologists, doctors, and public and law enforcement officials, since addictive behavior has become widespread and poses a threat to the social system. Currently, in the literature, it is possible to find many variants of addictions. They are mainly divided into chemical and nonchemical. Chemical addictions include drug and alcohol addictions, that is, those related to the use of various substances (Yoo, 2021). Nonchemical includes a wider spectrum, such as technological addictions (Internet addiction, gambling, gadget addiction), relationship addictions (sexual, erotic-love, codependency, avoidance addictions), fanaticism (musical, sports, political, religious, national), professional addictions (workaholism, procrastination, perfectionism), TV addiction, addiction to risk, body modifications (extreme tattooing, piercing, scarring) (Mudryk, 2022).

A number of modern researchers have studied the issue of addictions and the specifics of its individual types, in particular from the category of nonchemical addictions. Starodubtseva (2022) investigated clinical-psychopathological and pathopsychological features of computer addiction in the structure of adaptation disorders and determined the main strategy of the program for addicts in the form of a complex impact on cognitive, psychophysiological, emotional, social, and behavioral aspects. Aseeva (2021) studied the peculiarities of cyber-addictions among young people and schoolchildren and emphasized the extent to which the use of electronic devices affects the actualization of the processes of self-realization of the individual. Aimedov et al. (2020) paid special attention to the problem of cyber-communicative addiction associated with popular social networks, and also determined that people aged 16–20 with labile, demonstrative, and introverted accentual types have a greater tendency to cyber-communicative addiction. Petrunko and Teleshun (2022) developed tips for the prevention of computer addiction, in particular, they singled out compensatory, developmental, regulatory, corrective, and initiative functions to increase the effectiveness of correction.

One of the problems of prevention of addictions and their overcoming is that one type of addiction can quite easily turn into another. This applies to both chemical and nonchemical addictions. For example, a person who is too fond of sports games can transfer his pathological addiction to bets and totalizers (Mudryk, 2022). Therefore, an important element is the study of the stages of the emergence of disorders of addictive behavior, the identification of the causes of its origin, and the peculiarities of the flow through the prism of the psychoemotional state of people (Berdibayeva et al., 2021). This will allow paying attention in a new way to the problem of prevention, diagnosis, and treatment of addictions, the main elements of which are psychotherapy

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and psychocorrection. Addictive behavior outlines as an escape from reality, creating an illusion of safety and psychoemotional comfort (Vavdiuk et al., 2023). The research aims to analyze modern nonchemical addictions and develop effective ways to overcome them, focusing on identifying factors that influence addictive behavior and exploring modern methods of combating and preventing addictive behavior. The set tasks were solved as follows: the previous studies on the causes of the formation of nonchemical dependencies were studied; determined factors of the external environment and individual psychological features of human development that can influence the development of addictive behavior; separate types of nonchemical addictions are distinguished, and the stages of their occurrence, features of the course, and impact on the human psyche are determined; and modern methods of combating and preventing addictive behavior are analyzed.

It is necessary to analyze the nature, causes, and effects of modern nonchemical addictions, such as Internet and gadget addiction, and gambling. It seeks to understand the psychological factors underlying these addictions and explores effective methods for their prevention and treatment. The focus is on identifying factors contributing to addictive behaviors and developing comprehensive strategies to combat and manage these addictions, particularly among teenagers. The research's practical significance lies in its potential use in identifying addiction signs and developing programs for successful addiction management. The conclusion ties these findings to broader implications and future research directions in the field.

METHODS

To achieve the goal of the research work, a number of methods were used that helped to more widely analyze the issue of nonchemical addictions and the factors of their overcoming. With the help of analysis and synthesis, theoretical and scientific concepts related to the psychological features of the emergence and development of addictive behavior, detailed characteristics of types of nonchemical addictions, the study of factors that provoke addictive behavior, as well as factors that allow it to be prevented or to carry out psychocorrective work were investigated. The obtained theoretical data made it possible to build a basis for researching modern types of addictions and developing a methodology for overcoming them. The method of psychological research was implemented using a questionnaire to identify one of the most widespread addictions today—gadget addiction. In the sample size, a total of 30 participants were included in the study. In the demographics, the participants were schoolchildren aged 15–16, chosen due to their susceptibility to addictive behaviors during adolescence. Informed consent was obtained from the participants or their legal guardians, ensuring that they were aware of the study's purpose and procedures, and that their participation was voluntary. Adolescents were chosen for the study, because addictions at their age often arise in connection with insufficiently formed value orientations, forcing them to seek easy pleasures. Today, gadgets are an integral part of teenage life, as they provide access to the Internet, unlimited communication in messengers, games, including gambling, viewing of erotic content, the constant search for information that can affect the mental state, and preferences, and provide the opportunity to create the illusion of self-importance through posts in social networks. Thus, teenagers are one of the most vulnerable categories of people to addictions.

Since the use of gadgets is directly related to unlimited access to the Internet, the Kimberley test was used for the study of S. Young on the diagnosis of Internet addiction, adapted by V.A. Loskutova. It is a questionnaire with 20 questions that allow determining not only the presence of Internet addiction but also its stage. This choice was rationalized by its suitability for assessing Internet addiction stages and its relevance to the study's focus on gadget addiction, closely related to Internet usage. When developing the methodology, three components were taken into account: increasing the time spent in front of the screen;

change in the interviewee's behavior; and worsening of general well-being. Conducting a survey using the 16-factor questionnaire of B. Cattell (form C) was determined by the need to obtain multifaceted information about the adolescent's personality, based on the hypothesis that the individual's personal characteristics are related to the tendency to addictive behavior. The questionnaire consists of 105 questions that help determine some personality traits. His questionnaire was chosen to comprehensively understand adolescents' personalities, as it includes 105 questions that help determine personality traits relevant to addictive behavior. E. Schaefer's method was also used for diagnosis to assess the attitude of teenagers to their parents, since the problem of any addiction can have its roots in childhood, when the personality is still unformed, most vulnerable, and not able to independently satisfy all its needs. Thanks to the combination of the mentioned research methods, it was possible to observe the interdependence of the tendency or already detected addictive behavior of adolescents with their personal qualities and psychoemotional atmosphere in their families. The method of analogy helped to find similar factors of the development of addictive behavior and factors of overcoming it in various types of nonchemical addictions to determine universal psychocorrective methods and means. An interpretive method was used to combine the results already obtained in previous studies and new data, which further helped to determine the most important factors for overcoming nonchemical addictions.

RESULTS

In all types of nonchemical addiction, there are common features: the repeated urge to counterproductive behavior, temporary and quick turning off of tension with the help of addiction, and gradual return of dependent desires, which are stimulated by internal and external factors (Marks, 1990). Although nonchemical addictions do not involve the use of harmful substances, they also pose health risks, both physical and mental. Before the questionnaire on the main methods, a survey was conducted among the participants regarding the purposes for which they use gadgets. The majority of teenagers marked the point "Contact with friends and family," using mobile communication, SMS messages, social networks (Instagram, Facebook, Snapchat), and messengers (Telegram, Viber, WhatsApp, Signal, Facebook Messenger). Also, taking into account the fourth year of quarantine restrictions and the war on the territory of Ukraine, gadgets have become an integral part of the educational process, as they provide online classes in cases of the introduction of distance learning.

According to the Kimberley S. Young method on Internet addiction, 6 students were found prone to this addiction, but to date, none of them has developed it at a level that requires immediate intervention of a psychologist. The results of this technique were compared with the factors of questionnaire of B. Cattell and took into account the most significant ones, such as sociability, intelligence, emotional stability, courage in setting up social contacts, and anxiety. According to the factors of sociability and intellectuality, no pronounced relationship was found with students prone to gadget addiction. However, the comparison of the results of the Kimberley S. Young method with the emotional stability factor of the questionnaire of B. Cattell turned out to be more interesting (Fig. 1).

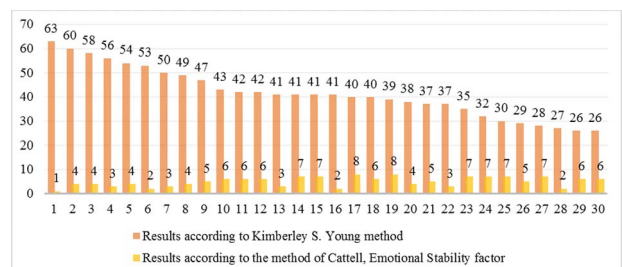


FIGURE 1. Comparison of results of Kimberley S. Young test and questionnaire of B. Cattell (Emotional Stability factor).

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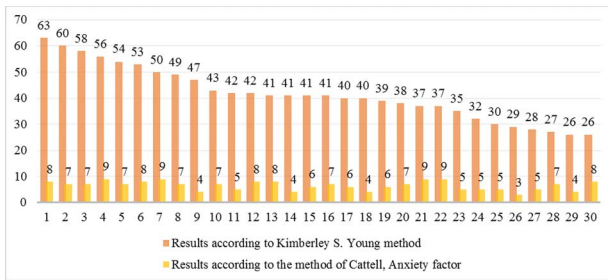


FIGURE 2. Comparison of results of Kimberley S. Young test and questionnaire of B. Cattell (Anxiety factor).

Figure 1 compares the results of the Kimberley S. Young test (for Internet addiction) with the emotional stability factor from the Cattell questionnaire. It shows a correlation between low emotional stability and the development of addictions. The indicator of the emotional stability factor in Internet-addicted adolescents does not exceed 4 points, which corresponds to a low level, whereas 73% of students who are not observed to be addicted scored mostly more than 5 points according to this parameter, which corresponds to an average and high level. It can be concluded from this that low emotional stability becomes the cause of the development of addictions, including gadgets. After all, it is more difficult for such a teenager to overcome the craving for pleasure from using electronic devices, to set limits for himself. Since emotional stability protects the child from disintegration and personal disorders, forms the basis of internal harmony, a decrease in emotional stability leads to a violation of the regulation of behavior and activities, a breakdown of the system of life values, motives, and goals, which increases the risk of addictions.

Therefore, in order to increase emotional stability as one of the factors in overcoming nonchemical addictions, a number of factors can be identified: the positive interest of loved ones (in the case of children and adolescents—parents) and their psychological and pedagogical culture, mastering the addicted person's knowledge and skills to successfully overcome stressful situations. This can be obtained at specially organized classes in the form of conversations, trainings, and classroom hours. It is important to consider that in the case of children and adolescents, they are also affected by physical and natural stressors. Often, the emotional sphere is accompanied by vegetative or physical disorders, character changes, that affect the fluctuations of emotional stability in both children and adults; therefore, to overcome addiction, it is necessary to take into account the physical and emotional state of a person. According to the analysis of the courage factor in setting up social contacts, it was determined that, in general, mostly average indicators are observed in the experimental group of teenagers. That is, among gadget-dependent students, there are those who can confidently establish contact, and those who prefer to stay away from human communication and have difficulties with it. The anxiety factor is closely related to other factors. It is known that anxiety can be the source of many health disorders in the physical and mental sphere, when it arises and prevents the harmonious development and self-realization of the individual (Alageel et al., 2021). And that is why there were assumptions that its high level affects addiction to gadgets. Adolescents with Internet addiction have high levels of anxiety (7 points and above) (Fig. 2).

Figure 2 presents a comparison of the Kimberley S. Young test results with the anxiety factor from the Cattell questionnaire. It highlights the relationship between high levels of anxiety and addiction to gadgets. If taking into account the low indicators of emotional stability, it is possible to conclude that excessive fascination with the Internet and gadgets is a consequence of high anxiety, which these children are unable to overcome on their own due to low emotional stability, and therefore find emotional salvation in gadgets. Anxiety becomes a factor of addiction, since an addicted person seeks to avoid it in the virtual dimension; therefore, an important factor for overcoming it is psychological

correction in several directions: correction of the cognitive sphere, which consists in the organization of cognitive activity, development of cognitive processes (memory, imagination, thinking, attention), mastering new skills; correction of motivational and emotional-volitional spheres by working with feelings, emotions, attitudes, personal attitude, mastering self-regulation skills; correction of certain behavioral aspects, interpersonal relationships (within the class team, with friends, with parents), difficulties in communication; prevention of preneurotic conditions and neuroses (Kuzikova, 2008). That is, an important aspect of overcoming nonchemical addictions is the correction of the emotional and volitional sphere, reducing the impact of anxiety, but at the same time preserving its stimulating function. Carrying out the method of E. Schaefer, which evaluates the attitude of teenagers to their parents, allowed seeing their interdependence with a tendency to addiction. The assessment was made in the range from 1 to 5 points, where 1 is the worst relationship, 5 is the best, 0 is the absence of one of the parents. Six students with signs of Internet addiction have strained relationships with one or both parents. The problem is especially acute for two teenagers who are raised only by their mother (Fig. 3).

Figure 3 compares the Kimberley S. Young test results with E. Schaefer's questionnaire, focusing on the relationships of teenagers with their parents. It illustrates the impact of strained parental relationships on the likelihood of gadget addiction. If considering the results of the questionnaire of E. Schaefer among six adolescents with pronounced addiction in more detail on the factors of positive interest in the child, directiveness, hostility, autonomy, and inconsistency, it can be seen that such relationships are caused by the rejection of the individuality of the child, increased demands on him and the predominance of criticism, or on the contrary, complete indifference and protection from it (Table 1).

Table 1 shows the results of E. Schaefer's questionnaire by factors, such as positive interest, directiveness, enmity, autonomy, inconsistency, and proximity. This table provides insights into the various factors of parent-child relationships and how they relate to addiction. There is a pronounced inversely proportional dependence between the Internet addiction indicators of teenagers and their relationship with their parents, especially with their mother. This confirms that mistrustful and strained relationships, or on the contrary, complete indifference, have a negative effect on teenagers, developing addiction to gadgets. A close relationship between relationships with parents and emotional stability is also observed. The better scores the teenagers scored according to E. Schaefer's method, the higher their emotional stability and, in turn, less dependence. Correlation analysis helped to see that gadget-dependent teenagers have greater anxiety and less stress resistance.

Addressing Nonchemical Addictions in Teenagers: A Comprehensive Approach to Treatment and Prevention

The danger of a teenager falling into a gadget and Internet addiction lies in the fact that this is the age period of development when

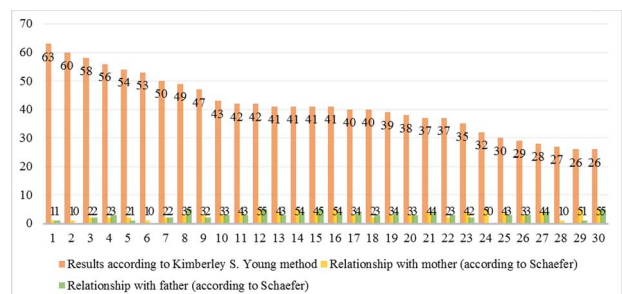


FIGURE 3. Comparison of the results of the Kimberley S. Young method and the questionnaire of E. Schaefer.

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TABLE 1. Results of E. Schaefer's Questionnaire by Factors

	Positive Interest		Directiveness		Enmity		Autonomy		Inconsistency		Proximity		Critics	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1	2	1	5	3	5	4	2	2	3	4	1	1	5	4
2	2	-	3	-	5	-	2	-	4	-	1	-	3	-
3	2	2	4	1	4	2	2	4	5	3	2	2	4	1
4	2	3	4	2	4	3	2	4	5	3	2	3	4	2
5	2	1	1	2	3	5	3	4	3	3	2	1	2	2
6	2	-	3	-	5	-	2	-	4	-	1	-	3	-

F, relationship with father; M, relationship with mother.

social skills are formed, the ability to communicate and interact with others, and life values are realized. Locking in the fictional world provokes aggression when the teenager tries to get out of it, and thus the stage of building relations with the surrounding world is lost. The latest scientific data on the principles of treatment of nonchemical addictions confirm the need to use complex approaches to the prevention, rehabilitation, and treatment of addictive behavior. The following main principles can be distinguished: voluntary treatment; the clinical validity of complex therapy; individualization, stages, duration, and continuity of the treatment process; and continuity of care (Zajac et al., 2017). At the same time, the therapy involves psychological, biological, and social interventions and rehabilitation of both the patient himself and his relatives in the immediate environment. Psychotherapy of pathological addiction should include the correction of thinking errors to restore adequate self-organization of patients. Emotion management training and stress-coping skills to process negative feelings can help in this. It is important that correction in the psychotherapy of nonchemical addictions has two directions of influence—existential, so that a person can solve intrapersonal experiences, family and cognitive-behavioral, which aims to form the potential to overcome difficulties with work, profession, and family sphere (Starodubtseva, 2022). Cognitive behavioral therapy (CBT) can be combined with pharmacology and other psychotherapeutic approaches, complementing their effectiveness. The basis of CBT is the correction of erroneous judgments and conclusions in the mind of a person, which makes it possible to change the attitude toward problematic reactions, and also prevents the occurrence of relapses. In the case of correction of nonchemical addictions among teenagers, it is worth noting the effectiveness of social skills training, which involves an individual approach and usually consists of such components as playing roles, self-affirmation, modeling, learning the skills of entering and maintaining a conversation, and regulating periods of silence.

An important role in the correction of nonchemical addictions is played by personal, subject, and metasubject factors (Niyetbaeva et al., 2016; Wright et al., 2021). The first ones include the skills to act effectively in a conflict situation and build interpersonal relationships, the development of communicative competence, responsibility, confident behavior, and motivation. The second is the formation of knowledge and understanding about the types of nonchemical addictions, the ability to use modern computer technologies and the Internet space within healthy limits, and the formation of media literacy. The third is the development of the ability to plan one's own actions according to the tasks and conditions for their implementation, the formation of skills in the adequate use of means of communication and language to manage one's own actions and emotional state. Other types of activities that produce similar neural connections in the human brain using a therapeutic approach to reward replacement can also be a factor in recovery from nonchemical addiction. That is, giving up one addictive behavior, a person replaces it with another, healthier one, such as sports, new hobbies,

and social interactions. Romantic love, for example, can be considered a powerful natural addiction, as it is able in some cases to change the structure of brain activity associated with destructive forms of addictions (Fisher et al., 2016). The main factor contributing to the successful overcoming of addiction should be the addict's awareness of his problem, with subsequent determination to change. This requires the support of a circle of relatives and friends, a change in the environment, if it provokes a return to addictive behavior, a change in lifestyle, and, of course, the help of specialists to select a complex of medical therapy measures. In nonchemical addictions, genetic and neurobiological factors play a key role in influencing the predisposition to addictive behavior. This may include aspects such as the influence of the brain's reward system and neurotransmitter imbalances. These biological underpinnings interact with psychological factors such as stress, emotional trauma, and social influences to form a complex picture of addictive behavior. In the context of prevention and treatment, educational programs aimed at raising awareness of the risks and consequences of addiction play a significant role. Psychotherapeutic methods that focus on addressing underlying psychological problems are also effective. In addition, community engagement initiatives and policy changes create a supportive environment to prevent the development of nonchemical dependence.

DISCUSSION

Nonchemical addictions represent a growing concern worldwide. They involve individuals seeking to escape reality through intense emotional engagement and distraction, often leading them into a “virtual” world. These addictions can disrupt one's ability to manage life, solve problems, and even result in personal degradation. Various forms of nonchemical addiction include self-improvement, work or study addiction, solitude or excessive socializing, and immersion in fantasies. In these cases, a specific behavioral pattern becomes the focal point of addiction. The phenomenon of addictions begins to focus on the “technological” perspective after the research of addictionologist M. Griffiths (2007), who noted in his publications the similarity of the symptoms of some users of technical devices with the symptoms of people who use psychoactive substances. Griffiths observed addiction symptoms in seemingly ordinary activities sharing specific characteristics: open competition, daily engagement for over an hour, simplicity, solitary execution, perceived value, illusion of personal growth, and reduced self-criticism. These criteria led to the identification of key signs of nonchemical addictions: pleasure, withdrawal syndrome, increasing tolerance, internal conflicts, social conflicts, and relapses akin to alcohol binges. The global rise in various forms of nonchemical addictions warrants a comprehensive understanding of their unique attributes and intensities, attracting global scientific attention. Dependence on interpersonal relationships is divided into three types: love addiction, which is characterized by a pronounced dependence on a relationship

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with a specific person, which turns into a manic state; avoidance addiction, which is characterized by avoiding communication with a significant person, the basis of which is the fear of being abandoned, abandoned, and feeling the pain of a possible parting and loss; sexual addiction, which is characterized by a constant need for sexual contact with one or several people, which can arise as a result of trauma in childhood, lead to constant viewing of pornography, and can also develop into separate types such as sadomasochism, fetishism, zoophilia, exhibitionism (Binnie and Reavey, 2020; Spytka, 2023a). Pathological attachment is closely related to the characteristics of the addict's personality, namely, impaired self-esteem, lack of self-respect, and love for one's "I." In addition, men and women who are passionately in love or, on the contrary, have been rejected, may show other types of addictions, such as gambling or psychoactive substances (Fisher et al., 2016).

The group of researchers with Awan et al. (2021) raised the question of the increase in pornography addiction that was caused by mass isolation due to the COVID-19 pandemic. In addition to an overview of the neurobiology of Internet addiction and pathological use of pornography, similarities with substance use disorders were explained, as well as an assessment of the potential harmful consequences of pornography addiction and proposed strategies for its treatment. The growing problem of pornography addiction was also noted in their work by researchers Bothe et al. (2021). They noted that despite the widespread use of pornography, there is little research examining the effectiveness of online interventions for the treatment of addiction, and conducted research and remedial work that helped a group of respondents to reduce pornographic craving and viewing frequency. Food addiction develops in people for whom food is not a source of satisfying hunger, but the main and sometimes the only source of pleasure. In some people, it turns out to be a factor that leads to obesity and, accordingly, harms health through the development of eating disorders (Levchenko, 2023; Praxedes et al., 2021). People who develop food addiction have symptoms similar to drug addiction: cravings for harmful foods, limited control over eating, unsuccessful attempts to reduce consumption, and withdrawal syndrome (Lennerz and Lennerz, 2018). Food addiction leads to eating disorders such as bulimia, anorexia, and compulsive overeating. According to forecasts of the World Obesity Atlas, by 2030, one billion of the Earth's population will face obesity problems, that is, one in five women and one in seven men (World Obesity, 2022). The greatest problem with eating behavior is observed in low- and middle-income countries, which may indicate the influence of people's psychological and economic status on food addiction.

Shopoholism or oniomania, which is an addiction to spontaneous and mostly unnecessary purchases, is currently attracting more and more attention from researchers. Advances in technology and access to the Internet make it possible to make uncontrolled purchases anytime, anywhere, which has increased the number of mental disorders, and the addiction itself has come to be associated with sensitivity to reward, low self-esteem, depression, lack of self-control, and compulsive overeating (Padalka et al., 2021; Savci et al., 2021). Gambling still occupies one of the highest ranks among nonchemical addictions (Edman and Berndt, 2017). If earlier they were limited to slot machines and casinos, thanks to the Internet and smartphones, every user can make bets or try their luck on gambling sites without leaving home. In the publication of Rosen et al. (2020), they examined the gambling attitudes of ex-offenders who were followed for this addiction, barriers to treatment, and the effectiveness of short-term interventions. It was found that 86% of offenders have gaming addiction to one degree or another, which emphasizes the existence of a relationship between addictive and deviant behavior. Sagoe et al. (2021) presented a quantitative synthesis of research on Internet-based treatment of gambling addiction, since such a method can reach a much larger number of people, overcoming such limitations as cost, accessibility, anonymity, and time, which is sometimes impossible for "live" treatment. Internet-based treatment for compulsive gambling had an effect on overall symptoms,

but had minimal effects on frequency of gambling and spending. Dowling et al. (2021) also conducted a randomized trial of therapeutic interventions in the treatment of gambling addiction. The effectiveness of independent behavioral work on overcoming addiction was compared with work under the supervision of a therapist. The results showed that the directed influence of the specialist on the treatment improved the effectiveness of the therapy and had a positive effect on the quality of life of the respondents. To date, the most widespread non-chemical addictions have become related to modern technologies: Internet addiction and addiction to computer games or social networks. Due to the possibility of changing a person's psychoemotional state at a deep level, Internet addiction has a high addictive potential, as it implements gaming, sexual, communicative, and other nonchemical addictions. The Internet and social networks have become widespread in everyday and professional life thanks to the use of mobile devices. In 6 out of 30 teenagers who participated in the research on gadget addiction, that is, in 20%, an increased tendency to it was found. Modern researchers understand Internet addiction as a compulsive desire to connect to the network and not be able to leave it. And despite the external similarity of this addiction with other types, the formation of Internet addiction can take a much shorter time (Wright et al., 2021).

Addiction to computer games is a separate problem. According to data for 2021, 3%–4% of gamers in the world are too addicted to them, so more than 60 million users may suffer from gaming addiction (Hopkins, 2022). The World Health Organization refers to game addiction as a mental disorder and associates it with the loss of control over the time spent in games. During the game, the human brain releases dopamine, the pleasure hormone, in response to a pleasant experience. Many modern games are designed in such a way to cause natural addiction thanks to the system of "rewards" for victories. Genres such as social simulation, MOBA, MMORPG, and shooters are recognized as the most exciting games. Teenagers are especially prone to addictions related to virtual reality, as it is closely intertwined with their age-related needs for self-affirmation, self-realization, communication, and separation from parents. Having difficulties and obstacles in meeting needs in real life, teenagers willingly look for pleasure in the virtual. This phenomenon is common among teenagers in industrialized countries where gadgets are widely used, and is associated with health, financial, and psychological problems (Jun, 2016). The conducted research on gadget addiction, described in this article, showed that signs of addictive behavior associated with addiction to gadgets are also manifested among Ukrainian teenagers. Correlation of techniques of Kimberley S. Young and B. Cattell confirms that the development of addictions in adolescents is influenced by psychoemotional factors, such as low emotional stability and increased anxiety. Adolescents with low emotional resistance are unable to suppress emotional reactions, the so-called "willpower," which leads to impatience, passivity, and lack of self-control and endurance. To the reasons that only strengthen the influence of these factors on the emergence of addictive behavior, it is possible to add the long-term stress associated with the COVID-19 pandemic, which has been going on for the fourth year, and military actions on the territory of Ukraine. Depressive moods were also observed in some children. Depressive syndromes are one of the most serious psychological problems and their relationship with mobile phone addiction is traced, which creates a critical problem.

Islam et al. (2020) conducted a study to examine the relationship between the Internet and computer games on the academic performance of Australian children and what effect they have on the process of acquiring new knowledge. The results revealed that teenagers mostly used the Internet much longer than the recommended limit, that is, 2 hours per day. If it exceeded 4 hours on weekdays, it had a negative effect on learning and cognitive activities. Adolescents with a tendency to addiction gained lower scores in reading and arithmetic compared with those without signs of addiction, and signs of deviant behavior such as skipping school and neglecting homework were also noted. The availability of

smartphones deepens the problem of Internet addiction, because, as noted in his work Mitchell and Hussain (2018), there is a connection with problematic use of gadgets and impulsivity, depression, and excessive search for self-confidence. At the same time, the average duration of smartphone use is affected by the person's age in inversely proportional dependence, that is, young people and children are more prone to gadget addiction than adults and mature individuals. These data are partially confirmed in another study among the Arab sample (Alageel et al., 2021). At the same time, it was noted that addiction to smartphones is not related to sociodemographic characteristics, such as gender, level of education, marital status, speciality, and number of children. These data are further emphasized by the research findings described in this article, namely, the correlation between addiction proneness and relationships with parents demonstrated by the techniques of Kimberley S. Young and E. Schaefer. Namely, parental attitudes, methods of upbringing, and behavior play a big role in the emergence and formation of gadget addiction in schoolchildren. After all, at this age, there is a restructuring of relations with parents: a transition from dependence on parents to a relationship based on mutual trust, respect, and constantly growing equality. A deeper analysis of the data of the technique E. Schaefer, divided by scales, showed that the lack of positive interest in the child, harshness, and hostility in upbringing contributes to the development of addiction, while trusting relationships and understanding help reduce the likelihood of gadget addiction. With the unsatisfied basic needs for parental love and acceptance, the development of depressive moods on this basis force teenagers to search for quick pleasures and positive emotions in the virtual world and to pour out unbridled emotions on the Internet. A connection between excessive use of gadgets and depression, insomnia and attention deficit hyperactivity disorder was found.

Social media addiction poses a significant threat as users lose control over their time spent online, adversely impacting various aspects of life. Social platforms stimulate the brain's reward center, akin to drugs or gambling, by offering likes, reposts, comments, and quick dopamine hits. Users further immerse themselves through rituals like subscribing and posting, often substituting real-life interactions.

For Ukrainian teenagers, social media addiction is especially pertinent due to the context of distance learning. An oral survey reveals that they rely on gadgets primarily for communication, seeking to maintain connections with friends and comrades, particularly in times of war that have separated them across different cities and countries. The heightened anxiety and low emotional stability resulting from social events in the country have amplified the risk of addiction, turning social networks into both a communication platform and a means of escape from reality. The global scale of this issue is evident, with Statista reporting approximately 5.16 billion Internet users and 4.76 billion social media users as of January 2023 (Statista, 2023). As the Influencer Marketing Hub notes in its statistical research, 67% of the Earth's population uses one or another mobile device, which makes Facebook, Twitter, Instagram, and other platforms more accessible (Influencer Marketing Hub, 2022). In 2022, compared with 2021, the number of users of social networks increased by 227 million people (5%), whereas young people spend an average of 2 hours and 27 minutes on them every day. Some teenagers can spend 9 hours on social networks, sleep with smartphones in bed, and 27% have mental health problems.

Comparing all the obtained results with the data of previous studies, the main factors that influence the development or spread of addictive behavior are the development of the Internet and computer technologies, the exploitation of addictions by the state for socioeconomic benefit (for example, in relation to gambling), cultural traditions and philosophy of consumption, and family and sociopolitical factors. It was determined that overcoming nonchemical addictions is closely related to the development of the emotional and volitional sphere, the formation of skills to deal with stress and anxiety states, the ability to build relationships with the surrounding society, and psychocorrective work

both with the addicted person and with his close environment—parents, partners, and friends. An important aspect is the prevention of addictive behavior, which includes the early identification of “risk groups,” the formation of their understanding of addictive factors, and self-help methods. In sum, this study's findings resonate with trends and research findings from various regions of the world, highlighting the global nature of nonchemical addictions. These insights can serve as a foundation for international collaboration and the development of comprehensive strategies to address and mitigate the adverse effects of addictive behaviors on the well-being of individuals, especially the youth, in an increasingly digitized world.

CONCLUSIONS

With the development of technology and the Internet, the problem of nonchemical addictions has become widespread throughout the world. Nonchemical addictions include those that do not involve the use of psychoactive substances, but have an equally destructive effect on the mental, emotional, physical, and personal spheres of a person. An addictive person is distinguished by an uncontrollable desire to depart from reality and has signs of personal immaturity, reduced resistance to the difficulties of everyday life, low self-esteem, irresponsibility for decisions made, and a high level of anxiety. Addictions have consequences such as the destruction of personal confidence, the development of depression, loss of contact with the outside world and internal needs, the destruction of relationships with loved ones, the cessation, and in some cases, the degradation of personal growth. For the research, a number of sources were analyzed regarding the essence, signs, causes, types of nonchemical addictions, factors of formation, and consequences. For a deeper understanding of the problem, a study was conducted to identify gadget addiction among teenagers, who are most prone to addictive behavior due to brain malformation, rebellious nature, desire for self-affirmation, and emotional instability. In a group of 30 teenagers, 6 children with signs of addiction were found. With a more detailed study of the possible causes of addictive behavior, a connection between addiction and a low level of emotional stability of teenagers, and their high anxiety was determined. The impact of strained relationships with parents on the development of addiction in children has also been established, which provokes them to seek a “safe” space in the virtual world. Successful correctional work to overcome nonchemical addictions should consist of a set of measures of both mental and medicinal nature, as well as adhere to the principles of voluntariness, phasing, clinical validity, continuity, and duration of therapy, individualization, and continuity of care. It is important to rehabilitate not only the addicted person, but also his close environment to prevent relapses. Cognitive-behavioral therapy has been identified as one of the most effective areas of influence, as it allows correcting erroneous attitudes and conclusions in a person's mind that lead to addictive behavior, and creates a further foundation for resistance to life's difficulties and challenges. In connection with the daily increase in the types of nonchemical addictions, the development of new tools for the prevention, and treatment of addicted persons, as well as their further rehabilitation support, is a promising direction for further research. The findings of the document suggest practical applications in developing more effective intervention and prevention programs for nonchemical addictions. The research indicates the need for further exploration into the specific psychological factors that contribute to these addictions and how they can be addressed more effectively. The conclusions contribute to a deeper understanding of nonchemical addictions, emphasizing the importance of considering psychological aspects in treatment and prevention strategies. This could lead to more personalized and effective approaches in helping individuals overcome such addictions.

DISCLOSURE

The authors declare that there is no conflict of interests.

Data availability statement: The data that support the findings of this study are available on request from the corresponding author.

Contributions: N.M. conceived of the presented idea. N.M. and A.H. developed the theoretical framework. M.M. and Y.K. carried out the experiment and performed calculations. J.U. supervised the project and critically revised the manuscript. All authors discussed the results and contributed to the final manuscript.

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