

Sociopsychological factors and trends in information addiction development among youth in contemporary times

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Abstract: The primary sociopsychological factors of the current spread of information addiction are as follows: expanded access to information, the popularity of social networks, marketing influence, Fear of Missing Out (hereinafter - FOMO) syndrome, which is a fear of lagging behind events or losing opportunities, desire for positive feedback and constant monitoring of news, and feelings of loneliness and depression. In this context, research in the fields of psychology, sociology, medicine, and related sciences that analyze the changes in human behavior regarding information consumption are relevant. This change may be manifested as satisfaction of the social need for moderately consumed information or as a psychological disorder – excessive consumption of information that harms the mental health of a person. Children, adolescents, and youth are the social groups that are the most vulnerable to information addiction in modern societies. The relevance of studying sociopsychological factors of information addiction is determined by the need to constantly monitor, prevent, forecast, and solve the problems of information addiction facing young generations to improve their quality of life, mental health, and full social integration into society.

Keywords: Internet addiction, cybersex addiction, online shopping addiction, web surfing, gambling addiction.

Resumo: Os principais fatores sociopsicológicos da atual disseminação do vício em informação são os seguintes: expansão do acesso à informação, popularidade das redes sociais, influência do marketing, síndrome do medo de perder (doravante - FOMO), que é o medo de ficar para trás nos acontecimentos ou perder oportunidades, desejo de feedback positivo e monitoramento constante de notícias e sentimentos de solidão e depressão. Nesse contexto, são relevantes pesquisas nas áreas de psicologia, sociologia, medicina e ciências afins que analisem as mudanças no comportamento humano em relação ao consumo de informação. Esta mudança pode manifestar-se como satisfação da necessidade social de informação moderadamente consumida ou como distúrbio psicológico – consumo excessivo de informação que prejudica a saúde mental de uma pessoa. Crianças, adolescentes e jovens são os grupos sociais mais vulneráveis ao vício em informação nas sociedades modernas. A relevância do estudo dos fatores sociopsicológicos da dependência de informação é determinada pela necessidade de monitorar, prevenir, prever e resolver constantemente os problemas de dependência de informação que as gerações jovens enfrentam para melhorar sua qualidade de vida, saúde mental e plena integração social na sociedade.

Palavras-Chave: Vício em Internet, vício em cibersexo, vício em compras online, navegação na web, vício em jogos de azar.

1. Introduction

One can hardly imagine the modern world without an enormous information flow, an array of data that is constantly generated, consumed, and distributed, affecting the consciousness, psyche, and social interaction of people in the process of globalization, digitalization, and the development of information and communication technologies. There are 5.16 billion Internet users and 5.44 billion mobile phone users as of 2023 in the world; the number of Internet users increased by 1.9 % over the year [1]. Modern studies of information addiction are formed at the confluence of psychology, medicine, sociology, and pedagogy. Researchers-psychologists consider information addiction as an addiction manifested in frequent overconsumption and overuse of information from any sources that are available to the user [2]. Current trends in the study of the impact of information technology development indicate that sociologists more often analyze this phenomenon within the perspective of online (virtual) communication, cyber-victimization, cyber-crime, and their influence on protest behavior and socio-political activity of citizens [3].

It is noteworthy that the study of Internet addiction is more represented in psychology than in sociology since it is defined as

a mental disorder rather than a social disorder (dysfunction). This term is defined as Internet Addiction Disorder (IAD) in the English literature and was suggested by Ivan Goldberg, the American psychiatrist and psychopharmacologist. The psychologist considered Internet addiction as a pathological attraction to the desire to use the Internet [4]. Goldberg's ideas have found use in the development of criteria for psychodiagnostics of Internet addiction. Apart from the specified Internet addiction, information addiction includes the following types:

1. Computer addiction is a negative psychological implication of excessive and uncontrolled interest of a person with a computer. It lies in the inability to overcome the desire to use a computer constantly. Now that computers and the Internet have become generally accessible, the number of people with uncontrolled attraction to them has drastically increased. Computer addiction is most common among adolescents and young people. The following alternative names for this addiction are also common: computer gambling, computer fanaticism, etc. Psychologists and sociologists believe that computer addiction is one of the manifestations of social anxiety [5].

2. Gadget (mobile) addiction is a term used to describe a person who is overdependent on their gadgets, such as smartphones, tablets, laptops, etc. This addiction is manifested in the fact that a person spends excessive time in front of screens, forgetting about the real world, interpersonal relationships, and other aspects of life. Gadget addiction can hurt physical and mental health and negatively affect social adaptation. This addiction is also denoted by such terms as nomophobia (fear of being without a gadget) and phubbing (a mental disorder when a person is constantly distracted by the phone). The researchers define it as a manifestation of social phobia [6].
3. Cybersex addiction is a type of information addiction where a person becomes overdependent on using the Internet to satisfy their sexual needs and fantasies. Having this addiction, a person spends excessive time visiting porn sites, or adult chats, communicating, and having virtual sex with other Internet users. Cybersex addiction can have serious consequences for personal life, including difficulties in interpersonal relationships, job loss, and other social problems [7,8].
4. Online shopping addiction (oniomania) is a type of addiction where a person depends on online shopping too much. The manifestation of this addiction is time and money overspending on shopping online, regardless of real needs and financial opportunities. The primary causes for becoming addicted to online shopping are psychological trauma, insufficient attention from loved ones, or dissatisfaction with one's own life. Online shopping addiction leads to serious financial and mental health consequences [9,10].
5. Web surfing is a type of behavioral addiction where a person feels a constant and uncontrolled need to browse and surf between web pages. People addicted to web surfing spend a great deal of time browsing websites, social networks, forums, news, or other Internet content. They find it difficult to stop even if this addiction harms their personal and professional life [11].
6. Gambling addiction (ludomania) is a kind of information addiction that can manifest itself both online and offline. People addicted to gambling spend too much time playing computer or mobile games. It is also a pathological addiction when a person is overdependent on gambling and gambling types of entertainment. Having this addiction, people spend considerable time and money on gambling and neglect financial problems and other negative implications it causes. This addiction became a widespread problem in society during the Covid-19 pandemic [12].
7. Addiction to social networks and online communication is a type of behavioral addiction where a person abuses social networks and other online platforms for communication and has a pathological need to track social networks. People who suffer from this addiction neglect real communication and

everyday duties and spend all their time on the Internet, mainly on social networks [13].

Psychologists and sociologists who study information addiction in the context of psychological aspects of information consumption define its pathological types as follows: Internet addiction, computer addiction, gadget addiction, cybersex addiction, online shopping addiction, web surfing, ludomania, and addiction to social networks and online communication. Psychologists examine how the continuous information flow can affect a person's mental health and behavior, including stress factors. Information overload, as one of these factors, involves mental and physical exhaustion, depression, irritability, nervousness, real-life communication difficulties, etc. Sociologists, unlike psychologists, study information addiction in terms of social relations, the impact of information on a person and society, the formation of cybercrime, and other phenomena associated with online communication development [14,15].

The authors of this article believe that sociologists should expand their focus and consider information addiction as a factor of social dysfunction and anomie. These factors, in turn, lead to negative consequences for society's development, including the social and demographic crisis, social escapism (acute social self-isolation in virtual life), and social anxiety disorder [16]. Analysis of previous studies in this subject field demonstrates that modern societies are leaning toward a tendency to the spread of information addiction caused by the development of social anxiety disorders. For example, this phenomenon is inherent in such developed information societies as Japan, South Korea, and the United States. However, it also spreads in least developed countries, such as Mexico, Brazil, Vietnam, and others [17].

2. Materials and methods

The academic staff of the Faculty of Sociology of Taras Shevchenko National University of Kyiv and the Faculty of Humanities and Social Sciences of the Institute of Psychology of Mykolas Romeris University analyzed online survey findings called "Sociopsychological factors of information addiction of youth." The respondents were men (46 %) and women (56 %) aged 17 to 24 years; all of them were residents of Kyiv.

The survey was conducted in May-June 2023 using an online questionnaire created based on the LimeSurvey sociological research platform. The link to the online survey was directly distributed among bachelor and master students of the Faculty of Sociology of Taras Shevchenko National University of Kyiv and National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute." Bachelor and master students at the Institute of International Relations of Taras Shevchenko National University of Kyiv and the youth organizations of Kyiv were also provided with this link. The link to the survey was directly provided to the members of the Kyiv Youth Center among the visitors of the YouthFull network. Respondents were informed

about the anonymity of the survey and agreed to publish materials based on their responses. Response analysis was performed using the SPSS statistical data analysis software package.

This study was designed to clarify sociopsychological factors and trends in information addiction development among youth in modern societies. Conclusions are provided and contribute to the organization of further research on the sociopsychological factors of youth information addiction by scientific institutions, researchers in the field of sociology and psychology, and other stakeholders (Table 1).

The authors combined sociological and psychological methodological approaches and used appropriate methods to analyze information addiction. The questionnaire was designed to determine the most pronounced types of information addiction among respondents by ranking it according to the degree of its impact on respondents in different age categories (17-18, 19-20, 21-22, 23-24 years).

Table 1. Characteristics of respondents who took part in the study.

Parameter	Quantity	Percentage
Sex		
Male	69	46.0
Female	81	54.0
Age		
17-18	27	18.0
19-20	38	25.3
21-22	44	29.3
23 - 24	41	27.3

Source: compiled by the authors of this article.

The range of information addiction included Internet addiction, computer addiction, gadget addiction, cybersex addiction, online shopping addiction, web surfing, ludomania, and addiction to social networks and online communication. A questionnaire also determined the level of FOMO syndrome, a fear of lost opportunities expressed in the constant desire to stay in touch [18].

According to the questionnaire methodology, respondents are provided with ten statements about their daily experience:

1. I am afraid other people will get more out of life than I do.
2. I am afraid that my friends live better than I do.
3. I worry when I find out that my friends are having fun without me.
4. I worry when I don't know what my friends are doing.
5. It is important to me that my friends understand me.

6. Sometimes it seems to me that I spend too much time to be aware of what is happening.
7. It bothers me when I miss an opportunity to meet friends.
8. When I'm having a good time, I feel the need to share details online (e.g., to update the status).
9. It bothers me when I miss a scheduled meeting.
10. When I go on vacation, I watch for what my friends are doing.

Respondents indicate the extent to which each statement corresponds to their overall experience using a 5-point scale:

- Never relates to me | 1
- Slightly relates to me | 2
- Moderately relates to me | 3
- Rather relates to me | 4
- Completely relates to me | 5.

It is possible to calculate individual points by averaging the answers to all ten questionnaire items and form a reliable, comprehensive indicator ($\alpha = 0.87 - 0.90$). The survey findings are presented in a range of three FOMO levels – low, average, and high. The study also used a questionnaire to subjectively determine the level of loneliness, which is defined by 20 questions and three levels of loneliness [19]. These levels are as follows:

- 0-20 points – low level of loneliness;
- 20-40 points – average level of loneliness;
- 40-60 points – high level of loneliness.

The authors also conducted a survey based on the Internet Addiction Test developed by Kimberly Young, a professor of psychology at the University of Pittsburgh, and adapted to this study [20]. The test includes 20 questions, where each question is rated at 5 points on the Likert scale, and Internet addiction is determined by the following ranges of points:

- 0–30 points – normal use of the Internet;
- 31-49 points – mild degree of Internet addiction;
- 50–79 points – moderate degree of Internet addiction;
- 80–100 points – abuse of the Internet.

The Patient Health Questionnaire-9 (hereinafter - PHQ-9) developed by Kroenke et al. [21] was used to determine the depression level among the respondents. The following levels determine the PHQ-9 scale:

- 0-4 – Absent-minimal;
- 5-9 – Mild;
- 10-14 – Moderate;
- 15-19 – Moderately severe;
- 20-27 – Severe.

3. Results and discussion

Based on Young’s test adapted to this study, the degree of Internet addiction was determined by sex and age distribution (Table 2).

Table 2. Determination (%) of the degrees of Internet addiction according to Young’s test.

	Number of respondents	Points			
		0-30	31-49	50-79	80-100
Sex					
Male	69	26.5	35.2	22.8	15.5
Female	81	30.4	32.8	21.6	15.2
Age					
17-18	27	35.4	33.0	18.6	13.0
19-20	38	36.0	35.7	17.2	11.1
21-22	44	29.1	30.5	26.2	14.2
23-24	41	29.3	35.1	20.4	15.2

Source: compiled by the authors of this article.

It was found that male and female respondents had a mild degree of Internet addiction (31-49 points on the scale), and there were no significant differences between the respondents of different sexes. Thus, abuse of the Internet was observed in 15.5 % of male and 15.2 % of female respondents. As for the age distribution, the authors found that 11.1 % of respondents aged 19 to 20 years suffered from Internet addiction, which was 4.1 % less than in representatives of the older category of young people – 23-24 years. According to the indicators, a moderate degree of Internet addiction was observed in 17.2 % of respondents aged 19 to 20 years which was 9.0 % less than in the respondents aged 21 to 22 years (26.2 %). Subsequently, a survey of respondents was conducted to establish the degree of their information addiction according to the specific type (Table 3).

Table 3. Determination of the degree of dependence on specific types of information dependence, by gender and age.

Type of information addiction	Quantity	Degree of addiction (%)					
		Sex		Age			
		M	F	17-18	19-20	21-22	23-24
Internet addiction	59	16.0	23.3	8.6	7.3	10.6	12.6
Computer addiction	11	2.6	4.6	0.6	1.3	2.0	2.6
Gadget addiction	18	5.3	6.6	2.6	2.0	3.3	4.0
Cybersex addiction	3	2.0	-	-	-	0.6	1.3
Online shopping addiction	8	1.3	4.0	1.3	-	1.3	2.6
Web surfing	6	2.0	2.0	-	-	1.3	2.6
Gambling addiction	10	4.6	2.0	2.6	2.0	0.6	1.3
Addiction to social networks and online communication	35	10.6	12.6	6.6	6.0	4.0	6.6

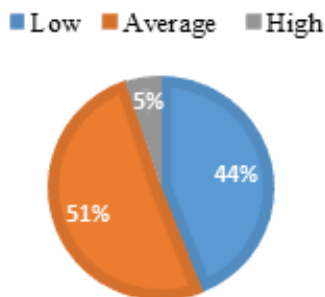
Source: compiled by the authors of this article.

The survey findings showed that Internet addiction was the most common type of information addiction typical for both sexes (16.0 % of men and 23.3 % of women). Furthermore, young people, predominantly aged 23 to 24 years, suffered from this addiction (12.6 % of respondents). Addiction to social networks and online communication took second place, being observed in 12.6% of female respondents and 10.6 % of male respondents; this addiction was predominantly felt by respondents aged 17 to 18 and 23 to 24 years (6.6 % of respondents, respectively). According to the survey findings, 5.3 % of men and 6.6 % of women were gadget-addicted, which was more characteristic for the respondents aged 23 to 24 years.

Computer addiction took fourth place, being found in 2.6 % of male respondents and 4.6 % of female respondents, basically aged 23 to 24 years. The survey findings showed that gambling addiction was more common for men (4.6 % of respondents) than for women (2.0 % of respondents), taking fifth place among other information addictions. It was typically manifested in respondents aged 17 to 18 years. Female respondents (4.0 %) turned out to be more addicted to online shopping than male respondents (1.3 %), and the age category of 23 to 24 years was the most seducible to this addiction. Web surfing as information addiction took seventh place was equally typical for both sexes (2.0 %), prevalently aged 23 to 24 years. According to the survey findings, the last place was occupied by cybersex addiction, which manifested itself in only 2.0 % of men, more often aged 23-24 years.

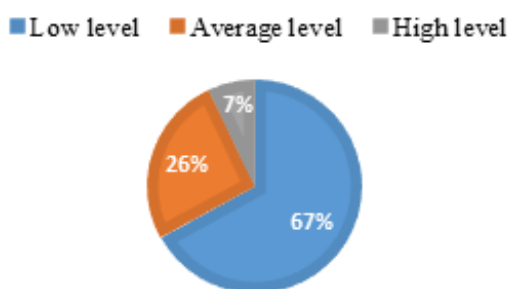
The authors further determined the level of FOMO syndrome among the respondents (Figure 1). Most respondents (51.0 %) showed an average level of FOMO; the low and high levels of FOMO were observed in 44 % and 5 % of respondents, respectively.

Figure 1. Indicators of FOMO level



The authors also examined the level of loneliness among the respondents (Figure 2). It was found that 7 % of respondents felt a high level of loneliness, while 26 % and 67 % of respondents had average and low levels of loneliness, respectively.

Figure 2. Indicators of the level of loneliness

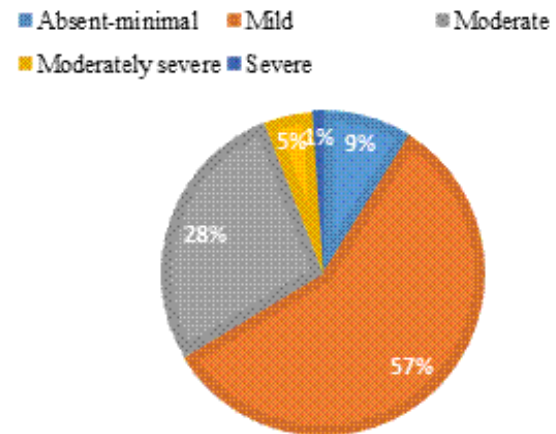


The authors found a statistically significant direct connection between the level of FOMO syndrome and the degree of Internet addiction ($r = 0.24, p \leq 0.01$). There was also a statistically significant direct connection between FOMO syndrome and subjective loneliness ($p = 0.40$), which, in turn, directly related to the level of Internet addiction ($r = 0.27, p \leq 0.01$).

The level of depression was determined among respondents according to the PHQ-9 (Figure 3). Thus, a mild level of depression prevails (58 % of respondents), 9 % of respondents had an absent-minimal level of depression, and a moderate level was typical for 27% of respondents. Moderately severe and severe levels of depression were felt by 5 % and 1 % of respondents, respectively.

The authors have analyzed information addiction among youth and determined that addiction to social networks and online communication is the most common type among young people. It is connected with their desire to overcome feelings of loneliness, moderate depression, and average level of FOMO syndrome, which involves anxiety and compulsion to use the Internet offline.

Figure 3. Indicators of depression according to the PHQ-9



FOMO is associated with the irresistible urge to stay online, receive media messages, or passively or actively participate in the exchange of information through SMS, online games, and other types of web pages and Internet services [22]. If this need is not satisfied, a person feels negative emotions and becomes more seducible to various addictions, such as phubbing. This excessive attraction to electronic devices (smartphones) is expressed so strongly that it leads to a dismissive attitude towards society or its complete ignoring.

Previous research on phubbing showed the destructive nature of this addiction. It affects predominately the relationship of married couples, increases the number of divorces, and thus worsens the socio-demographic development of modern societies. In 2016, psychologists James Roberts and Meredith David examined how phubbing affected relationships in couples. According to the survey findings, 47 % of respondents indicated that they were subjected to phubbing by their partners, 23 % of respondents had conflicts due to phubbing, and 37 % admitted that phubbing was the cause of their depression [23]. The data obtained indicate that the older a young person becomes, the greater the likelihood of the development of a particular type of information addiction is since a person may have undergone negative experiences in the past and have a less biased attitude towards addiction. This phenomenon comes from the very specifics of addiction development, which is a rather gradual than instantaneous process.

Further research is necessary to confirm the extent to which young people recognize their Internet addiction as a particular psychological disorder requiring psychological help. Such research is expected to provide researchers with more empirical information and explore the dynamics of changes in young people's perception of their addiction to specific types of information and their willingness to seek psychological help. Information addiction among youth aged 23 to 24 can develop in response to tough times of uncertainty and difficulties in fulfilling their potential in society. This period is oversaturated

with stresses, including the completion of higher education, the need to get employed and start a family, and social pressure in regard to the latter. All this can lead to negative implications for the psyche of young people who flee from these problems to the virtual world. Further studies and empirical data for comparative analysis are needed to confirm the presence or absence of these connections [24].

Previous research conducted at the Pennsylvania Research Center and led by psychologist Hunt was focused on analyzing the impact of online platforms, such as Facebook, Snapchat, and Instagram, on a person's mental health [25]. The research showed that participants who minimized their stay on social networks demonstrated a significant reduction in cases of depression and feeling lonely compared to active users of social media. At the same time, a significant decrease in the level of anxiety and FOMO syndrome was noticed in both groups. The researchers believe this decrease is down to participants' awareness of the need for self-control when using social networks explained to them during the initial stage of the experiment. However, it is worth noting that only users aged 18 to 22 years participated in the experiment. As the researchers note, it is not yet clear whether social networks hurt older people and whether this phenomenon will pass from generation to generation.

The findings presented in this article make it possible to identify particular sociopsychological factors affecting information addiction development among youth and the trends in their distribution in modern societies. The authors believe additional indicators that can correlate with the information addiction development among young people are the level of anxiety, depression, and low self-esteem. Various modern methods can be used to measure these indicators. However, the procedure for their measurement should be improved by simplifying the questionnaires and reducing the number of questions and the time spent on filling them out. It is also necessary to form a general theory of information addiction research because many modern studies can proceed from various theoretical approaches [26]. One of them can be a theory based on the characteristics of the Internet. This theory suggests that information addiction is caused by the characteristics of the Internet itself, such as anonymity, convenience, and the possibility of escape, which is called the ACE model. Another theory is based on the commitment to interaction, which represents a cognitive-behavioral model of pathological use of the Internet; this model defines Internet addiction as a pathological use of the Internet. There is also a theory focused on development, which has two meanings in this context: 1. The process and stages of the development of Internet addictive behavior. 2. Lifecycle personality development. COVID-19 consequence theory is also noteworthy. The theory emphasizes Internet addictive behavior has become more common during the COVID-19 pandemic. It is caused by risk factors that contribute to the development of addictive behavior on the Internet during the pandemic, including boredom, stress, anxiety, and social isolation.

4. Conclusion

Discussions on the negative effects of social media, the Internet, computers, and other gadgets on human mental health have been going on for many years at the global level. China and the United States recognize Internet addiction as a disease and provide professional treatment services – psychological support. Scientists from many other countries, especially post-Soviet ones, still debate over the recognition of Internet addiction; they do not always manage to trace the dependence between information addiction and human mental health.

The findings of this research indicate that the problem of information addiction spread is still relevant since it affects the development of not only modern youth under 24 years (who literally cannot imagine their lives without access to the Internet) but also children, adolescents, and older people who are constantly included in the streams of continuous information overload. All this hurts the development of mental health and leads to various addictions, such as Internet addiction, computer addiction, gadget addiction, cybersex addiction, online shopping addiction, web surfing, and addiction to social networks and online communication. Different age groups, indeed, are characterized by different types of information addictions. This is due to the specifics of using the Internet at a particular stage of life and the need to meet information search or specific goals. However, information addiction predominantly arises from the accessibility and prevalence of the Internet as a rapid means of obtaining necessary information for every taste.

Some types of addiction give rise to others and spread due to such sociopsychological factors as FOMO syndrome, loneliness, depression, social anxiety disorders, social escapism, the possibility of expanding the boundaries of communication, inclusion in new social virtual groups, the need for social recognition, increased access to information, popularization of social networks, aggressive targeting (Internet advertising), the development of information and communication technologies, etc.

It should be noted that researchers need to pay attention to the study of the synergy between information addiction and possible chain causes of the development of other information addictions. It is also necessary to develop new methods of sociological and psychological analysis, which involves developing new techniques and tests that will be relevant in the context of modern sociopsychological problems associated with information addiction development. It is essential to define and recognize information addiction as a mental disorder and included in the International Statistical Classification of Diseases and Related Health Problems.

Scientists should unite efforts to conduct scientific research to determine the impact of information addiction on mental health in modern societies. This will allow predicting and determining

the dynamics of changes in this impact to overcome this problem. After all, the advice of some researchers on limiting the time (from 30 min to an hour a day) spent on a computer, gadgets, or the Internet is not always efficient since it requires constant external control and self-control. Although this advice encourages people to develop willpower, it can lead to the development of hysteria and neuroses, especially in children and adolescents.

Particular attention should be paid to the study of the implications of information addiction affecting the social life of people. An information-addicted person suffers from a deterioration in relations with the surrounding people. There is a deterioration in relations between parents and children, friends, colleagues, partners, and couples. One can frequently find mentions of this disease in the consideration of legal cases related to divorce or criminal offenses when a person, being in the heat of passion, can kill another person to seize valuable information on which this person depends. Even though there is substantial research in this area, many questions regarding the psychological diagnosis, correction, and prevention of Internet addiction remain unresolved.

Thus, the authors conclude it is essential to inform young people and other social groups on the prevention and diagnosis of information addiction in society. People should know that it would not resolve the problem of information addiction but exacerbate it if you take gadgets away from a child, adolescent, youth, or senior people and prohibit using computers or the Internet. To treat this mental disorder, a set of measures of psychological and (possibly) psychiatric care should be carried out, depending on how complex the case of information addiction is. Therefore, psychologists, sociologists, and teachers should promote educational events, pieces of training, lectures, and consultations on combating information addiction and the possible negative implications of its development in society.

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