Psychological Characteristics of Internet Addiction in Students in Problem Life Situations (COVID-19, War)

Halyna CHUYKO [1]
Yan CHAPLAK [2]
Tetiana KOLTUNOVYCH [3]

[1] PhD, Associate Professor of the Department of Psychology at Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine, e-mail: h.chuyko@chnu.edu.ua

[2] PhD, Associate Professor of the Department of Psychology at Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine, e-mail: y.chaplak@chnu.edu.ua

[3] PhD, Associate Professor of the Department of Pedagogy and Psychology of Preschool and Special Education at Yuriy Fedkovych Chernivtsi National University, Chernivtsi, Ukraine, e-mail: t.koltunovych@chnu.edu.ua

Abstract: *The relevance of this research lies in the fact that the number of Internet addicts in the world is constantly growing (the premise of which we consider the possibilities of Internet content that open up to a person in the virtual space), and the situation can turn into a public health problem. The purpose of the article is to carry out a theoretical analysis of the phenomenon of Internet addiction and, based on it, conduct an empirical study of Internet addiction of students, its connection with their personal traits and their satisfaction with life in difficult life situations: during the COVID-19 pandemic (n=88) and war (n=87). The research used the following methods: Internet Addiction Test (K. Young), CIAS, Chen-Internet-Addiction-Scale (S.-H. Cnen), Techniques for diagnosing predisposition to 13 types of addictions (G.V. Lozova), Test T. Leary, Questionnaire "Life Satisfaction Index" (B. Neugarten, R. Havighurst, Sh. Tobin), Oxford Happiness Inventory, OHI. Mathematical processing of research results was carried out using statistical package SPSS 17.0. The analysis of approaches to the understanding of Internet addiction by scientists leads to the conclusion that it is a behavioral deviation that manifests itself in a person's excessive spending of time in the Internet space due to reluctance to return to real life; this is exactly information addiction. The main symptoms of Internet addiction: the tendency of an individual to choose being on the Internet before any other types of his activity; a change in his/her state of consciousness, a gradual increase in the time spent on the Internet, the lack of an objective assessment of the negative consequences of Internet addiction. As a result of the study, it was found that: Internet addiction can be combined with other types of addiction, Internet addicts are characterized by certain types of attitude towards others and a lack of feeling of satisfaction with life; Respondents who are less dependent on the Internet tend to positively evaluate themselves, be consistent in achieving their goals, fall into other addictions less often, and activate situationally necessary types of attitude towards others.*

Keywords: *Internet, Internet-addiction, peculiarities of Internet addiction, students, war situation, COVID-19.*

How to cite: Chuyko, H., Chaplak, Y., & Koltunovych, T. (2024). Psychological characteristics of internet addiction in students in problem life situations (COVID-19, war). *Revista Românească pentru Educație Multidimensională, 16*(3), 309-334. https://doi.org/10.18662/rrem/16.3/895

Introduction

Information technologies in general and the Internet in particular have long secured a reliable place in human life and the information society. However, together with the discovery of unprecedented opportunities for people (the Internet is a unique means of finding and receiving information from various areas of life, a place for virtual meetings and communication, entertainment, artistic and cultural development and virtual trips to wonderful places in the world; a huge market where you can not only buy desirable, but also to find a corner for playing or earning money (Chujko & Chaplak, 2019), they also brought new problems, the most discussed of which in the columns of scientific journals was Internet addiction – excessive, uncontrolled and unproductive stay on the Internet, combined with an acute reluctance to leave it in the real world, regardless of any consequences, both for oneself and for loved ones. According to scientists, "the average user spends" in the Internet space "about seven hours every day" (Stanislavsky, 2021), but if we are talking about an Internet addict, then this figure can be even higher. In addition, the number of Internet addicts is increasing from year to year, turning into a problem that needs to be solved. Moreno et al. (2019) concluded that problematic Internet use can be driven by a sense of threat to it, making Internet addiction a public health problem.

However, regarding the study of Internet addiction, one gets the impression of an ambivalent situation: on the one hand, the growing number of studies indicates the importance of the problem, the need for its solution, and the likelihood of quickly achieving the long-desired result: the creation of a scientifically based theory of Internet addiction, which will explain the validity of using just such a term, on the other hand the huge number of scientific works related to the problem of excessive uncontrolled use of the Internet, which can lead to unexpectedly severe consequences, actually complicates their systematization and generalization of their results in a coherent scientific theory that would explain the phenomenon of Internet addiction.

Review of literature

Background of the problem

Internet Addiction Disorder problem is relatively new in psychology, its history is not even half a century old. Perhaps that is why there is still no agreement among scientists regarding a certain sounding of the term. In the scientific literature, you can find the phrases "Internet addiction",

"computer addiction", excessive, problematic or compulsive use of the Internet, "pathological use of the Internet" (Cash et al., 2012) and many others (Vojskunskij, 2009: 101), used by scientists to denote the phenomenon of human dependence on the Internet.

Internet addiction has almost all the features characteristic of addictions known in science (Cash, Rae, Steel, & Winkler, 2012), in particular, such as a certain level of manifestation, loss of control, altered state of consciousness, mood modification as an opportunity to obtain an object addiction, even when it is necessary to refrain from it, habituation, which leads to a gradual increase in the "dose", unwillingness to notice one's problem and accept the remarks / requests of loved ones who point to it, ignoring all other aspects of life, the desire to continue despite understanding the negative consequences . Internet addiction differs only in that it is a non-chemical addiction and it develops much faster than other addictions. Thus, Young & de Abreu (2017) notes that a quarter of people became addicted to virtual space within six months, two thirds during the second half of their active stay on the Internet, the rest is within a year.

According to Subashkevych & Grynash (2021), since modern person has understood the inability to function normally in the information society without the use of various technical means, the emergence of dependence on the Internet "is a natural necessity" of modern society.

This position, in our opinion, needs to be clarified: not by "natural necessity", but by a certain regularity of the development of the information society, in which any technological information innovation (which in the perception of people remains so as long as it is possible to discover a deep, externally hidden potential, which, in fact is the Internet) causes admiration, affection and a certain dependence. Internet addiction, in our opinion, may turn out to be a component of a more fundamental addiction that is informational (and not technological, because it is an addiction not to the device, not to the machine, but to its content), caused by the excessive value and importance of information and knowledge obtained on it basis, in the information society, where a significant share of information is stored precisely in the virtual space of the Internet.

Scholars' Understanding of Internet Addiction

Having analyzed various interpretations of the concept of Internet addiction, it is first worth noting the following circumstances that generalize the situation in a certain way.

Firstly, since Internet addiction is still not included in the DSM, the question of its pathology remains open, so even if scientists understand it as

such, it is more likely not a medical issue, but a social pathology of Internet addiction (non-compliance with social norms).

So, one of the first to talk about Internet addiction as an example of pathological use of the Internet was Davis (2001). The scientist's opinion was supported and specified by Stril'chuk (2020), understanding Internet addiction as a psychopathological behavioral disorder, and A.A. Smirnova and colleagues (Smirnova et al., 2017), associating it with mental disorder of personality as a whole. From the point of view of Asjejeva (2020), addiction to the Internet manifests itself as a compulsive disorder not only of behavior, but also of the addict's psyche; according to Di Carlo et al. (2021), is a manifestation of obsessive-compulsive mental disorder. While Lozano-Blasco et al. (2022) and Christakis (2010) note that excessive use of the Internet is not a pathology and is not recognized as such by official science, although the behavior of an Internet addict differs from the behavior of other people in society. Vojskunskij (2017) adds that now is not the time to interpret Internet addiction as a mental illness, it is worth continuing the research of this phenomenon.

Secondly, scientists also disagreed in the interpretation of whether Internet addiction is an independent manifestation of deviant behavior and the result of excessive and uncontrolled use of the Internet, or whether it is one of the manifestations of concomitant addiction, especially considering the fact that Internet addiction is accompanied / is associated with the existence of another type of addiction / mental disorders of a person. In particular, M. Anderson and J. Jiang (2018) note that some researchers consider Internet addiction to be an independent phenomenon, while others emphasize that this addiction implements those deviations that were already present in human behavior. However, in our opinion, the position of scientists that Internet addiction is preceded by the presence of other deviant behavior in a person's behavior does not actually deny the fact that addiction to the Internet arises as a result of excessive enthusiasm for being on the Internet (perhaps, precisely realizing its tendency to addiction). In addition, when determining what exactly is an "accompanying manifestation": Internet addiction or another form of behavioral or emotional deviation, it is worth considering what appeared first in a specific situation: if it is an addiction to the Internet, then it is exactly Internet addiction in general (the rest negative manifestations – accompanying phenomena), if other deviations in the behavior, social or emotional spheres of the personality are initially diagnosed / manifested, then the emergence of Internet addiction is only a new symptom of the first, initial addiction.

In this context, we note that T. Hassan and colleagues (Hassan et al., 2020) tend to understand Internet addiction as a rather independent phenomenon, when a person gradually loses volitional control over Internet use and notices a problem when negative consequences for his/her life from such behavior becomes irrefutable to him/her. While the majority of scientists believe that Internet addiction is to some extent connected with other human diseases. Yes, Davis (2001) notes that before the appearance of Internet addiction, a person may already have disorders in the cognitive sphere, H. Cash and colleagues (Cash, Rae, Steel, & Winkler, 2012) believe that Internet addiction as a disorder of human control over own impulsive behavior can be a manifestation of another mental disorder of the personality, in particular emotional. According to W. Bai and colleagues (Bai et al., 2022), it is a manifestation of compulsive behavior associated with other behavioral addictions or emotional disorders such as inappropriate anxiety or depression. Vojskunskij (2015) generally believes that a person's mental problems become the basis for the formation of Internet addiction. That is, according to these scientists, excessive use of the Internet is preceded by other psychological disorders of the individual. While Young & Rogers (1998) investigated the relationship between Internet addiction and depression, and Gjoneska et al. (2002) tend to believe that it is the addiction to the Internet that can provoke problems with the psyche and general health of a person. Kuss & Lopez-Fernandez (2016) quite logically point out that Internet addiction is associated with co-morbidities of a person, although it is not always their root cause.

Thirdly, starting from Davis (2001), two types of Internet addiction are distinguished: general and specific. At the same time, general Internet addiction is interpreted as human behavior manifested in excessive use of the Internet in general. While specific is interpreted as a person's focus on achieving a certain fixed goal online (for example, buying goods, earning money, playing, etc.). Let us add that the selection of a specific type of Internet addiction actually correlates with various separate types of Internet addiction, identified by Young & de Abreu (2017) and that in our work we focused on its general understanding, regardless of what exactly (what object) interests the user of the Web within its limits, although we are also fully aware of its complex integral nature of this concept.

Griffiths (2001) considers general, "generalized" addiction to the Internet to be "technological addiction", that is, a manifestation of excessive interaction between a person and a machine, which is a type of behavioral addiction. Tripathi (2017), Hassan et al. (2020), Fernandes et al. (2021), Moreno et al. (2019) and Burkauskas et al. (2022) tend to understand

Internet addiction as a general (generalizing) concept, regardless of what the Internet interests a person, what type of activity in the virtual space he/she prefers. Griffiths (2009) adds that the Internet becomes very important for a person, and while on it, he/she loses the ability to control the flow of time. According to Kuss & Lopez-Fernandez (2016), Internet addiction is problematic Internet use in general that correlates with symptoms of other addictions. Di Carlo et al. (2021) also explain its formation by a person's inability to emotional self-regulation. Ryding & Kaye (2018) also interprets Internet addiction as a complex generalized concept that involves various types of human activity on the Internet.

As we can see, different authors' interpretations of the concept of "Internet addiction", regardless of how they are expressed verbally, take into account the circumstances listed by us to varying degrees.

In our opinion, addiction manifests itself as a deterioration of a person's well-being and functioning, or in general as the impossibility of his/her existence in the absence of the object of addiction. Dependence can be considered a problem of possession, manifested in the need to have the object of dependence at one's disposal. In this context, if a person's mood and general psychophysical well-being deteriorates to the point of impossibility/inability to engage in any other activity due to the lack of a chance to use the Internet and its capabilities, then we are talking about Internet addiction. And, if for the vast majority of people (as it is noted that the level of addiction to the Internet of the adult population reaches 2% (Lozano-Blasco et al., 2022) this situation is not relevant, is not the norm, then Internet addiction is a manifestation of pathology, although not always mental, rather social-behavioral deviation.

We are closer to a comprehensive understanding of Internet addiction as a person's dependence on everything that becomes available to him/her thanks to the Internet, be it online contacts, buying things, online games, searching for the necessary information, "surfing" the Internet with alternate jumping from one information to another (from site to site), interesting for the user, or visiting specific sites, because all these forms of activity are related to a specific "place" – a virtual network.

We would like to add that Internet addiction, in our opinion, is actually an addiction not to the Internet and not to an uncontrolled and mindless stay on the Internet. The meaning of this "stay" is to search for the necessary and/or interesting information (of different nature, content and origin) from all that is contained in the virtual Web (so to speak, "mediated" by the Internet). Taking into account the fact that we live in an information society, which continues to develop in the key of the greatest appreciation of

Information and knowledge, it is disappointing to state that the number of those who will become addicted to the Internet will increase from year to year, and in the future development of society – in geometric progression. This is a natural phenomenon under the conditions of the information society. As long as a person needs information that can be found on the Internet, and as long as access to this information is relatively easy, the risk of falling into Internet addiction will remain. And the only salvation, taking into account the fact that Internet addiction is formed relatively quickly, is the hope that, having passed the stages of forming an addiction to the Internet, the majority will not be "stuck" at the stage of formed addiction, but will successfully move to the next stage, having learned and acquired training to use Internet only in case of objective necessity (Bacylova & Puz', 2018).

The understanding of Internet addiction as a general one allows to distinguish within its limits certain types (Young & de Abreu, 2017); this is an addiction to communication in social networks and virtual dating; from computer / online games, in particular gambling; from constant "surfing" of the Internet in search of interesting but superficial information; from information that can be obtained on the Internet through active search, important and necessary, and cybersexual addiction.

So, it is not a dependence on a place (at least not purely on a place as a virtual world, time and space), it is a dependence on its possibilities and content. Internet addiction is an additive behavioral deviation that manifests itself in an unreasonably excessive stay of an individual in the Internet network with the complete impossibility / acute reluctance to return to the real world, which is accompanied by a change in the state of his consciousness (Chaplak et al., 2023).

Indications of Internet addiction

Analyzing the symptoms of Internet addiction presented in the works of various scientists, we reached two main conclusions: first, there are many different symptoms that indicate a person's addiction to the Internet, and with each new study of Internet addiction, their number gradually increases; secondly, the symptoms of Internet addiction should be divided into basic, fundamental (they can be the criteria for a person's addiction to being on the Internet), and secondary, derived from the first. We believe that it is appropriate to name one basic symptom, and others can be considered derivatives, consequences of the manifestation of this very sign of Internet addiction: it is a person's preference for being on the Internet over any other possible types of his/her activity in real life. Other symptoms/criteria by which Internet addiction can be diagnosed essentially explain this

fundamental symptom, emphasizing the causes, manifestations and consequences of Internet addiction. Thus, most scientists, defining the symptoms of Internet addiction, actually focus on the following three main ones: 1) the psychological (emotional) state of the addict; 2) the time he/she spends on the Internet; 3) the negative consequences of addiction and the Internet addict's attitude towards them.

Let's briefly analyze each of them.

1. A person's mental state and well-being improves to the point of being euphoric and inspired while on the Web and sharply deteriorates (irritation, anxiety, depression) when it is impossible to do so.

Young & de Abreu (2017) draws attention to the impatient waiting of an Internet-addicted person for the moment when he/she can enter the Network, being in which can be used to improve his/her own well-being and good mood (Tao et al., 2010; Orzack & Orzack, 1999; Vanda & Bondarenko, 2019) and even borderline euphoric pleasure (Sasovs'ka, 2019). At the same time, even after being on the Internet for a long time, a person does not feel guilty (Vojskunskij, 2017). If, for any reason, an Internet addict is deprived of the opportunity to visit desired Web sites, he experiences feelings of irritation, restlessness, depression, and associated negative emotions (Orzack & Orzack, 1999; Tao et al., 2010; Beard, 2005; Vojskunskij, 2017; Sasovs'ka, 2019; Griffits, 2001; Asjejeva, 2020).

As a result, an Internet addict is characterized by mood swings associated with his/her ability to enter the Internet (M.A. Vanda, & N.B. Bondarenko (2019), M. Griffits (2001)).

2. The time that an Internet-addicted person spends on the Internet is, firstly, greater than the statistical average; secondly, it is constantly increasing, as there is a process of getting used to the influence of the Internet and its effect on the user loses its sharpness; thirdly, it is little controlled by a person addicted to the Internet; fourth, even when offline, a person is constantly thinking about his/her past/future online activity, even about what is happening there when he/she is offline.

Once on the Internet, an Internet addict loses the ability to control not only his/her behavior, but also the time he/she spends in the virtual world (M.A. Vanda, & N.B. Bondarenko (2019)). At the same time, he/she not only remembers and can experience the details of past Internet visits, but also enjoys the thought of what he/she will do on the Internet now and in the future (Tao et al., 2010); that is, even without being online in reality, a person is always or mostly there in thoughts (Beard, 2005). The time that an Internet addict spends on the Internet must constantly increase in order to achieve the euphoric state that he/she experienced in the virtual world

before (Griffits, 2009; Orzack & Orzack, 1999; Vanda & Bondarenko, 2019; Beard, 2005). Any attempt by a person to reduce, adjust the time he/she spends on the Internet, or even limit himself/herself to the time spent on the Internet before, ends in fiasco. Even the complaints of loved ones about a person's constant presence on the Internet turn out to be ineffective (Beard, 2005; Tao et al., 2010).

3. An Internet-addicted person "does not notice" the negative consequences of his/her problematic use of the Internet for a long time, and when relatives/dear ones point them out, he/she ignores them, because by this time he/she is completely absorbed in the idea that only the Internet is his/her "true friend" (Vanda, & Bondarenko, 2019), so problems in the family, at work, in real life are of little interest to him/her, unless they concern the possibility of accessing the Internet.

Not only loved ones notice that a person spends too much time online (Vojskunskij, 2017), while spending considerable money (Young, 1998a, 1998b), the addicted person himself/herself can fully understand this, as well as to be aware of the negative consequences of such behavior and the problems it leads to (Tao, et al., 2010; Orzack & Orzack, 1999). However, since it cannot be stopped (Griffits, 2001), the negative consequences of Internet addiction can be: deterioration or loss of relationships (friendship, family, work) (Tao et al., 2010; Vojskunskij, 2017; Beard, 2005); conflicts and misunderstandings with loved ones (Asjejeva, 2020); social isolation (Orzack & Orzack, 1999); indifference to what was previously of interest (Tao et al., 2010; and to other aspects of life in general (Vanda & Bondarenko, 2019; Asjejeva, 2020); personality disorder (Tao et al., 2010; Vojskunskij, 2017; Beard, 2005)

Methodology

Aim of the research

The aim of the work is to theoretically analyze the phenomenon of Internet addiction, its psychological manifestations and features, to conduct an empirical study of Internet addiction of students in crisis life situations (COVID-19 pandemic and war), its connection with their dispositional characteristics and their satisfaction with life.

Problematic questions

Is the Internet addiction of students related to their personal characteristics and the degree of their satisfaction with life and feeling of happiness?

Do the BC (beginning of COVID-19) and BW (beginning of war) samples differ in the context of the investigated problem?

Can the level of Internet addiction of the respondents of both samples affect their satisfaction with life?

Study sample

Ethical approval was not required for this research article.

Forms of methods were provided to each respondent to fill in at his/her request/consent. Participation in this research was purely voluntary, anonymity, protection of personal data of research participants and confidentiality of results were guaranteed. They were informed in advance about the purpose of the study, after which their verbal consent to participate in it was obtained. A period of ten days to two and a half weeks was set for data collection.

The general sample was made up of students – future psychologists and teachers of preschool education institutions of Yuriy Fedkovych Chernivtsi National University, junior years (I-II years). The study was conducted in the spring of 2020 (COVID-19 disease situation, beginning of COVID-19 sample (n=88)) and 2022 (war situation, WW (beginning of war) sample (n=87)), the average age of the respondents of the WS sample – 18.61 years; sample BW – 18.25 years.

Methods and techniques

During the research, a combination of complementary methods was utilized:

– Theoretical methods involved analysis, comparison, and synthesis of researchers' perspectives regarding the understanding of Internet dependency issues, along with the systematization and summary of results.

– Empirical methods included the use of the Internet Addiction Test, a methodology created by Young in the 1990s (Young, 1998b; Internet Addiction Test, n. d.), adapted by Loskutova (2004). It's designed for self-diagnosis by respondents of pathological tendencies towards Internet usage. The complete test comprises 40 questions, each with five response options: "never", "rarely", "occasionally", "often", and "always" (scoring from 1 to 5). The sum of the respondent's scores determines their level of Internet dependency: 20-49 points indicate a regular Internet user; 50-79 points suggest existing issues related to excessive Internet use; 80-100 points imply Internet dependency.

Scale S.-H. Cnen (CIAS, Chen-Internet-Addiction-Scale) (Chen et al., 2003), adapted from Malygina et al. (2011), intended for the diagnosis of Internet addiction based on the respondent's assessment of 26 situations

related to the use of the Internet, by choosing the appropriate answer from 4 possible: "absolutely not suitable" (1 point), "rather not suitable " (2 points), "more suitable" (3 points) and "completely suitable" (4 points). According to the key to the methodology, points are calculated for 5 scales of Internet addiction: the presence of compulsive (Com), withdrawal (Wit) and tolerance (Tol) symptoms; intrapersonal and health problems (IH), time management problems (TM). On their basis, two basic scales of the technique are determined: 1) key symptoms of Internet addiction (sum of Com, Wit and Tol) and 2) personality problems related to Internet addiction (sum of IH and TM), as well as the total CIAS score (sum of points on all scales). Based on this, three levels of Internet addiction are determined: 1) from 27 to 42 points - a minimal risk of Internet addiction, 43-64 points – a tendency to develop Internet addiction, $\geq$ 65 points – a expressed and persistent manifestation of Internet-dependent behavior.

Test for dependence (addiction) (Methodology for diagnosing susceptibility to 13 types of addictions, G.V. Lozovaja) (Test na zavisimost', n.d.). The methodology was created in 2007 and is intended for indicative determination of a person's propensity to 13 types of addictions (alcohol, television, computer, love, drug, tobacco, food, gaming, workaholism, religious, intersex relationships, healthy lifestyle and drugs) and the general tendency to fall into addiction in general, where "addictive behavior" is interpreted by the author of the technique as the realization by an individual of an attempt to escape from reality by changing the state of consciousness, which provides him with an illusory feeling of comfort and security. At the same time, the desire to change the psychophysical state is insurmountable, constant and cyclical (from the phase of psychological readiness to addictive behavior to obtaining the object of addiction, relaxation and a period of remission as a result of satisfying the addictive need).

The methodology contains 70 statements that the respondent needs to evaluate by choosing an answer option (from "no" to "yes") on the R. Likert scale. Each type of addiction diagnosed by the method is divided into three levels of manifestation during evaluation: 5-11 points is low, 12-18 points is average, 19-25 points is high.

The method of diagnosing interpersonal relations (T. Leary Test), developed in 1954 by T. Leary, R. Leforge, R. Sazek (Leary, 1957; Test mizhosobystisnyh, n. d.), is intended for studying the individual's perception of himself/herself based on his assessment of belonging / not belonging to him/her of each of the 128 characteristics listed in the methodology. The method diagnoses 8 types of the respondent's relationship with other people / personality types (managerial, competitive, aggressive, rebellious, self-

effacing, docile, cooperative, responsible), which ultimately combine into two key factors (dominance – submission and friendliness – aggressiveness), which reveal the nature of interpersonal relationships.

The maximum score of each type is 16 points, combining manifestations of adaptive behavior (up to 8 points), extreme (9-12 points) and pathological behavior (13-16 points).

The Life Satisfaction Index questionnaire (Neugarten et al., 1961), adapted from Panina (1993), designed to determine the degree of a person's satisfaction with life in general, as an integral indicator that reflects his/her mental state and socio-psychological adaptability. The methodology consists of 20 statements, with which the respondents are asked to rate their agreement ("agree", "disagree", do not know). In addition to the general indicator of life satisfaction, the methodology defines five of its components: 1. Interest in life (enthusiasm for ordinary everyday life). 2. Consistency in achieving goals (manifestation of determination and perseverance aimed at achieving the goal). 3. Consistency between set and achieved goals (conviction in the possibility of achieving the goal). 4. Positive assessment of oneself and one's actions. 5. General mood background (degree of optimism due to life satisfaction).

The updated Oxford Happiness Inventory (OHI) (Obnovlennyj Oksfordskij, n.d.), developed by Argyle et al. (1989), is designed to diagnose the respondents' sense of happiness, which, according to the authors of the method, being holistic factor / construct of human experience, consists of the following indicators: satisfaction with life, dominance of positive and absence of negative emotions. The questionnaire consists of 29 groups of statements, each of which contains 4 interrelated statements, from which the subject must choose one – the one that most accurately characterizes his/her state and feelings recently. Then the obtained points are added, their sum is divided by 87 (the maximum possible number of points according to the method) and multiplied by 100, determining what percentage of happiness, compared to the maximum, the respondent feels. At the same time, up to 20% is a sign of a low indicator, 21-40% is low, 41-60% is medium, 61-80% is elevated, and 81-100% is high.

Results

Note that, according to the method of S.-H. Chen, the average level of manifestation of all indicators is dominant in both samples; at the same time, the average values of indicators of compulsive symptoms and the presence of key symptoms of Internet addiction (BW sample) differ slightly,

reaching a higher-than-average level of manifestation, as well as indicators of problems caused by respondents' Internet addiction is in the BC sample.

According to the method of Young, the sample averages (84.69 points (BC sample) and 80.45 points (BS sample) indicate their addiction to the Internet, which managed to turn into a problem.

Correlational analysis of research results, according to the methodology of Ch. Spearman (Spearman's rho), revealed a significant number of statistically significant correlations between the indicators of different methods, however, given the aim of our research and the large number of detected correlations, we will focus on the analysis of the correlations of the methods of S.-H. Chen and Young with other indicators, and let's focus on the common connections of both Internet addiction diagnosis methods with other methods. We also note that these relationships are common to both samples.

Table 1. Correlations of Internet addiction diagnosis methods of both samples

indicators	sample BW		sample BC		method
	r	p	r	p	
rebellious type of attitude	0,42	≤0,001	0,40	≤0,001	S.-H. Chen
	0,33	≤0,01	0,25	≤0,05	K.S. Young
docile type of attitude	-0,53	≤0,001	-0,51	≤0,001	S.-H. Chen
	-0,32	≤0,01	-0,27	≤0,05	K.S. Young
feelings of happiness	-0,51	≤0,001	-0,45	≤0,001	S.-H. Chen
	-0,46	≤0,001	-0,41	≤0,001	K.S. Young
food addiction	0,43	≤0,001	0,35	≤0,01	S.-H. Chen
	0,48	≤0,001	0,50	≤0,001	K.S. Young
religious addiction	0,36	≤0,001	0,30	≤0,01	S.-H. Chen
	0,28	≤0,01	0,22	≤0,05	K.S. Young
computer addiction	0,47	≤0,001	0,44	≤0,001	S.-H. Chen
	0,54	≤0,001	0,53	≤0,001	K.S. Young
sequence in achieving a goal	-0,43	≤0,001	-0,36	≤0,001	S.-H. Chen
	-0,49	≤0,001	-0,48	≤0,001	K.S. Young
consistency between set and achieved goals	-0,31	≤0,01	-0,30	≤0,01	S.-H. Chen
	-0,50	≤0,001	-0,46	≤0,001	K.S. Young
positive self-assessment and evaluation of one's actions	-0,35	≤0,01	-0,32	≤0,01	S.-H. Chen
	-0,25	≤0,05	-0,28	≤0,01	K.S. Young
life satisfaction	-0,36	≤0,001	-0,34	≤0,01	C.-X. Chen
	-0,41	≤0,001	-0,43	≤0,001	K.S. Young

Source: Author's own conception

In order to determine and evaluate the differences between the two samples, we used the Mann-Whitney U-test. The differences we identified are recorded in the table:

Table 2. Mann-Whitney U-test results

BW > BC			
indicators	method	U	p
aggressive type of attitude	Methods of diagnosing interpersonal relationships by T.Leary	2202	0,000
rebellious type of attitude		3126	0,036
self-effacing type of attitude		1974	0,000
docile type of attitude		864	0,000
cooperative type of attitude		1152	0,000
responsible type of attitude		2262	0,000
Alcohol addiction	Method of diagnosing predisposition to 13 types of addictions by G.V. Lozova	3024	0,016
TV addiction		2142	0,000
computer addiction		3246	0,018
zest for life	Life Satisfaction Index Test (Neugarten et al. 1961), adapted by Panina (1993)	2502	0,000
Consistency in achieving the goal		3150	0,043
BC > BW			
feeling of happiness	OHI, Oxford Happiness Inventory	2130	0,000
love addiction	Method of diagnosing predisposition to 13 types of addictions by G.V. Lozova	2598	0,000
food addiction		3168	0,000
religious addiction		3168	0,049
labour addiction		2136	0,000
general tendency to become addicted		2502	0,000
integral measure of life satisfaction	Life Satisfaction Index Test (Neugarten et al. 1961), adapted by Panina (1993)	3018	0,015
time management	Chen Internet Addiction Scale	3126	0,036
problems associated with computer addiction		3102	0,030
Compulsive symptoms of addiction		3126	0,036

Source: Author's own conception

Continuing the analysis of the research results, in order to evaluate the differences between the three experimental conditions (levels of Internet addiction (high, medium and low), determined according to the scale of S.-H. Chen (note that the choice for this purpose of S.-H. Chen's methodology is due to that according to the questionnaire of K. Young, in one of the samples (BW) only two levels of Internet addiction are determined: medium (55.17%) and high (44.83%)), Kruskal-Wallis rank univariate analysis was applied - Wallis one-way analysis of variance). As a result, the existence of

statistically significant differences between three groups of experimental indicators in both samples was revealed. We present them, as well as the results of their pairwise comparison of samples, in the table:

Table 3. Kruskal-Wallis H-test results

Indicators	Sample BC (n=88) High (n=32) Medium (n=33) Low (n=23)	Comparison of three groups (1, 2, 3), selected according to the method of S.-Kh. Chen	Sample BW (n=87) High (n=21) Medium (n=50) Low (n=16)	Comparison of three groups (1, 2, 3), selected according to the method of S.-Kh. Chen
The diagnostic methodology of interpersonal relationships by T. Leary, R. Leforge, R. Sazek (types of attitudes towards other people)				
Managerial	-	-	H=10,156, p=0,006	1>3, 2>3
Competitive	-	-	H=17,009, p=0,000	1<2, 3<2
Aggressive	H=6,84, p=0,033	2>3	-	-
Rebellious	H=21,432, p=0,000	1<2, 1<3	-	-
Self-effacing	-	-	H=14,608, p=0,001	1>3
Docile	H=14,666, p=0,001	1>3	-	-
Cooperative	H=8,653, p=0,013	2<3	-	-
Responsible	H=29,151, p=0,000	1>2, 1>3	-	-
Oxford Happiness Inventory, OHI (Argyle et al., 1989)				
Feeling of happiness	H=12,981, p=0,002	1>3	-	-
The addiction test (diagnostic method for susceptibility to 13 types of dependencies by H.V. Lozova)				
Alcoholic	H=20,511, p=0,000	1<2, 1<3	-	-
Television	H=12,957, p=0,002	1<3, 2<3	-	-
Love	-	-	-	-
Gaming	H=6,893, p=0,032	1<3, 2<3	-	-
Relation	-	-	-	-
Food	H=16,352, p=0,000	1<2, 1<3	-	-
Religious	H=10,987, p=0,004	1<3	H=17,277, p=0,000	2>3

Medical	H=12,951, p=0,002	1<2, 3<2	H=15,221, p=0,000	1<2, 1<3
Computer	H=15,697, p=0,000	1<3, 2<3	H=35,374, p=0,000	1<2, 1<3, 2<3
Tobacco	-	-	H=10,781, p=0,005	1<3, 2<3
Healthy lifestyle	-	-	H=22,072, p=0,000	1>3, 2>3
Drugs	H=7,357, p=0,025	1>2	H=7,573, p=0,000	1>3, 2>3
Overall indicator	H=28,973, p=0,000	1<3, 2<3	H=12,984, p=0,023	1<3, 2<3
*Life satisfaction index (*Neugarten et al., 1961*), adapted by Panina (1993) (LSI)*				
Interest in live	-	-	H=35,866, p=0,000	1>2, 1>3, 2>3
Consistency in achieving goals	H=15,357, p=0,000	1>2, 1>3	H=30,726, p=0,000	1>3, 2>3
Goals consistency	-	-	H=29,943, p=0,000	1>3, 2>3
Positive self-assessment	H=6,325, p=0,042	2>3	H=28,305, p=0,000	1>3, 2>3
General mood background	-	-	H=18,802, p=0,000	1>3, 2>3
LSI	-	-	H=33,357, p=0,000	1>3, 2>3

According to the method of S.-H. Chen: 1 corresponds to a low level of Internet dependency, 2 is moderate, 3 is high level.
Source: Author's own conception

In order to find out whether a person's Internet addiction affects his/her feeling of happiness and life satisfaction, the calculations of correlation relations, coefficients of determination (Table 4) and correlation coefficients (Table 1) made it possible to determine the degree of curvilinearity of the relationship ($K = \eta^2 - r^2$, where η is the value of the correlation ratio, r is the value of the correlation). With a clearly straight line, the correlation ratio and correlation coefficient are equal to 1, i.e., $r = \eta = 1$, with a curvilinear one – $\eta > r$. When $K = 0$, the relationship is straight-line. With a value of K in the range from 0 to + 1, it is necessary to determine the reliability of the measure of linearity (tK). The calculation of the tK error allows us to assert the reliability of curvilinearity for the indicators of "happiness" and "life satisfaction" during the war (tK > 3).

Table 4. Coefficients of correlation and determination

Effect of dependence on:	sample BC			sample BW		
	η	η^2	variation	η	η^2	variation
feeling of happiness	0,506	0,2561	25,61%	0,0058	0	–
satisfaction with life	0,3561	0,1268	12,68%	0,6191	0,3833	38,33%
Impact on addiction						
feeling of happiness	–	–	–	0,1364	0,0186	1,86%
satisfaction with life	–	–	–	0,6283	0,3947	39,47%

Source: Author's own conception

Discussions

Based on the analysis of the data in Table 1, the following separate conclusions can be reached; A person addicted to the Internet can doubt everyone and everything, suspect them of bad intentions towards him/her, therefore he/she is not inclined to rely on the opinion of other people or to enter into business, and even more so into personal relationships with them (suspicious type of attitude), but, perceiving the world as a hostile place for oneself resists it, showing confidence in one's own abilities (apparently, fleeing from it to the Internet space) (non-dependent type of attitude); as an addition to the main addiction, he/she may also have a tendency to fall into other types of addiction: food, religious, computer addiction – losing self-control and thus activating an altered state of his/her own consciousness, which can serve as a psychological defense against an unacceptable reality; such a person may not feel satisfied with life in general and the situation around him/her in particular, he/she has a predominant negative emotional response, in particular, anxiety and a negative assessment of himself/herself and the results of his/her actions; he/she reacts passively to his/her own failures is convinced that he/she will not be able to achieve what he/she wants (at least in real life), perhaps that is why he/she tends to show an irresistible desire to escape from reality into the world of the Internet, where there is always a virtual opportunity to achieve the goal and which protects her from the distresses and problems of real life (Chaplak, Chuyko, &

Zvarych, 2023), which can cause damage to the self-esteem of the individual, weakening negative external influences and helping to stabilize her psyche, in fact, approaching the role of psychological protection (Chuyko et al., 2022).

Considering the cases where the BW (Beginning of War) > BC (Beginning of COVID-19) indicators (table 2), we can assume that during the war (at its beginning), firstly, something happens that makes no sense in the conditions of COVID-19: there is a review by the individual of his/her own qualities from the point of view of their correspondence to new external realities, activating the necessary ones, changing his perception of himself/herself and those of his/her characteristics that are manifested in the attitude towards the world in general and other people in particular under new conditions. On the one hand, internal resistance increases, and with it the aggressiveness of a person, which is manifested in the harshness and rigidity of his/her behavior and statements (in response to the external aggression of the war), on the other, as a result, in particular, insecurity and anxiety about the future, disappointment in other people and the world in general, submission to circumstances that cannot be changed appears, this is combined with the strengthening of altruistic manifestations and the desire to help as much as possible by working, for example, as a volunteer. Secondly, a person's experience of an external tragic situation prompts him/her to seek psychological protection, in particular, falling into television and / or computer addiction (sources of the latest news), and in search of solace from the horror he/she saw, to alcohol, which allows him to cope with perception what is happening It can also be considered natural that the respondents of the sample have an increased interest in everyday life with its objective loss or tragic disruption and attention to consistency in achieving the set goal.

Whereas COVID-19, the beginning of which was accompanied by the transition to a distance form of education, on the one hand, is associated with respondents feeling optimistic satisfaction with life and even experiencing happiness from an unexpected relief for them (you can get up right before classes without wasting time going to HEI); on the other hand, more time was freed up for other activities, which resulted in falling into various addictions, in our opinion, to some extent typical for the period of isolation: love, food, work (to occupy oneself with something while wasting time) or religious (it is worth mentioning that in publications, COVID-19 was often interpreted as "God's punishment"); however, this distribution of time (its unexpected excess) caused problems with its management, its correct structuring and the appearance of other, concomitant problems related to addictions, in particular, Internet addiction: both intrapersonal and

with the health of the respondents in general, on the one hand, and compulsive symptoms of addiction, on the other hand.

Analyzing the data presented in Table 3, we first focus on indicators where the difference between experimental groups applies to both samples at the same time. So:

- respondents who are less dependent on the Internet are more consistent in achieving the set goal and evaluate themselves more positively (methodology of LS); show a lower tendency to fall into addiction in general (methodology of diagnosis of tendency to 13 types of addictions, G.V. Lozova) and to computer addiction and addiction to the use of medical drugs in particular, but show a higher tendency to fall into narcotic addiction.

According to the method of T. Leary, R. Leforge, R. Sazek:

– the sample of BC: less Internet-addicted respondents have stronger personality traits of aggressive, dependent and altruistic types of interpersonal attitudes, while individuals more dependent on the Internet tend to display suspicious and benevolent types of attitudes;

– the BW sample: less Internet-addicted interviewees may go to extremes: show authoritarianism and submissiveness, and more Internet-addicted respondents may show selfishness.

According to the method of diagnosing susceptibility to 13 types of addictions:

– respondents of the BC sample: the greater their dependence on the Internet, the stronger their tendency to other types of addiction: alcohol, television, gaming, food, and religious addiction; surveyed BW samples with a lower level of Internet addiction show a tendency to be addicted to a healthy lifestyle and religious addiction, while those with sufficiently developed Internet addiction are also addicted to tobacco;

– the most significant difference between the samples according to this method is by religious dependence: if in a situation of COVID-19 Internet addicts fall into religious dependence more often than those independent of the Internet, then in a war situation – on the contrary, less dependence on the Internet is combined with religious dependence; statistically significant differences between less Internet-dependent respondents and the feeling of happiness were found only in the BC sample.

As can be seen from table 4, during the COVID-19 pandemic, 25.61% of the variation in the variable "happiness" and 12.68% of the variation in the variable "satisfaction with life" are explained by the level of dependence of the interviewees on the Internet (F=29.56, p≤0.000; F= 13.41, p≤0.000, respectively). The analysis of Table 4 also demonstrates the

presence of a mutual influence of indicators of Internet addiction and the index of satisfaction of respondents with life during the war: the level of satisfaction with life of the studied sample of WW by 38.33% is determined by their level of Internet addiction, which, in turn, by 39.47% and 1.86%, respectively, is described by the respondents' level of satisfaction with life (F=54.34, p≤0.000) and the feeling of happiness (F=11.73, p≤0.000). While the influence of the level of Internet addiction on the level of the respondents' feeling of happiness during the war was not found.

That is, the possibility of being distracted in a war situation by staying in the virtual space of the Internet, which in this context is able to perform the function of psychological protection, on the one hand, and becomes an optimal source of information, – on the other hand, is able to lead the user to experience a feeling of happiness and a certain satisfaction with life, which, in turn, it can encourage the respondents of the BW sample to be even more interested in visiting the Internet, gradually forming Internet addiction in them (in essence, falling into a vicious circle: Internet fascination can become one of the sources of personal satisfaction with life (this satisfaction, presumably, with virtual life, in the Internet space, since the correlation of indicators of life satisfaction and Internet addiction is negative), and the desire to feel satisfaction from life, in turn, can make a person inclined to visit the Internet even more often).

Conclusions

Internet addiction is a behavioral deviation, the appearance of which is determined by cognitive and/or affective factors, and which manifests itself in the excessive presence of a person on the Internet, combined with an acute reluctance to leave the Internet and negative experiences due to the inability to access the Internet; Internet addiction turns out to be a problem of possessing a certain object without being able to give it up. However, this is precisely informational dependence, since it is not actually a dependence on the place (the Internet), but on its content, content, which is information in the broadest sense of the word. This dependence can be understood as pathological in the sense of social behavioral deviation, since it is not characteristic of most people. Internet addiction can be an independent manifestation of deviant behavior or a concomitant symptom of another addiction or disorder, depending on the time of its manifestation in a person.

A basic/defining symptom of Internet addiction is a person's preference for being online over any other activity in real life; other important signs of Internet addiction are a change in a person's mental state

both during a stay on the Internet and when it is impossible to do so; the gradual increase in time spent on the Internet, due to getting used to its influence, and the inability of an Internet-addicted person to adequately assess the negative consequences of his excessive and uncontrolled fascination with the Internet not only for himself.

The analysis of the results of the empirical study shows:

– Internet addiction of the respondents of both samples is gradually increasing, becoming problematic;

– in an Internet-addicted person, manifestations of suspicious and independent types of personal attitude, manifested in interpersonal relationships, may become more active; other types of addiction (food, religious, computer) are added; such a person does not feel satisfied with real life and happiness, preferring to exist in the virtual space of the Internet;

– in wartime situations (BW sample), aggressive, self-effacing, rebellious, docile, cooperative and responsible types of interpersonal attitudes manifest more strongly. Other addictions (alcohol, television, computer) are present, yet an interest in life remains. In the context of COVID-19 illness (BC sample), compared to the former, accompanying dependencies (love, food, religion, labour-related) are more frequent, and there is a general inclination towards susceptibility to dependencies. Problems arise concerning the management of time spent on the Internet, overall Internet addiction, but feelings of happiness and a positive mindset persist.

– less Internet-dependent respondents can show greater consistency, achieving the set goal and positively evaluating themselves and their own actions; they are less likely to fall into most other (chemical) addictions, but they can become addicted to drugs; in various groups formed under experimental conditions, the manifestation of a certain type of personality, manifested in the attitude towards others, is also activated;

– representatives of the BC sample who are more addicted to the Internet show a tendency to other addictions (alcohol, television, gaming, food and religion), while the respondents of the BW sample are less addicted to the Internet and show addiction to a healthy lifestyle and religion, and more addicted from tobacco;

– the possibility of a long stay in the Network can cause/increase a sense of satisfaction with life in general in its users, both in a situation of quarantine isolation (COVID-19) and in a state of war, however, in the latter case, the opposite effect is also possible: the satisfaction of an individual with life can affect the formation of it Internet addiction.

References

Anderson, M., & Jiang, J. (2018). *Teens, social media & technology.* Pew Internet & American Life Project. https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/

Argyle, M., Martin, M., & Crossland, J. (1989). Happiness as a function of personality and social encounters. In: J. P. Forgas, J. M. Innes (Eds.) *Recent advances in social psychology: An international perspective* (pp. 189–203). Elsevier. https://www.psy.ox.ac.uk/publications/386556

Asjejeva, Ju. O. (2020). Komp'juterna zalezhnist', Internet zalezhnist' ta kiber-adykicii' (istorychnyj ogljad definicij) [Computer addiction, Internet addiction and cyber-addictions (historical overview of definitions)]. *Psychological journal, 6*(6), 57–65. https://doi.org/10.31108/1.2020.6.6.6

Bacylova, O.V., & Puz', I.V. (2018). Psyhologichni aspekty projavu Internet-adykcii' u molodizhnomu seredovyshhi [Psychological aspects of the manifestation of Internet addiction in the youth environment]. Teorija i praktyka suchasnoi' psyhologii'. *Medychna psyhologija* [Theory and practice of contemporary psychology. *Medical psychology]*, 4, 48–52. http://www.tpsp-journal.kpu.zp.ua/archive/4_2018/11.pdf

Bai, W., Cai, H., Wu, S., Zhang, L., Feng, K.X., Li, Y.C., Liu, H.Z., Du, X., Zeng, Z.T., Lu, C.M., Mi, W.F., Zhang, L., Ding, Y.H., Yang, J.J., Jackson, T., Cheung, T., An, F.R., & Xiang, Y.T. (2022). Internet addiction and its association with quality of life in patients with major depressive disorder: a network perspective. *Translational Psychiatry,* 12(1), 138. https://doi.org/10.1038/s41398-022-01893-2

Beard, K.W. (2005). Internet addiction: a review of current assessment tes and potential assessment questions. *CyberPsychology & Behavior, 8*(1), 7–14. https://doi.org/10.1089/cpb.2005.8.7

Burkauskas, J., Gecaite-Stonciene, J., Demetrovics, Z., Griffiths, M.D., & Király, O. (2022). Prevalence of problematic internet use during the covid-19 pandemic. *Current Opinion in Behavioral Sciences,* 15, 101179. https://doi.org/10.1016/j.cobeha.2022.101179

Cash, H., Rae, C.D., Steel, A.H., & Winkler, A. (2012). Internet addiction: A brief summary of research and practice. *Current Psychiatry Reviews, 8*(4), 292–298 https://doi.org/10.2174/157340012803520513

Chaplak Ja.V., Chujko G.V., & Zvarych I.M. (2023). Teoretychni aspekty problemy Internet-zalezhnosti: aktual'nyj stan [Theoretical aspects of the problem of internet addiction: current status]. *Habitus*, 45, 270–277. https://doi.org/10.32782/2663-5208.2023.45.44

Chen, S.-H., Weng, L.-J., Su, Y.-J., Wu, H.-M., & Yang, P.-F. (2003). Development of a Chinese Internet Addiction Scale and its psychometric study. *Chinese Journal of Psychology, 45*(3), 279–294. https://psycnet.apa.org/record/2004-10292-005

Christakis, D.A. (2010). Internet addiction: a 21st century epidemic? *BMC Medicine, 8*, 61. https://doi.org/10.1186/1741-7015-8-61

Chujko, G.V., & Chaplak, Ja.V. (2019). Internet jak chastyna suspil'nogo informacijnogo prostoru ta zasib manipuljacii' indyvidual'noju svidomistju [The Internet as part of the social communicative space and means of manipulation of individual consciousness]. *Technologies of intellect development, 3*, 1. https://doi.org/10.31108/3.2019.3.1.5

Chuyko H., Koltunovych T., Chaplak Y., & Komisaryk M. (2022). Students' defense mechanisms and coping strategies in terms of COVID-19 pandemic. *Revista Romaneasca pentru Educatie Multidimensionala, 14*(1), 115–138. https://doi.org/10.18662/rrem/14.1/510

Davis, R.A. (2001). A cognitive-behavioral model of pathological Internet use. *Computers in Human Behavior, 17*(2), 187–195. https://doi.org/10.1016/S0747-5632(00)00041-8

Di Carlo, F., Pettorruso, M., Alessi, M.-Ch., Picutti, E., Collevecchio, R., Migliara, G., Baroni, G., Gambi, F., Cinosi, E., Martinotti, G., Grant, J.E., & di Giannantonio, M. (2021). Characterizing the building blocks of Problematic Use of the Internet (PUI): The role of obsessional impulses and impulsivity traits among Italian young adults. *Comprehensive Psychiatry,* 106, 152225. https://doi.org/10.1016/j.comppsych.2021.152225

Fernandes, B., Uzun, B., Aydin, C., Tan-Mansukhani, R., Vallejo, A., Saldaña-Gutierrez, A., Nanda Biswas, U., & Essau, C.A. (2021). Internet use during COVID-19 lockdown among young people in low- and middle-income countries: Role of psychological wellbeing. *Addictive Behaviors Reports*, 14, 100379. https://doi.org/10.1016/j.abrep.2021.100379

Gjoneska, B., Potenza, M.N., Jones, J., Corazza, O., Hall, N., Salesj, C.M.D., Grünblattl, E., Martinotti, G., Burkauskas, J., Werling, A.-M., Walitza, S., Zohar, J., Menchon, J.M., Király, O., Chamberlain, S.R., Fineberg, N.A., & Demetrovicss, Z. (2022). Problematic use of the internet during the COVID-19 pandemic: Good practices and mental health recommendations. *Comprehensive Psychiatry, 112,* 152279. https://doi.org/10.1016/j.comppsych.2021.152279

Griffiths, M. (2001). Does Internet and computer "addiction" exist? Some case study evidence. *CyberPsychology and Behavior, 3*(2), 211–218. https://doi.org/10.1089/109493100316067

Griffiths, M. (2009). Excessive use of the Internet: online addictive behavior. In A.E. Voiskunsky (Ed). *Internet zavisimost'. Psihologicheskaja priroda i dinamika*

razvitija [Internet addiction: the psychological nature and dynamics of development] (pp. 253–256).

Hassan, T., Alam, M.M., Wahab, A., & Hawlader, M.D. (2020). Prevalence and associated factors of internet addiction among young adults in Bangladesh. *Journal of the Egyptian Public Health Association*, 95,3. https://doi.org/10.1186/s42506-019-0032-7

Kuss, D.J., & Lopez-Fernandez, O. (2016). Internet addiction and problematic Internet use: A systematic review of clinical research. *World Journal of Psychiatry, 6*(1), 143–176. http://dx.doi.org/10.5498/wjp.v6.i1.143

Leary, T. (1957). *Interpersonal diagnosis of personality; a functional theory and methodology for personality evaluation.* Ronald Press.

Loskutova, V.A. (2004). *Internet-zavisimost' kak forma nehimicheskih addiktivnyh rasstrojstv [Internet addiction as a form of non-chemical addictive disorders].* [Diss. kand. med. nauk. NGMA MZ RF] https://www.dissercat.com/content/internet-zavisimost-kak-forma-nekhimicheskikh-addiktivnykh-rasstroistv

Lozano-Blasco, R., QuilezRobres, A., & Soto Sánchez, A. (2022). Internet addiction in young adults: A meta-analysis and systematic review. *Computers in Human Behavior*, 130, 107201. https://doi.org/10.1016/j.chb.2022.107201

Malygina, V.L., Feklisov, K.A., Iskandirova, A.B., Antonenko, A.A., Smirnova, E.A., & Homeriki, N.S. (2011). *Internet-zavisimoe povedenie. Kriterii i metody diagnostiki [Internet addictive behavior. Criteria and diagnostic methods].* MGMSU. http://www.vsma.ac.ru/publ/vest/044/site/index23.html

Moreno, M.A., Eickhoff, J., Zhao, Q., Young, H.N., & Cox, E.D. (2019). Problematic internet use: A longitudinal study evaluating prevalence and predictors. *The Journal of Pediatrics: X*, 1, 100006. https://doi.org/10.1016/j.ympdx.2019.100006

Neugarten, B. L., Havighurst, R. J., & Tobin, Sh. S. (1961). The measurement of life satisfaction. *Journal of Gerontology*, 16, 2, 134–143. https://doi.org/10.1093/geronj/16.2.134

Obnovlennyj Oksfordskij oprosnik schast'ja (OHI, Oxford Happiness Inventory) (n. d.). https://psycabi.net/testy/1076-obnovlennyj-oksfordskij-oprosnik-schastya-ohi-oxford-happiness-inventory-i-pervonachalnyj-variant-metodiki-testy-dlya-diagnostiki-urovnya-schastya

Orzack, M.H. & Orzack, D.S. (1999). Treatment of computer addicts with complex co-morbid psychiatric disorders. *CyberPsychology & Behavior, 2*(5), 465–473. https://doi.org/10.1089/cpb.1999.2.465

Panina, N.V. (1993). Metodika izmerenija zhiznennoj udovletvorennosti [Methodology for measuring life satisfaction]. In A. A. Kronik (Ed.) *«Life line» i drugie novye metody psihologii zhiznennogo puti ["Life line" and other new methods of life path psychology*] (pp. 107-114). Progress

Ryding, F.C., Kaye, L.K. (2018). "Internet addiction": a conceptual minefield. *International Journal of Mental Health and Addiction, 16*(1), 225-232. https://doi.org/10.1007/s11469-017-9811-6

Sasovs'ka, O.V. (2019). *Teoretychnyj analiz ponjattja Internet-adykcii' u suchasnij psyhologichnij nauci [Theoretical analysis of the concept of Internet addiction in modern psychological science].* http://naukam.triada.in.ua/index.php/konferentsiji/56-dvadtsyat-shosta-vseukrajinska-praktichno-piznavalna-internet-konferentsiya

Smirnova, A.A., Zaharova, T.Yu., & Sinogina, E.S. (2017). *Kiberugrozy bezopasnosti podrostkov [Cyber threats to adolescent security]. Nauchno-pedagogicheskoe obozrenie [Scientific and pedagogical review], 3* (17), 99–107. https://doi.org/10.23951/2307-6127-2017-3-99-107

Stanislavsky, Yu. (2021). Kil'kist' korystuvachiv Internetu u sviti sjagnula 4,66 mlrd. [The number of Internet users in the world reached 4.66 billion]. https://root-nation.com/ua/news-ua/it-news-ua/ua-new-internet-records/M

Stril'chuk, O.V. (2020). *Social'no-psyhologichni mehanizmy formuvannja mediakul'tury u pidlitkiv z Internet-zahoplenistju [Socio-psychological mechanisms of formation of media culture among teenagers with Internet enthusiasm]* [Candidate's Dissertation]. ISPP NAPN Ukrai'ny.

Subashkevych, I.R. & Grynash, M.I. (2021). Vikovi osoblyvosti Internet-zalezhnosti [Age characteristics of Internet addiction]. *Gabitus*, 22, 179-183. https://doi.org/10.32843/2663- 5208.2021.22.30

Tao, R., Huang, X., Wang, J. (2010). Proposed diagnostic criteria for internet addiction. *Addiction*, 105, 556–564. https://doi.org/10.1111/j.1360-0443.2009.02828.x

Test mizhosobystisnyh vidnosyn Liri. [Leary's Interpersonal Relations Test] (n. d.). http://psychologis.com.ua/test_mezhlichnostnyh_otnosheniy_liri.html

Test na internet-zalezhnist'. (K. Jang) [Internet addiction test. (Young)] (n. d.). https://www.eztests.xyz/tests/personality_iat/

Test na zavisimost' (addikciju). Metodika diagnostiki sklonnosti k 13 vidam zavisimostej, Lozovaja G.V. [Test for dependence (addiction). Methodology for diagnosing propensity for 13 types of addictions, Lozovaya G.V.] (n. d.). https://psycabi.net/testy/485-test-na-zavisimost-addiktsiyu-metodika-diagnostiki-sklonnosti-k-13-vidam-zavisimostej-lozovaya-g-v

Tripathi, A. (2017). Impact of internet addiction on mental health: An integrative therapy is needed. *Integrative Medicine International, 4*, 215–222. https://doi.org/10.1159/000491997

Vanda, M.A., & Bondarenko, N.B. (2019). Internet-zalezhnist': peredumovy, oznaky ta ryzyky dlja pidlitkiv [Internet addiction: prerequisites, signs and

risks for adolescents]. *Psyhologija ta psyhosocial'ni intervencii' [Psychology and psychosocial interventions],* 2, 37-42. https://doi.org/10.18523/2617-2348.2019.2.37-42.

Vojskunskij, A.E. (2015). Koncepcii zavisimosti i prisutstvija primenitel'no k povedeniju v Internete [The concepts of dependency and presence as applied to online behavior]. *Medicinskaja psihologija v Rossii [Medical psychology in Russia], 4*(33), 6. http://mprj.ru/archiv_global/2015_4_33/nomer07.php

Vojskunskij, A.E. (2017). *Zavisimost' ot Interneta: aktual'naja problema [Internet addiction: A current problem].* https://cyberpsy.ru/articles/vojskunskij-internet-addiction/

Vojskunskij, A.E. (Ed.) (2009). *Internet-zavisimost': psihologicheskaja zavisimost' i dinamika razvitija [Internet Addiction: Psychological Addiction and Dynamics of Development].* Akropol'

Young, K. S. & de Abreu, C. N. (Eds.). (2017). *Internet addiction in children and adolescents: Risk factors, assessment, and treatment.* Springer Publishing Company.

Young, K.S. (1998a). *Caught in the Net: How to recognize the signs of internet addiction – and a winning strategy for recovery.* John Wiley & Sons.

Young, K.S. (1998b). Internet addiction: the emergence of a new clinical disorder. *CyberPsychology & Behavior, 1*(3), 237–244. https://doi.org/10.1089/cpb.1998.1.237.

Young, K.S., & Rogers, R.C. (1998). The relationship between depression and Internet addiction. *CyberPsychology & Behavior, 1*(1), 25–28. https://doi.org/10.1089/cpb.1998.1.25.