

THE USING OF SOCIAL NETWORKS AS A HEALTH RISK

Zoran Milošević^{1,2}, Natalija Premović⁴, Miodrag Stojanović^{1,2}, Aleksandar Višnjić^{2,5},
Aleksandra Ignjatović^{1,2}, Marija Apostolović-Andjelković^{1,2}, Sanja Milošević³

Social networks represent the most used type of communication. They are the largest virtual community and an inexhaustible source of information. The essential characteristic of social networks is virtual socializing and communication between people around the world.

Today, it is known that excessive use of social networks for an extended period can cause significant health problems. The most common health problems are highlighted in this paper, and they are addiction, impaired concentration and attention, negative impact on intellectual abilities, increased levels of stress and fatigue, and negative impact on emotions.

It is a fortunate circumstance that it is possible to reduce the negative impact of social networks on health. It is advised to limit the time of using social networks. It is best to connect to social networks from time to time and to look at the content that is offered to you several times during the day. It would be advisable to have access at a time that is convenient and limited for you.

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¹University of Niš, Faculty of Medicine, Department of Medical Statistics and Informatics, Niš, Serbia

²Institute of Public Health Niš, Niš, Serbia

³Clinical Center Niš, Niš, Serbia

⁴Health Center Niš, Niš, Serbia

⁵University of Niš, Faculty of Medicine, Department of Social Medicine, Niš, Serbia

Contact: Zoran Milošević
48 Dr. Zoran Djindjić Blvd., 18000 Niš, Serbia
E-mail: zoran.milosevic@medfak.ni.ac.rs

Introduction

Social networks have occupied our lives. Thanks to the dizzying development of technology, this kind of communication is available to almost everyone on the planet today. The development of telecommunication equipment and the appearance of the smart phone leads a large number of people to spend most of the day with their phone and in online communication with their "friends". We live in the 21st century; everything is different than before; our day begins and ends with some technological device in our hands. By organizing a Wi-Fi network, uninterrupted communication devices are available. Unfortunately, in-ear headphones are mandatory for

a large number of people, not just young people. In everyday life, wherever you go, you meet people who use their phones and other communication devices (1).

We should all try not to spend our time on the Internet and social networks. There is not even anything social in them. Instead of drinking coffee and talking "face to face", we do it through a chat. If you pay attention, you will see young people in cafes looking at their phone screen non-stop.

Social networks represent the most used type of communication nowadays. They are a large virtual community and an inexhaustible source of information. The primary characteristic of social networks is virtual socializing and communication between people around the world. Besides, people can get to know each other, connect with someone with whom they have lost contact, new jobs can be promoted through social networks; they can be used to exchange information and opinions. Nowadays, current socializing is online in all generations, and unfortunately mostly among young people. The big problem is when young people meet, most of their attention is focused on the status and events on their mobile phone. Nearly half of the world's population (3.48 billion people) uses social networks, according to the Digital 2019 survey. The latest research shows that we spend an average of 116 minutes a day on social networks (2).

Social networking sites are a global phenomenon and enjoy an exponential increase in their use (e.g. Facebook, Twitter). Participation on these

sites is currently one of the main activities on the Internet, especially for the younger generations (3).

The digital connection of young people is increasing over the years, and social networking sites play a significant role in their personal and professional relationships. According to Eurostat (1), the participation of young people on websites and social networks is growing every year. More than half of individuals between the ages of 16 and 74 use the Internet for social networks, and the percentage of young people is continuously increasing (4).

Today, social networks are indeed an integral part of the modern health care system. The population can be informed and warned daily with the help of social networks about important life issues, among other things and about issues important for health. Social networks significantly helped to raise the level of health culture and positive behaviour in the fight against the virus during the COVID 19 Pandemic (5).

Most social networks are used to find out what friends we have online are doing, in second place is the reception of information, news and various events, in third place is the use of free time.

The impact of social networks on health

Theoretically, social networks represent an excellent platform for the promotion of healthy lifestyles, consultations with appropriate medical doctors, scheduling examinations, the flow of health information necessary for the diagnosis and treatment of patients, as well as other vital issues important for health. Modern technology has created technical conditions so that you can always be online wherever you are (6).

Exaggeration in anything inevitably leads to illness. Therefore it is crucial not to overdo the use of social networks. In the world of electronics, social network users are increasingly lonely because they have more friends on social networks compared to real life.

According to a study published in *The Lancet Child* magazine in England, based on interviews with almost 10,000 children aged 13 to 16, it was concluded that depression is related to the use of social networks. This study argues that the issue may be more complicated than experts think. Researchers believe that the use of social networks by adolescents disturbs sleep and leads to a decrease in physical activity. Also, the use of social networks leads to greater exposure of young people to various harmful contents. The content mostly causes the problem of sleep disorders and reduced physical activity that young people are inevitably exposed to on social networks. The existence of psychological problems was also recorded; interestingly, this problem is even 45% more present in girls.

A survey conducted in the United States on about 5,000 respondents showed that Facebook users have symptoms of mental health disorders, unlike young people who do not use this social network. Research has proven that the same time

spent on the Internet does not cause mental health problems.

There are identical data from the survey of Twitter users' behaviour. A large amount of various information has a lot of content which is harmful and affects mental health disorders. Attitudes and opinions are shared on Twitter; therefore, there is an eager need for followers' confirmation. The correlation between the time spent on Twitter and the increase in the negative mood of users was unequivocally confirmed.

Young people on social networks have the feeling that they are members of a virtual society and that they are worth more. It's probably the trigger to start ignoring friends in the real world and spending much more time on social media. Inevitably, young people start to compare themselves with others and try to achieve other people's standards, which are often not real.

As the widespread use of social media is associated with depression, anxiety, self-harm, and suicide, there is no consensus (3). Still, most social media impact analyzes appear to stem from unwarranted panic rather than extensive analysis. A study investigating social networks shows that young people today use them the most to alleviate boredom and to connect socially (7, 8).

Biolcati R. and a group of authors in the study published in the *Journal of Clinical Medicine* analyzed the use of Facebook (8). They noted that it is becoming more widespread around the world as a communication platform. Young people, in particular, use this social networking site daily to maintain and establish relationships. This study aimed to deepen the understanding of the relationship between personality traits, social and emotional loneliness, life satisfaction and Facebook addiction. Behaviour and life satisfaction are also discussed as independent variables to explain the difference depending on Facebook. The research showed that conscientiousness, extraversion, neuroticism, and loneliness (social, family, and romantic) are a direct consequence of excessive use of social networks. They conclude that excessive use of this social network significantly affects people's behavior (9).

Social networks are not necessarily the cause of these problems, but the content to which young people are exposed is more likely, as well as their disruption of healthy living habits. There are several negative influences of social networks, and here we will consider only some of them.

Social network's addiction

It has long been known that excessive computer use can develop an addiction, especially when it comes to video games, and the same happens with the use of social networks. Excessive use of social networks creates addiction because it stimulates the pleasure centres in the brain that are activated every time someone leaves you a positive comment or "likes" a photo. Satisfaction is caused by stimulation of the neurotransmitter dopamine. Dopamine is responsible for the feeling of satisfac-

tion, such as the desire for a more significant presence on social networks. It is generally known that the pleasure centre is influenced by communication, and thus also on social networks.

Most social network users have a large number of "friends" who regularly post photos, write statuses and thus consistently communicate. In real life, you will hardly get so many congratulations on various occasions, or positive comments for a new wardrobe, hairstyle or car. Live communication requires much more time than social networks, and people rarely have the opportunity to be in live contact with as many people as it is on social networks. Communication on the Internet is fast and easy, a large number of comments and likes to arrive, which leads to an increase in the amount of dopamine and satisfaction. A significant number of social media users due to the large number of compliments and satisfaction it evokes can create an illusion of their greatness.

The pleasure caused by using social networks, a simple, fun and quick form of communication can very easily lead to addiction.

Apart from the mentioned, when we have nothing to do, or we are just bored, we take a light look at our mobile phone and review what "friends" have posted on one of the social networks. Today, in the era of the smart phone, it is available to almost everyone. In this way, one enters a vicious circle of habit and addiction, and after a while, we cannot imagine life without social networks. And then, more significant problems such as lack of attention and concentration inevitably develop; you will notice how it is more and more challenging to focus on one thing and how less and fewer things hold your attention.

Previous research suggests that excessive engagement on social networks and the perceived need of their users to be continuously connected to these services is considered problematic (3). Although the use of social networks is a typical behaviour, excessive and compulsive use has recently been proposed as behavioural addiction (6).

People around the world are showing inappropriate and problematic use of social networking sites, such as Facebook and Instagram. The symptoms of overuse of social networks are similar to the symptoms of substance use and behavioural disorders similar to an abstinence crisis, such as relapse when trying to stop using drugs (9, 10).

Morioka H, and co-authors conducted a study aimed at elucidating the link between smoking and internet addiction and internet overuse among Japanese adolescents. Responses were received from 100,050 high school students. The results of multiple logistic regression analyses showed that the adjusted odds coefficients for internet addiction and internet overuse were significantly higher in students who smoked (including those who smoked before) than in those who never smoked ($p < 0.01$ for all comparisons). This study found that adolescents who smoked usually or those who smoked more cigarettes a day had a higher risk of problematic Internet use than adolescents who did not (11).

Kumar et al. investigated the prevalence and pattern of problematic use of the Internet among engineering students from various faculties in India. After research, they concluded that students tend to use the Internet in a way that could negatively affect several aspects of their lives. This study is one of the most extensive studies being done in India, which aims to understand the existing pattern of internet use and assess the prevalence of problematic internet use among students (12).

The results obtained in the Salem survey among students in Egypt show that this population is less dependent on social networks. On a sample of 835 Facebook users, findings showed that in most cases, there was a slight Facebook dependence (48.7%) and an average Facebook dependence (46.7%). Very few students had severe symptoms of Facebook addiction (1%), and regular Facebook addiction (5.5%). No differences were found between men and women in their dependence on Facebook (13).

It has been proven that the use of a smartphone can take an addictive form. At the same time, through the literature, evidence of the connection between various psychopathological manifestations and tendencies with the possible addictive use of a smartphone is singled out. A study conducted at the Faculty of Medicine in Belgrade examined the effect of anxiety, depression and impulsiveness concerning addictive phone use (14).

The first signs of addiction are impatience, obsession, exclusion from the environment. These signs are followed by avoidance of obligations and meals, avoidance of personal hygiene and finally, aggression.

Disorder of concentration and attention

Excessive time on social networks can cause a disorder of concentration and attention in healthy people. Decreased concentration may occur continuously, work or study will be neglected to see what is new on social networks. Comments are read quickly and switched from one topic to another, from one place to another. New posts are tracked, messages replied quickly, and comments and likes are sent. For these reasons, attention is more difficult to maintain for a long period of time. This can cause a problem in communicating with real people and can, therefore, cause problems at school or work.

The information that comes through social networks is mostly concise and can also affect the way someone learns new things. This can affect concentration and attention. Excessive time spent on social media can cause a problem when you want to read a printed text, book or textbook; a person can feel quite uncomfortable because they will not receive any feedback. People who have had an attention deficit disorder so far need to know that social media will exacerbate that problem.

Negative impact on intellectual abilities

Activity on social networks, which means watching the posts of other users of social networks and possibly commenting on them, can only lead to stagnation of intelligence. Viewing and commenting on other people's messages, pictures or other content can in no way be classified as an intellectual activity. No specialized knowledge or education is required to use social networks, reviewing the content of social networks is a movement through the virtual world, and it is certain that it will not lead to more intelligent behavior in real life. On the contrary, it will negatively affect the intellectual abilities of social network users. There is also a great danger that the user of social networks does not have time for real communications, but will be more and more obsessed with communications on social networks.

Increased levels of stress and fatigue

Long-term monitoring of content on social networks can instead of rest, as some believe, lead to increased fatigue. Receiving a large amount of various information will surely result in fatigue and increased stress. Although at the beginning, it seems to users that this process is the opposite. Information arrives every hour, the user is bombarded with it, it is usually short and varied, which on the other hand, certainly requires an effort to follow everything, and if users post and comment, it is an even more significant problem for them. Most of the unnecessary information during the day that just arrives, occupies the user's attention and thus the brain is strained at all times, which certainly makes him or her tired. There is a shortening of sleep over time, and instead of resting, the user of social networks wants to see some more information, and thus he or she is certainly stressed and tired every day. Insufficient rest and focused attention during the day produces stress, which is the trigger for the development of health problems. Physical activity will inevitably be reduced, because walking and staying outdoors will be replaced more and more by activities with a computer screen, lab cannon or smart phone.

The use of social networks has caused profound changes in the way people communicate. Some of these changes in communication can affect certain normal aspects of human behavior and cause psychiatric disorders. Several studies have suggested that excessive use of social networks, such as Facebook, may be associated with signs and symptoms of fatigue, stress, and depression (15).

Influence of social networks on emotions

The emotions of social network users when they start sharing or following others are certainly in danger. More and more social media users want to see what others think of their post on the networks or comment on other people's posts.

By following the news and posts on social networks, their user directs his or her attention to

other people's emotions. In that way, he or she suppresses his or her own emotions. And with that, one enters a vicious circle, because by suppressing one's own emotions, stress and an emotional problem arise. Day by day, the problems accumulate and it is very difficult to solve them later. It is necessary for each of us to dedicate a lot of time to the analysis of our own feelings, and to deal with problems as little as possible and distract our attention from other people's emotions and problems.

Is it possible to reduce the negative impact of social networks on health?

Social networks, in addition to the negative impact on health, can be useful if you spend moderate time on an electronic device where you have social networks installed and it strongly depends on the content you share on them. With the help of social networks, you can communicate with people you care about, it is possible to get information from all areas of human activity, and thus it is possible to gain some knowledge that will be useful for your health.

The limit where the positive impact ends and the negative impact on your health begins is very small. The basic requirement to avoid negative impact is to limit the time of using social networks. It is best not to be constantly involved than to look at the content that is offered to you several times during the day. It would be advisable to have access at a time that is convenient and limited for you. And choose the time so that it does not disturb your biorhythm and the plans you have for the day. Do not focus your attention on the correspondence and photos of your "friends", but try to read and follow the pages that match your affinities and the work you do. Social networks are full of useful information and content that can be very useful to you. Try not to follow the likes and photos, but follow the content that interests you professionally. This recommendation is especially important for everyone who is in any cycle of their education. Or even better advice and activity is to take a walk in the park or in the woods outside the city when you are tired of your core business. If that doesn't seem feasible to you either, you can physically relax in your bed and take a break from daily activities.

Awareness of what social networks can bring us will come with age, and maybe we will just outgrow them. Until then, if a person really annoys you with his or her posts, delete either his or her or your profile.

The Internet can also be used for other activities

Since the beginning of the Internet, there have been daily discussions about whether it is necessary, whether it is harmful and how much. Most people today need the internet every day. Sure social networks are one of the possibilities, but the Internet offers much wider possibilities. Today, with the help of the Internet, you can find out all the important information, scientific newspapers and many things that people are interested in.

When it comes to content that Internet users pay attention to, they most often watch video content, visit various websites, as well as friends' profiles and edit their own profiles. The dominant social network is still Facebook, and it is similar in other countries in the region. Approximately 77 percent of the internet population in Serbia visits Facebook more than once a day. In Serbia, 88 percent of them visit Facebook several times during the day, 44% of Internet users post only their pictures, not pictures of their friends.

In the coronavirus pandemic, the Internet enabled students to actively participate in teaching, thus saving the second semester of school and the semester of studies.

The Internet provides unlimited opportunities to get informed and learn if you wish. Social networks can serve as a time of relaxation to have fun and relax from gaining new knowledge. It is certainly important to maintain live contacts with your loved ones, so do not let your life be "online".

References

- Clement J. Social media – Statistics and facts. Statista May 2020 "cited 2020 October 11". Available from: URL: <https://www.statista.com/topics/1164/social-networks/>
- Milošević Z, Stojanović M, Anđelković-Apostolović M, Višnjić A, Ignjatović A, Milošević S. Information technology and health. Proceedings of the 50th International Congress of Days of preventive medicine; 2016; Niš, Serbia. Niš: Public Health Institute Niš; 2016. 242-5.
- Jovanović T, Višnjić A, Gmijović M. The Association between Depression and Anxiety Symptoms with Six Core Components of Social Networking Sites Addiction – A Cross-Sectional Study in Serbia. *Acta Medica Medianae* 2021;60(1):44-50. [[CrossRef](#)]
- da Veiga GF, Sotero L, Pontes HM, Cunha D, Portugal A, Relvas AP. Emerging Adults and Facebook Use: the Validation of the Bergen Facebook Addiction Scale (BFAS). *Int J Ment Health Addict* 2019;17(2):279-94. [[CrossRef](#)]
- de Mesa JC, Gómez-Jacinto L, Peláez LA, Erro-Garcés A. Social Networking Sites and Youth Transition: The Use of Facebook and Personal Well-Being of Social Work Young Graduates. *Front Psychol* 2020;11:230. [[CrossRef](#)] [[PubMed](#)]
- Andreassen CS. Online social network site addiction: A comprehensive review. *Curr Addict Rep* 2015; 2(2): 175-84. [[CrossRef](#)]
- Bányai F, Zsila Á, Király O, Maraz A, Elekes Z, Griffiths MD, et al. Problematic social media use: Results from a large-scale nationally representative adolescent sample. *PLoS One* 2017;12(1):e0169839. [[CrossRef](#)] [[PubMed](#)]
- Biolcati R, Mancini G, Pupi V, Mugheddu V. Facebook Addiction: Onset Predictors. *J Clin Med* 2018; 7(6):118. [[CrossRef](#)] [[PubMed](#)]
- Stockdale LA, Coyne SM. Reasons for using social media, problematic social networking site use, and behavioral outcomes across the transition from adolescence to emerging adulthood. *J Adolesc* 2020; 79:173-183. [[CrossRef](#)] [[PubMed](#)]
- Meshi D, Ulusoy E, Özdem-Mertens C, Grady SM, Freestone DM, Eden A, et al. Problematic social media use is associated with increased risk-aversion after negative outcomes in the Balloon Analogue Risk Task. *Psychol Addict Behav* 2020;34(4):549-55. [[CrossRef](#)] [[PubMed](#)]
- Morioka H, Itani O, Osaki Y, Higuchi S, Jike M, Kaneita Y, et al. Association between smoking and problematic Internet use among Japanese adolescents: Large-scale nationwide epidemiological study. *Cyberpsychol Behav Soc Netw* 2016;19(9):557-61. [[CrossRef](#)] [[PubMed](#)]
- Kumar S, Singh S, Singh K, Rajkumar S, Balhara YPS. Prevalence and pattern of problematic internet use among engineering students from different colleges in India. *Indian J Psychiatry* 2019;61(6):578-83. [[CrossRef](#)] [[PubMed](#)]
- Salem AAMS, Almenaye NS, Andreassen CS. A psychometric evaluation of Bergen Facebook Addiction Scale (BFAS) of university students. *Intl J Phys Beh Res* 2016;6:199-205.
- Pantic, I. Online social networking and mental health. *Cyberpsychol Behav Soc Netw* 2014;17(10):652-57. [[CrossRef](#)] [[PubMed](#)]
- Ahmer Z, Tanzil S. Internet addiction among social networking sites users: Emerging mental health concern among medical undergraduates of Karachi. *Pak J Med Sci* 2018;34(6):1473-7. [[CrossRef](#)] [[PubMed](#)]

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DA LI JE KORIŠĆENJE DRUŠTVENIH MREŽA RIZIK PO ZDRAVLJE?

Zoran Milošević^{1,2}, Natalija Premović⁴, Miodrag Stojanović^{1,2}, Aleksandar Višnjic^{2,5},
Aleksandra Ignjatović^{1,2}, Marija Apostolović-Andelković^{1,2}, Sanja Milošević³

¹Univerzitet u Nišu, Medicinski fakultet, Katedra za medicinsku statistiku i informatiku, Niš, Srbija

²Zavod za javno zdravlje Niš, Niš, Srbija

³Klinički centar Niš, Niš, Srbija

⁴Zdravstveni centar Niš, Niš, Srbija

⁵Univerzitet u Nišu, Medicinski fakultet, Katedra za socijalnu medicinu, Niš, Srbija

Kontakt: Zoran Milošević

Bulevar dr Zorana Đinđića 48, 18000 Niš, Srbija

E-mail: zoran.milosevic@medfak.ni.ac.rs

Društvene mreže su, u svetu, fenomen današnjice i predstavljaju najkorišćeniji vid komunikacije, najveća su virtuelna zajednica i neiscrpan izvor informacija. Osnovne karakteristike društvenih mreža su virtuelno druženje i komunikacija među ljudima širom sveta.

Danas je poznato to da, na duži vremenski period, prekomerno korišćenje društvenih mreža može izazvati značajne zdravstvene tegobe. Najčešći problemi sa zdravljem istaknuti su u ovom radu, a oni su: zavisnost, poremećaj koncentracije i pažnje, negativni uticaj na intelektualne sposobnosti, povećani nivoi stresa i umora i negativan uticaj na emocije.

Srećna je okolnost to da je moguće smanjiti negativan uticaj društvenih mreža na zdravlje. Predlaže se ograničenje vremena korišćenja društvenih mreža. Najbolje je da se povremeno konektuje na društvene mreže i da se nekoliko puta u toku dana pogledaju sadržaje, koji se nude. Bilo bi preporučljivo da pristup bude u neko zgodno i ograničeno vreme.

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Ključne reči: društvene mreže, internet, zdravstveno vaspitanje