



Internet an Integral Part of Human Life in 21st Century: A Review

Renu Joshi ^{a*}, N. Pavithra ^a and C. K. Singh ^a

^a Department of Human Development and Family Studies,
CCS Haryana Agricultural University, Hisar-125 004, Haryana, India.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/CJAST/2022/v41i363963

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/80423>

Received 20 January 2022

Accepted 25 March 2022

Published 14 October 2022

Short Communication

ABSTRACT

The Internet in 21st is the backbone of an inexhaustible source of global information that has revolutionized the communication system, knowledge transmission and education system which brings progress in all fields of endeavour from the creation of new goods, services and ideas for the advancement of knowledge and well-being of society as well. Internet is not just a mere technology, rather a cultural artefact bringing cultures together and aggregates people in more accessible forms, nurturing the rise of new forms of expression for art, innovation and enormous knowledge transmission. The internet has strongly influenced our education system by connecting and empowering students and educators through unbounded possibilities of knowledge sharing and creating new ways of teaching and learning without the restriction of time and physical constraints that captivate and stimulate students' imagination at anytime, anywhere using an internet connected device. The internet can speed up growth, development and offer immense opportunities for strengthening the economy through e-commerce coupled with improved productivity and competitiveness as it has become a major distribution channel for goods and services. Our lives are surrounded by the internet in every aspect and altered the way of interaction with our family, friends and life partners, and the meaning of cultural identity as well. Internet is a formidable resource of building knowledge in which the users are highly sensitized with the security and privacy issues, particularly minors and children despite raising awareness. Though it a huge network of networks, it acts as an easy medium to access pornography in children causing a sexually deviant or sexually-addictive and increase in the prevalence of sexually transmitted diseases (STD). Social media and

*Corresponding author: E-mail: joshir41615@hau.ac.in;

the internet have become an inseparable part of the younger generation's lifestyle. The excessive use of Internet had leads to IA Disorder (IAD) resulting negative impact on physical, mental, social and occupational health impairment to people who are exposed and also to vulnerable population by disabling their time control. This paper emphasized on both positive and negative impacts of Internet in our day to day lives; Psychological profile of addicted people; potential risk on emotional, mental and physical health and possible treatment strategies of IAD.

Keywords: Internet; application of internet; impact of internet and IAD.

1. INTRODUCTION

Internet, a subtle multidisciplinary tool brings us together in one unit, free from geographic fetters that modify us to share information and data from either side of world to other in an exceedingly fraction of time. In the present scenario, the internet is being used as an information hub and has become an integral part of human lives. The use of internet has been explosively growing across the world, immensely influencing the behaviour of people and society. Within the last quarter-century, our lifestyle has drastically modified with the rising influence of the internet [1]. The internet has become so vital for business, education, communication and entertainment as well. It is therefore no longer viewed as a luxury of few and the rich and considered as an essential resource for all [2]. The Internet has dramatically turned the existence of life as it completely revolutionized the current communication system and socialization scenario to an extent where it has become our most preferred medium of everyday communication and raising human life day by day to a new level. The Internet has entered into various domains of life such as research, communication networks, business and the banking sector. The key advantage of the internet in the education field is to access libraries, encyclopaedias, art galleries, news archives, and other information sources from anywhere in the world. Now a day, almost everything we do on the internet from ordering a pizza to sharing a moment with friends.

The internet itself is a "network of networks" linked through wireless connections and other techniques that have been transformed since its inception. In its early days, it was a static network designed to shuttle a small freight of bytes or a short message between two terminals and for a repository of information where the content was published and maintained only by expert coders. However, in present times uploading and downloading immense quantities of information over various electronic leviathan, and now we

are all commentators, publishers and creators with our contents. As being a part and parcel of one's life, people are extremely dependent on the internet and its applications which affect their time and attention to be given for their work such as educational, research and domestic works, responsibilities at home, even interaction and relationships with family and others [3]. With the advent of the internet, most offline services are now available online for example digital education, digital payment and money transfers, online shopping and online businesses. The internet has been abolished the barriers and boundaries of time and space and introduced lots of opportunities in everyone's lives. In the last decade, a huge increment in the number of internet users has been observed throughout the world. India had around 700 million internet users by 2020 and continuously growing day by day that will reach over 974 million users by 2025 i.e., the new internet users will be quintupled around 300 million by 2025 [4]. Roughly 4.66 billion people across the world are using the internet in their daily lives. In the begging of 2021 i.e., close to 60 per cent of the world's population. Statistics predicts that there will be six billion internet users by 2022, 75 per cent of the world's population and more than 7.5 billion internet users by 2030, 90 per cent of the world population [5].

Although, the internet has become one of the key drivers of social evolution and the best thing to have happened in human society, instead, excessive use of the internet has detrimental impacts on humans as well as on society too. People started to use social media with no real idea of the dangers, posting inappropriate comments to the profiles, leaking private pictures and tapes seems to hit the headlines every day, and even criminal activities involving private-data trafficking. With the availability and mobility of new media, internet addiction (IA) has emerged as a potential problem in young people which refers to excessive computer use that interferes with their daily life [6]. The unique qualities that seem to contribute to the potential for Internet

addiction may be related to the speed, accessibility and intensity of the information accessed online [7]. Obsessive use of the internet leads to IAD (Internet Addiction Disorder) and pieces of evidence are mounting that IAD harms the mental health of adolescents. It has negative implications such as sadness, feeling down, having a loss of interest in daily activities, a distraction from normal exercises and other physical play as well as social interaction with friends. Adolescents, who have high IAD, are more likely to suffer from emotional and mental stress, depression or social anxiety. However, the researchers have already uncovered some ways to treat the IAD, such as doing sport or spending more time with friends and developing healthy social networks [8].

2. MATERIALS AND METHODS

A systematic review of the literature was done related to the research goals. The studies were taken from google scholar, searched with following keywords: Internet; Internet addiction disorder; diverse applications of the internet; positive and negative impact of internet and treatment strategies for internet addiction. Moreover, the search related to the topic was refined for the years 1999–2020. Finally relevant

research papers were selected and reviewed here with their brief description.

3. DIVERSE APPLICATIONS OF THE INTERNET

The various remarkable and diversified applications of the internet make it an integral part of everyone's lives. The internet is a multi-dimensional technology that provides abundant opportunities to its users through various applications and its multiple services.

Empirical evidence suggested that the use of the internet could have both positive and negative impacts on everyone's life depending upon the person and the circumstances.

4. POSITIVE IMPACTS OF THE INTERNET

Quick access

- The internet provides quick access to its users to connect worldwide through various devices and applications. It makes smarter your device in any sphere of the world and gives them quick access to connect globally.

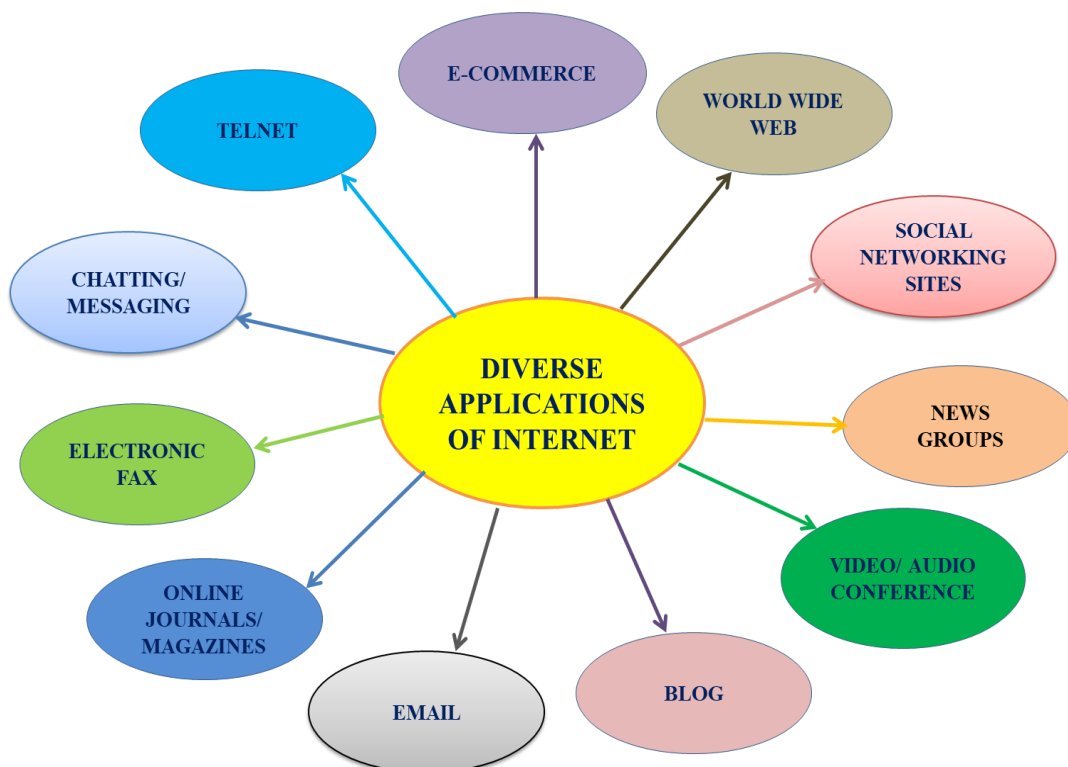


Fig. 1. A wide range of applications and services of the internet in everyday life

Cloud storage

- Cloud storage or cloud computing is one of the major advantages of the internet which offers connectivity to personal computers and cloud services to store their private data as it offers cost-effective storage and services across a variety of devices.

Saves time, money and energy

- Along with the speed, reliability and extensive influence, the internet provides a fairly profitable mode to its users with a greater range of products and services in a cost-effective manner that saves time, money and energy.

Online services

- Undoubtedly, online services are booming on the net that helps people to communicate and work with other people all over the world. For example, the use of email to communicate with friends and family, consumers and businesses for digital goods and services, and also for digital education through google classroom and audio/ video conferences.

5. NEGATIVE IMPACTS OF THE INTERNET

Cybercrime

- With rapid growth and development, the internet became means for computer-based cybercrimes for data stealing, spamming, money-laundering, stalking, credit card and identity theft, virus distribution, fraud calls and news, computer vandalism, child pornography and bullying etc.
- Many people have already become victims of cybercrime as it is increasing at an alarming rate and cyberspace security management is a serious issue of national security and military-related security throughout the world [9].

Physical health

- Excessive and maladaptive use of Internet have serious impacts on physical health in several ways viz., health anxiety and cyberchondria [10,11,12,13], cervical pain,

anxiety, stress, addiction, insomnia, neck complaints, strained vision, eating disorders and obesity.

- The person found with IAD are found incidence with other co-morbid conditions such as Anger and Alexithymia [14,15,De 16,17,18,19]; emotional maladjustments; poor sleep quality [20]; alcohol dependence [21,22], etc.,
- It is a global cause of concern to control internet usage to prevent health problems that decreased physical activity levels.

Internet addiction

- The excessive undisciplined use of the internet causes addiction which might include addiction to the computer game, online relationships, cybersex, net compulsions and seeking compulsive information.

Illegal/ inappropriate material

- Inappropriate content includes inaccurate information such as text, images or videos that encourages unlawful or dangerous behaviour among individuals.
- Inappropriate material is available on the internet in the form of pornographic material, violence, extremist, criminal and anti-social behaviour, and offensive content on social sites and blogs that encourage terrorism or hate.

Spreading of hate/ terrorism

- The rapid distribution of hate speeches and terrorism propaganda through the use of the internet has become a cause of concern in recent years worldwide.
- The internet has become a platform of public incitement to ethnic, racial and religious hatred, and terrorism.

6. INTERNET ADDICTION DISORDER (IAD)

Internet Addiction Disorder (IAD) is a behavioural disorder regarding excessive use of the internet that leads to impairment or distress that significant damages both individuals and society. In America alone, it has been estimated that around 10-15 million people are suffering from an internet addiction disorder, and this is increasing at the rate of 25% every year [23]. The most

significant contribution to the knowledge of IAD is to be attributed to Young, who developed a structured Internet Addiction Test (IAT) using the DSM-IV criteria for pathological gambling. The psychological profiles of internet-addicted users are briefly described below:

- Behavioural dominance, mood alteration, tolerance, abstinence, conflicts, pathological gambling, eating disorders, sexual addictions and generic technological addictions, involving video games
- Mental refuge needs a virtual space where discharge the individual anxieties and frustrations.
- Deep effects on the social and psychological phenomenon, unable to tolerate the existential feeling of emptiness and the frustration of personal needs.
- Neglect family members, people at the workplace, studies, social relationships and themselves. Moreover, when they are offline, they tend to develop addicting behaviours such as insomnia, anxiety, depression etc.
- IAD seems to be a cross-cultural syndrome, loss of boundaries and the distinction between people's public and private lives and loss of quality of life, lack of privacy, decreased safety and security.
- Damages the children's cognitive development which includes memory skills development, attention span, critical reasoning abilities, language acquisition, reading and learning abilities.
- Many offline communities suffer from the internet through the partial migration of human activities such as e-shopping, e-commerce, socialising, leisure activities and professional interactions.

Treatment strategies

- Internet addiction must be alternatively replaced with healthy activities such as yoga practising, exercising, meditation and involving sports activities [24]. Therapies like cognitive behaviour therapy may play a major role in reducing the addiction to internet/social networks by changing their thought process for a better living. As the addiction to the internet is increasing day by day, therefore, several strategies should be planned to avoid internet addiction.
- Promoting technology that better protects social institutions, which requires tech

companies to introduce better products and services for the wellbeing of society.

- To impart awareness about the positive and negative impacts of the internet.
- Strengthening social services support for internet users to prevent or mitigate harmful effects such as antisocial online behaviour or information overload.
- Establishing governmental units and multi-stakeholder platforms at the EU level to address the problems of the internet's harmful social and cultural effects.
- Encourage the parents and teachers to ask children about the content they are searching for.
- Learn how to report inappropriate or offensive content available on social media.
- Counselling services in the area for stopping the things that upset or makes uncomfortable feel.

7. CONCLUSION

Over the past few decades, the internet has become an integral part of everyone's lives and the most important tool of our present-day society, profoundly revolutionizing our communication, information sources, day to day work, education, learning and playing. It brought extensive transformation in everyone's life to perform any type of task and provide a vast platform for quick and easy accessibility of high-intensity information or data more conveniently and efficient way by saving time, energy and money, and virtually performing various services such as e-commerce, video/ audio conferencing, email, digital education and financial transactions, work from home, collaboration and access to a global workforce. Extensive internet use of social media in particular damages the social and intimate relationships and made them lonely or socially isolated by viewing online pornography, malicious online behaviour, cyber-bullying and cyber-stalking. All social media like Facebook, Whatsapps, Instagram, Twitter, Youtube etc., won't give a healthy environment for children and adolescents. The parent should be warned about the characteristics of social media such as cyberbullying, Facebook depression, sexting and being exposed to inappropriate content. Although, an alarming growth rate and unique qualities of internet experiences increasing dependence on internet use in daily lives and works imposing severe health challenges. Internet addiction is accelerated intimacy, anonymity, dis-inhibition,

loss of boundaries and stimulation contents. Apart from internet addiction disorder (IAD), it also has widened the scope of criminal activities such as online money laundering, harassment, defamation, cyberstalking, pornography, cyberbullying and cyber mob attack. Children are not much aware of the consequences of the internet but we must take the responsibility to guide our children as parents, teachers and guardians to ensure to get right information through wise use of the internet and inculcate right behaviour in our children. We use technology for the betterment of our lives but we have to decide to place it in the right direction or unabated abuse.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

- Kitazawa M, Yoshimura M, Hitokoto H, Sato-Fujimoto Y, Murata M, Negishi K, Mimura M, Tsubota K, Kishimoto T. Survey of the effects of internet usage on the happiness of Japanese university students. *Health and Quality of Life Outcomes*. 2019; 17(1):1-8.
- Bricolo F, Gentile DA, Smelser RL, Serpelloni G. Use of the computer and Internet among Italian families: First national study. *Cyber Psychology & Behavior*. 2007;10(6):789-798.
- D'Souza L, Hemamalini MJ. Instagram addiction and depression among college students. *The International Journal of Indian Psychology*. 2018;6(4):96-102.
- Keelery S. The Number of internet users in India from 2015 to 2020 with a forecast until 2025; 2021. Available: <https://www.statista.com/statistics/255146/number-of-internet-users-in-india/>
- Johnson J. The worldwide digital population as of october 2020; 2021. Available: <https://www.statista.com/statistics/617136/digital-population-worldwide/>
- Kumar M, Mondal A. A study on Internet addiction and its relation to psychopathology and self-esteem among college students. *Industrial Psychiatry Journal*. 2018;27(1):61-66.
- Greenfield DN. Psychological characteristics of compulsive Internet use: A preliminary analysis. *Cyberpsychology & Behaviour*. 1999;2(5):403-412.
- Masih J, Rajkumar R. Internet addiction disorder and mental health in adolescents. *Depression Anxiety*. 2019;S13.
- Gandhi VK, Thanjavur TNSI. An overview study on cyber-crimes on the internet. *Journal of Information Engineering and Applications*. 2012;2(1):1-5.
- Baumgartner SE, Hartmann T. The role of health anxiety in online health information search. *Cyberpsychology, Behavior, and Social Networking*. 2011;14:613-618. DOI: 10.1089/cyber.2010.0425
- Fergus TA, Dolan SL. Problematic Internet use and Internet searches for medical information: The role of health anxiety. *Cyberpsychology, Behavior, and Social Networking*. 2014;17:761-765. DOI: 10.1089/cyber.2014.0169
- Muse K, McManus F, Leung C, Meghreblian B, Williams JMG. Cyberchondrias: Factor or fiction? A preliminary examination of the relationship between health anxiety and searching for health information on the Internet. *Journal of Anxiety Disorders*. 2012;26:189-196. DOI: 10.1016/j.janxdis.2011.11.005
- Singh K, Brown RJ. Health-related Internet habits and health anxiety in university students. *Anxiety, Stress, & Coping*. 2014; 27:542-554. DOI: 10.1080/10615806.2014.888061
- Craparo G. Internet addiction, dissociation, and alexithymia. *Procedia – Social and Behavioral Sciences*. 2011;30:1051-1056. DOI: 10.1016/j.sbspro.2011.10.205
- Dalbudak E, Evren V, Aldemir S, Coskun KS, Ugurlu H, Yildirim FG. Relationship of Internet addiction severity with depression, anxiety, and alexithymia, temperament and character in university students. *Cyberpsychology, Behavior, and Social Networking*. 2013;16:272-278. DOI:10.1089/cyber.2012.0390
- De Berardis D, D'Albenzio A, Gambi F, Sepede G, Valchera A, Conti CM, Fulcheri M, Cavuto M, Ortolani C, Salerno RM, Serroni N. Alexithymia and its relationships with dissociative experiences and Internet addiction in a nonclinical sample. *Cyber Psychology & Behavior*. 2009;12:67-69. DOI: 10.1089/cpb.2008.0108
- Schimmenti A, Passanisi A, Caretti V, La Marca L, Granieri A, Iacolino C, Gervasi A. M, Maganuco NR, Billieux J. Traumatic experiences, alexithymia, and Internet

- addiction symptoms among late adolescents: A moderated mediation analysis. *Addictive Behaviors*. 2015;64: 314–320.
DOI:10.1016/j.addbeh.2015.11.002
18. Scimeca G, Bruno A, Cava L, Pandolfo G, Muscatello MRA, Zoccali R. The relationship between alexithymia, anxiety, depression, and Internet addiction severity in a sample of Italian high school students. *The Scientific World Journal*. 2014;1–8.
DOI:10.1155/2014/504376
 19. Yates TM, Gregor MA, Haviland MG. Child maltreatment, alexithymia, and problematic Internet use in young adulthood. *Cyberpsychology, Behavior, and Social Networking*. 2012;15:219–225.
DOI:10.1089/cyber.2011.0427
 20. Demirci K, Akgonul M, Akpinar A. Relationship of smartphone use severity with sleep quality, depression, and anxiety in university students. *Journal of Behavioral Addictions*. 2015;4(2):85–92.
Available:https://doi.org/10.1556/2006.4.2015.010
 21. Petry NM, Stinson FS, Grant BF. Comorbidity of DSM-IV pathological gambling and other psychiatric disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions. *The Journal of Clinical Psychiatry*. 2005; 66:564–574.
DOI:10.4088/JCP.v66n0504
 22. Regier DA, Farmer ME, Rae DS, Locke BZ, Keith SJ, Judd LL, Goodwin FK. Comorbidity of mental disorders with alcohol and other drug abuse: Results from the Epidemiologic Catchment Area (ECA) Study. *JAMA*. 1990;264(19):2511–2518.
DOI:10.1001/jama.1990.03450190043026
 23. UK Essays. Advantages and disadvantages of the internet essay; 2018. Available:https://www.ukessays.com/essay/s/media/the-disadvantages-of-internet-media-essay.php?vref=1
 24. Busari AO. Academic stress and internet addiction among adolescents: Solution focused social interest programme as treatment option. *Journal of Mental Disorders and Treatment*. 2016; 2(2):1-10.

© 2022 Joshi et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/80423>