

## Webbed in Digital World: A Systematic Review on Factors of Internet Addiction among Youths

Anjana Bhattacharjee, Aurondhuti Roy and Tatini Ghosh

Tripura University

In this technological era, internet usage became a part and parcel of our everyday life. Excessive use of internet is very common among young generations particularly among the youths. Now days, it is common for a child to have access to computer, laptop, and smart phones with proper internet connection since they are toddlers. As the time continues, the use of internet is also increasing among the people starting from child to adult, especially since Covid-19 pandemic, the youths are prone to internet addiction. Particularly among the youths, internet has created an obsessive and uncontrollable urge to stay online for long hours on different social media platforms for entertainment, playing online games or online shopping. Continuous indulges in these online activities ultimately affect their education, academic performances, mental and physical health and also relationships with family and friends. The current study tries to make an in-depth analysis of internet addiction among the youths from various sources like, PsycInfo, Google Scholar, CrossRef, PubMed, ResearchGate, Springer, and many other research journals. The present study intends to examine the various predictors of internet addiction among youths. Further, the paper also suggested some preventive measures for limiting the use of internet, consequently reducing internet addiction.

**Keywords:** Internet Addiction, COVID-19, youths, mental health issues

Internet addiction is a behavioral addiction in which a person becomes dependent on use of the internet or other online devices, as a maladaptive way of coping with stresses of life (Cash, et al., 2012). It has devastating effects on individuals, families, and particularly growing children and teens. An individual is addicted to internet when their psychological state, educational status, occupational and social relationships are damaged by excessive use of Internet (Beard, 2005).

According to Diagnostic Statistical Manual of Mental Health-5 (DSM-5), excessive use of internet, withdrawal, tolerance and negative repercussions are the four components of internet addiction (APA, 2013). The excessive use of internet is an important symptom of addiction, but no one knows exactly how much time should be counted as excessive usage. Some of the researchers say that, the individuals who uses internet for non-essential things are highly addicted rather than the individuals who uses internet for work and

study (Reid Chassiakos, et al., 2016). Secondly, some of the withdrawal symptoms of internet include anger, depression and sadness when the individual is unable to use internet. These symptoms may be recognized as moodiness, nervousness, and boredom when the individual can't access to internet (Musetti, et al, 2016). Thirdly, tolerance is an important component that depicts individuals who has the patience and determination to use the internet to binge watch videos and play online games for a long period of time. As a result, these individuals are unable to focus on other works and studies and are gradually degrading their own lifestyle (Musetti, et al, 2016). Lastly, negative repercussion is an important component of internet addiction. Here, the individual develops online relationships and spends a lot of time on internet by chatting with online friends, online gaming, online gambling, and online shopping. They are socially detached from the people around in the society, faces financial lose and their studies also suffer as they uses internet late at night which leads to sleep deprivation.

### **Prevalence of Internet Addiction:**

A study by Cheng and Li (2014) conducted among the 89,281 participants from 31 nations across the world shows that the Middle Eastern regions have the highest prevalence rate of internet addiction which is 10.9%, whereas the lowest prevalence of internet addiction was found in Northern and Western Europe with 2.6% rate only. The internet addiction prevalence rate varies across the world and it is consistent with the quality of life (Cheng and Li, 2014).

Another survey was conducted across 23 countries indicated that India has the highest number of people (82%) who cannot imagine their life without Internet (IPSOS, 2018). Result from a CAMH study (2016) showed that 86% of the adolescents in Ontario use social media on a daily basis, around 16% of the adolescents waste more than 5 hours in a day on social media platforms

In a pilot study by Missaoui, et al., (2015) shows that, among the adolescents of Tunisian, the prevalence of internet addiction was 11.6%. Similarly, Demir (2020) found that the prevalence of internet addiction was 1.9% among the students of Turkey. Another study by Cernja, et al., (2019) indicates that, among the Croatian adolescents, 3.4% of high school students had severe internet addiction, whereas, 39% of them had low-level addiction, and 32% had moderate-level internet addiction. Another, cross-sectional study by Zenebe, et al., (2021) shows that, among the students of Ethiopia, the prevalence of internet addiction was 85%. Al-Hantoushi and Al-Abdullateef, (2014) founds that the prevalence of Internet Addiction was 5.16% among adolescents of Riyadh. Similarly, Bener, et al., (2016), found the prevalence of internet addiction to be 19.8%.

Study by Banstola, et al., (2018) shows that in Western Nepal, majority of adolescents had mild (64.7%) level of internet addiction. Similarly, in a study by Asrese and Muche (2019) shows that, majority of the students was addicted to internet in Ethiopia. Also, in a cross-sectional study by Hossain, et al., (2017) indicates that, among the adolescents of Bangladesh, 2.51% were severely addicted to Internet and 64.87% were moderately addicted to Internet. Siomos,

et al., (2008) depicts that, among the students of Greece, males were more addicted to internet than females. Similarly, Bener, et al., (2016), shows that, among the students of Doha-Qatar, males were more addicted to internet than females. Sasmaz, et al., (2013) found that, males students were more addicted to internet than females students of Mersin.

In a study by Jhala and Sharma, (2016) indicates that, 24.2% of adolescents were highly addicted to internet in Vadodara, India. Similarly, in a study by Kaur and Cheema, (2018) shows that, 2% of the adolescents were normal internet users, 24% had mild internet addiction, 64% had moderate and 10 % of them had severe internet addiction in Bathinda, Punjab. Another study by Vig and Gill (2015) shows that, 14% of adolescents were severely addicted to Internet, and also there was significant difference between genders as well as between Government and Private schools of Chandigarh. Grover and Joseph, (2020) found that, 4.2% to 4.8% of adolescents were severely addicted to internet. Similarly, in a study by Bajwa and Maheshwari, (2020) and Kaur and Cheema, (2018) indicates that, majority of adolescents had moderate level of internet addiction in Punjab.

Sharma, et al., (2014) depicts that, among the students of Madhya Pradesh, males were more addicted to internet than females. A cross-sectional study by Mane, et al., (2018) showed that the boys were more addicted to internet than girls in Pune. Arthanari, et al., (2017) and Dhawan, et al., (2020) found that adolescent boys were significantly more addicted to internet than girls in India. Similarly, Upadhyay, et al., (2017) and Anwar, (2014) indicated that, among the adolescents of Lucknow, males were more addicted to internet than females.

Sharma and Nitakumari, (2019) shows that, majority of the adolescents had moderate level (89%) of internet addiction and moderate level (60%) of impact on health in Punjab. Another gender-based study by Kaur, (2020) indicates that, adolescent males were more addicted to internet gaming than females. Mali, et al., (2015) depicts that, among the students of Mumbai, majority of them had mild level (41.33%) of internet addiction and they uses internet to be active on social media, playing games,

downloading music, pornography and so on, which is affecting both mental and physical health of the adolescents.

#### **COVID-19 Pandemic and Internet Addiction:**

As the internet allows people to communicate easily, it played an important role during the Covid-19 pandemic. Internet helped to remain connected with everyone by maintaining social distancing and staying at home. The whole world worked with the help of internet and other electronic devices. Starting from online classes for the students to working from home and starting online businesses, internet has helped a lot during this pandemic period (Subudhi & Palai, 2020). But due to Covid-19 pandemic the usage of internet has also increased tremendously. The lives were totally dependent on internet and gradually it led to addiction of internet. The use of technology has increased almost for everyone since this Covid-19 pandemic. A research study conducted by Lin (2020) during Covid-19 showed that the prevalence rate of Internet addiction in Taiwan was 24.4%. The results revealed that, the students those who were addicted to Internet had higher neuroticism, higher impulsivity, high level of depression, low level of family function, self-esteem and well-being, and also lower actual social support and higher virtual social support (Lin, 2020). Similarly, a research study conducted by Siste, et al., (2021) during Covid-19 showed that the prevalence of Internet Addiction among Indonesian adolescents was 19.3%. The results revealed that, the adolescents those who were addicted to Internet had lower pro-social behavior and sleep disturbances were found as risk factors of Internet Addiction (Siste, et al., 2021).

In a cross-sectional study by Kumar, et al., (2022) shows that, among the students of Bhubaneswar city, 23.6% of them had severe internet addiction, 13.4% of them had anxiety disorder and about 84.6% of them had poor sleep quality. The findings showed that, severe internet addiction was positively related to anxiety disorder and poor sleep quality of the students (Kumar, et al., 2022). Similarly, a correlational study conducted by Hamami, et al., (2022) among the students of Malang during Covid-19 showed that, there was a significant relationship

between stress and internet addiction. It depicts that the individuals who are stressful about Covid pandemic are more prone to internet addiction (Hamami, et al., 2022). Furthermore, a study conducted by Ilesanmi, et al., (2021) showed that, 64.3% of the participants in Nigeria had problematic internet use during the pandemic. It also depicts the main reasons for the increase in internet use, such as, boredom, loneliness, idleness, physical isolation and so on (Ilesanmi, et al., 2021). Moreover, a study in Bangladesh by Jahan, et al., (2021) showed that, medical students had higher internet addiction than the university and high school students. Students those were in a relationship were likely to be more addicted to internet compared to single and married participants. The results also portrays that, internet addiction was higher among the participants those who did not exercise regularly. However, online chatting, gaming, video streaming, and news sites surfing were associated with internet addiction. And, smartphone addiction, facebook addiction, depression, and anxiety were associated as the risk factors of internet addiction (Jahan, et al., 2021).

The result of the different studies conducted in different parts of the world during Covid-19 pandemic clearly portrays a gloomy picture of the increased internet addiction among the youths. Not only internet addiction but other mental health issues like, anxiety disorder, depression, sleep disorder etc. has increased extremely among the youths and it has become a serious matter of concern in the society.

#### **Internet Addiction and Health Issues:**

**Effect on Physical Health:** Some of the physical symptoms of Internet addiction includes headaches, backaches, neck pain, insomnia, poor nutrition, Carpal Tunnel Syndrome (numbness or weakness in hand and arms), poor personal hygiene (e.g., not bathing or grooming to stay online or play games), vision problems, weight gain or loss and other such physical dysfunctions (Bennett, 2020 & Hoeg, 2019).

**Effect on Emotional or Mental Health:** Internet addiction has many harmful effects on an individual emotionally and mentally. Some of the emotional symptoms like, depression,

anxiety, feeling of guilt, isolation, and poor time management, avoidance of work, dishonesty, mood swings, loneliness, and boredom. Internet addicted individuals may also have ADHD symptoms, such as impulsivity, poor concentration, poor time management and poor decision making (Bennett, 2020 & Hoeg, 2019).

**Effect on Interpersonal Relationship:** The individuals who are addicted to internet may isolate themselves from others and hamper their personal relationships and they may face trouble in developing new relationships, as they are more comfortable in online environment than the physical one. Issues like distrust and dishonesty may arise as they try to hide or deny the amount of time they remain online. They may also face difficulties while dealing and doing conversations with others, making new friends and dealing with complicated relationships in life. As there is no face-to-face communication during internet access, so the individual can express their feelings with others more freely and gradually gains confidence and self-identity (Hao, et al., 2022).

**Effect on studies, career or professional life:** Various research studies showed that the individuals who were having internet addiction has more trouble in dealing with their day-to-day activities, including work, school, finances, family relations and socialization with their surroundings. Some of the studies have shown that, the individuals who are addicted to internet are hampering their studies, facing difficulties in studies (Toth, et al., 2020; Sriati, et al., 2022), and having poor academic performances (Asrese, et al., 2019; Malak, et al., 2017; Xin, et al., 2018; Mohamed & Bernouss, 2020; Tsitsika, et al., 2011; El-Mawgood, et al., 2021; Mahmoud, et al., 2022) which can be a major loss in their career. These individuals also suffer with higher degree of depression and anxiety symptoms.

**Effect on Finances:** Some of the individuals may face financial issues and bankruptcy as they engage on continuous online gaming and online gambling. Some of the individuals, who are addicted to online shopping and online food delivery processes, usually look for offers and sales; such individuals faces fraud online through money transfer messages and calls

and unknowingly shares bank details and become financially bankrupted within a span of minutes. So, when such situation occurs, the individual may suffer from mental distress and gradually suffer with severe mental disorders (Bhattacharjee & Ghosh, 2022).

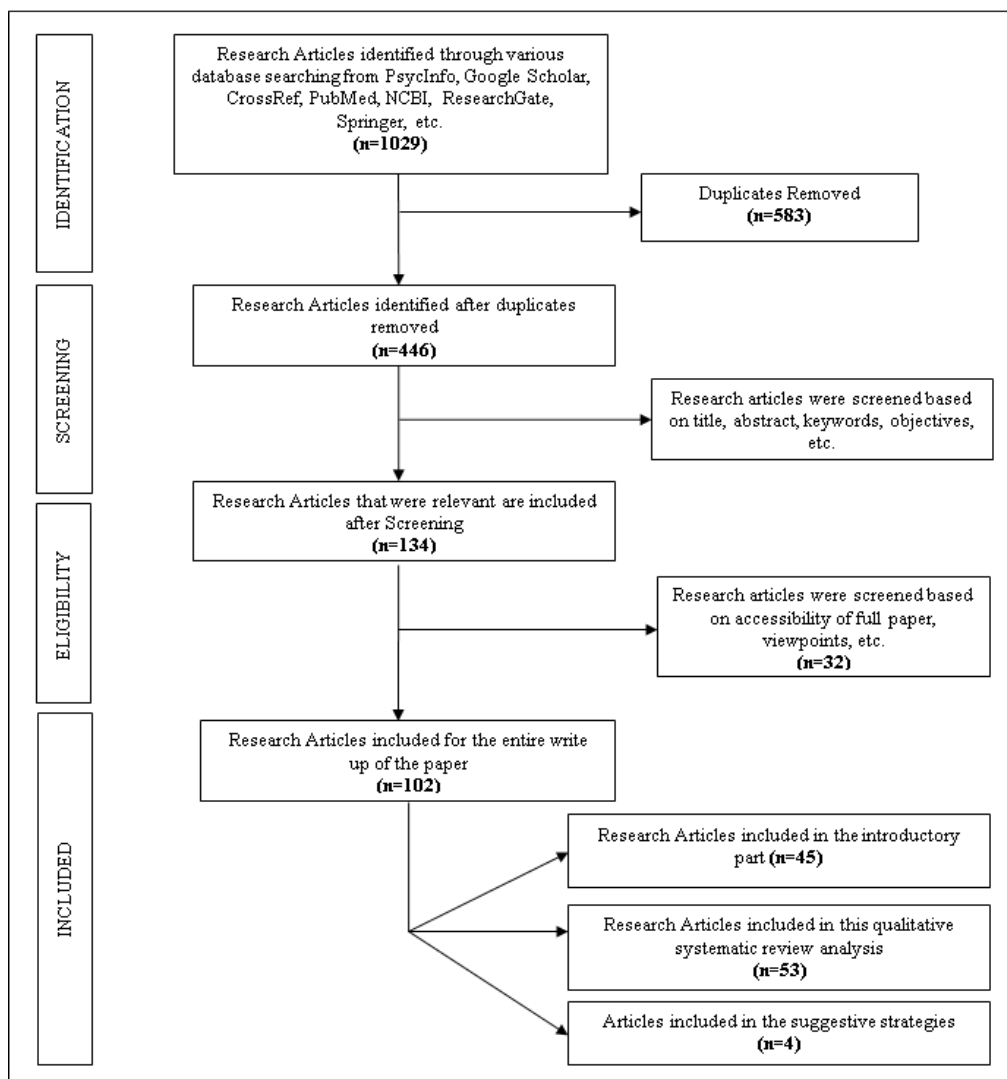
**Effect on Lifestyle:** Internet addiction is causing devastating effects among kids and teenagers. Adolescents have no idea about how excessive use of computer, internet and video games, cyber bullying, cyber sex are harming their life style and making them more stressed up and tired mentally and physically (Walrave & Heirman, 2011). Now days, it's common for a child to have access to computer, laptop, and smart phones with proper internet connection since they are toddlers. As the time continues, the use of internet has also increased among the people starting from child to adult. Especially since Covid-19 pandemic, the adolescents have become more prone to internet usage. As we know that, sleep is a mental and physical resting state important for all human beings. Some of the studies have shown that, due to excessive uses of internet, problems in sleeping like, insomnia (Nayak, et al., 2021; Tereshchenko, et al., 2021; Shahrezagamasaei & Shahyad, 2022), problems in duration of sleeping (Alimoradi, et al., 2019), difficulty in waking up early at morning (Tereshchenko, et al., 2021; Ahmed, et al., 2018; Shahrezagamasaei & Shahyad, 2022), feeling dizziness during day time (Bener, et al., 2016; Tereshchenko, et al., 2021; Ahmed, et al., 2018) and poor quality of sleep (Acikgoz, et al., 2022; Agarwal, et al., 2020; Hossin, et al., 2022; Mahmoud, et al., 2022; Nagori, et al., 2019; Nayak, et al., 2021; Vadher, et al., 2019; Missaoui, et al., 2015; Karki, et al., 2021) were some of the effects of internet addiction. The adolescents may involve in cyber bullying activities, both as victim and a perpetrator. They may also engage in cybersex, pornography, and may do online sexual harms through using some online dating applications.

### **The Current Study**

The aims of the present study are two folded. First it intends to examine various factors of internet addiction to have a clear understanding on why youths have the urge to be online.

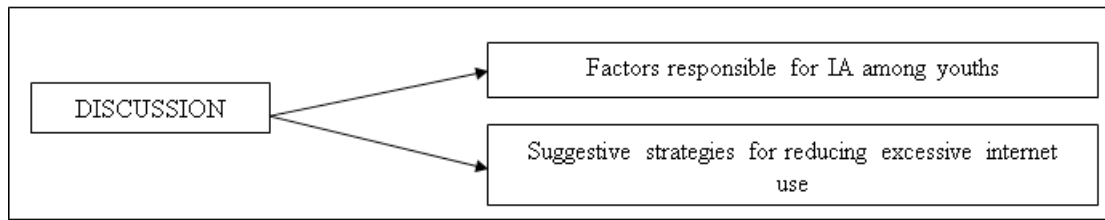
**Table-1: Study Inclusion and Exclusion Criteria**

Characteristics	Inclusion Criteria	Exclusion Criteria
Publication Type	Published scholarly Journals and Articles	Book Chapters and Sections Conference abstracts Unpublished research papers
Publication Date	2007-2022	Papers published before 2007
Language	English	Other languages
Accessibility	Full paper available online	Full paper not available online
Age Group	Published articles on youths aged 10 to 24 years	Articles on youths aged beyond 10 to 24 years



**Figure 1: Prisma Chart of study screening and selection**





**Figure 2: Figure showing the Discussion**

Second, it tries to suggest some preventive measures for reducing the use of internet among youths.

### Method

The paper reviews various literatures over a period of last 15 years. The databases that were used for identifying related articles were PsycInfo, Google Scholar, CrossRef, PubMed, ResearchGate, Springer, and many other research journals. Various past journals, research papers and websites related to internet addiction and its bio-psycho-social factors were also narratively synthesized, following inclusion and exclusion criteria (Table 1).

The systematic search started with 1029 research articles. After screening of abstracts and final in-depth understanding of full text articles, in total 927 articles were excluded as they were not found relevant for qualitative analysis (see Fig. 1).

Other than that, the present paper broadly reviews around 102 articles related to internet addiction and its prevalence and predictors among the adolescents and its impact and different consequences accountable for internet addiction (see fig. 1). Among which, 53 articles were selected for qualitative meta-analysis based on the objectives of this paper. Finally, the conclusion and suggestions have been made accordingly (see Fig. 2).

### Discussion

A. Factors responsible for IA among youths:  
The Bio-psycho-social factors

#### **Physical Health Issues:**

Being physically active is necessary for all individuals to lead a healthy life. Out of 53 studies, 8 studies (15%) have shown that, avoiding exercises (Lukács, 2021), problems

in eating, headache (Bener, et al., 2016; Srivastava, et al., 2020; Stiglic, et al., 2022), exhaustion (Toth, et al., 2020), vision and hearing problems (Bener, et al., 2016; Dey, et al., 2021), bones and joint pains (Kapus, et al., 2021; Dey, et al., 2021; Toth, et al., 2020), feeling dizziness (Bener, et al., 2016), and poor physical health (Upadhyay, et al., 2017) were significant predictors of internet addiction.

Mental and Emotional Health (loneliness, depression, anxiety, stress, personality, etc.):

The mental and emotional health is important for every individual across the world. Being mentally strong helps the person to think appropriately, to do more productive work and make proper decisions for their life. Out of 53 studies, 22 studies (41.5%) have highlighted on some psychological issues as a factor of IA. Some of the studies have shown that, loneliness (Lukács, 2021; Nithya & George, 2022; Mozafari, et al., 2018) is a significant predictor of IA. Also, the adolescents who uses internet excessively experiences depression (Chen, et al., 2020; Kaur & Cheema, 2018; Upadhyay, et al., 2017; Sasmaz, et al., 2013; Taechoyotin, et al., 2020; Chang, et al., 2015) and related symptoms of depression, like, feeling irritated, weight loss or gain (Toth, et al., 2020), loss of concentration (Lukács, 2021) and so on. Even they doesn't do their regular necessary activities, like studies, playing outdoor games, moving out with friends, communicating with parents and so on (Bahrainian, et al., 2014; Tsitsika, et al., 2011; Oh, 2003; Singh & Barmola, 2015; Shahrezagamasaei & Shahyad, 2022; Wang, et al., 2013; Upadhyay, et al., 2017; Taechoyotin, et al., 2020). Additionally, anxiety (Kaur & Cheema, 2018; Upadhyay, et al., 2017; Vadher, et al., 2019), and emotional disturbance (Missaoui, et al., 2015; Zenebe, et al., 2021), neurotic personality traits (Wu, et al., 2015) and

stress (Kaur & Cheema, 2018; Taechoyotin, et al., 2020; Lam, et al., 2009; Jameel, et al., 2018) were the significant predictors of internet addiction.

#### **Excessive use of social media platforms:**

Out of 53 studies, 7 studies (13.2%) have highlighted on the uses of social media platforms and gaming as the factors of IA. Now-a-days, various social media platforms are a source of entertainment and communication that provides us with regular updates and also it is easy to communicate with various individuals online. Some of the studies have shown that, entertainment or social media platforms (Asrese, et al., 2019; Malak, et al., 2017; Savci, et al., 2017; Xin, et al., 2018; El-Mawgood, et al., 2021) and online shopping platforms (Xin, et al., 2018; Vadher, et al., 2019) were significant predictors of internet addiction.

#### **Online Gaming or Watching gaming streams:**

Out of 53 studies, 10 studies (18.8%) have highlighted on the uses online gaming. It is also a vital topic at present, as it is used by majority of the population across the world, especially the children and adolescents. Individuals who are excessively indulged in gaming platforms at daily basis are hampering their physical and psychological health. Some of the studies have shown that, online gaming platforms (Asrese, et al., 2019; Avila, et al., 2020; Zenebe, et al., 2021; Kuss, et al., 2013; Bener, et al., 2016; Savci, et al., 2017; Xin, et al., 2018; Kumar, et al., 2022; Mahmoud, et al., 2022) was a significant predictor of internet addiction. Adolescents who play online games, continues to play for a long period of time (Kumar, et al., 2022; Toth, et al., 2020).

#### **Pornography:**

Out of 53 studies, 4 studies (7.5%) have highlighted on the watching or indulging in activities related to cyber sex and pornography. Pornography viewing has been increased among the adolescents since the last decade which has increased the risk of internet addiction also. Some of the studies have shown that, viewing pornography (Alexandraki, et al., 2018), online exposure to pornography (Andrie, et al., 2021;

Bernstein, et al., 2022; Sabina, et al., 2008) seems to increase IA among the adolescents.

#### **Substance Use:**

Substance use is dangerous for our health. It may lead to emotional, physical, social and financial problems. Some of the studies (7.5%) have shown that, alcohol and drug consumption are the significant predictors of internet addiction (Zenebe, et al., 2021; Kapus, et al., 2021; Lam, et al., 2009; Jain, et al., 2020).

#### **Life Style:**

Living a proper life-style is necessary for all individuals. An individual can lead a healthy life-style by maintaining a proper routine, healthy diet plan, regular exercises and health check-ups. Some of the studies (11.3%) have shown that, ignoring household works (Missaoui, et al., 2015), poor self-esteem (Wang, et al., 2013; Chen, et al., 2020; Bahrainian, et al., 2014), poor self-efficacy (Chen, et al., 2020), poor self-perception (Sasmaz, et al., 2013), poor life-satisfaction (Wang, et al., 2013), and poor quality of life (Vadher, et al., 2019) were the significant predictors of internet addiction.

#### **Family Issues:**

Family plays a very significant role in internet use among adolescents. Out of 53 studies, 20 studies (37.7%) have highlighted on family factors of IA. A family relationship is the connection or bond that is important for the members present in the family, especially for the child. Studies have shown that broken or divorced family (Demir, 2020; Wu, et al., 2016; Yen, et al., 2007), poor family environment (Chen, et al., 2020), staying away from family (Kapus, et al., 2021; Hassan, et al., 2020; Taechoyotin, et al., 2020), family monthly income or financial status (Shek, et al., 2019; Malak, et al., 2017; Wu, et al., 2016; Yen, et al., 2007; Sarıalioğlu, et al., 2022), parents with low level of education (Bajwa and Maheshwari, 2020; Malak, et al., 2017; Bashir, et al., 2021; Mohamed & Bernouss, 2020; Lukács, 2021; Sarıalioğlu, et al., 2022), poor parental attachment and relations (Chang, et al., 2015; El-Mawgood, et al., 2021; Xin, et al., 2018; Tsitsika, et al., 2011; Jameel, et al., 2018) and parental mental health (Lam, et al., 2009) were the significant predictors of internet addiction.

**Online friendships and relationships:**

Out of 53 studies, 5 studies (9.4%) have highlighted on online friendships and relationships as factors of IA. The internet use for forming online friendships with various individuals (Smahel, et al., 2012; Prabakaran, et al., 2016) and chatting (Prabakaran, et al., 2016) has occurred due to pandemic situation and social isolation as the adolescents were unable to meet physically hence they spent more time on social media platforms for communication (Krishnamurthy & Chetlapalli, 2015) and thus, they were significantly addicted to internet as well for long hours (Toth, et al., 2020). Individual also forms online relationships through dating applications and chats for long hours and gradually they are addicted to internet (Krishnamurthy & Chetlapalli, 2015; Taechoyotin, et al., 2020).

**Table-2: Factors responsible for Internet Addiction showing in Chronological order**

Study Reviewed (N= 53)	Total {Multiple Response}	Percentage
Mental and Emotional Health	22	41.5%
Family Issues	20	37.7%
Online Gaming or Watching gaming streams	10	18.8%
Physical Health Issues	8	15%
Excessive use of Social media platforms	7	13.2%
Life-style	6	11.3%
Online Friendships and Relationships	5	9.4%
Pornography	4	7.5%
Substance Use	4	7.5%

**B. Suggestive strategies for reducing excessive internet use:**

There are various ways in which the individual can help themselves to get rid of internet addiction. Here, are some suggestive

measures to reduce the rate of internet addiction among individuals:

*Maintaining good and healthy Lifestyle:* By following a routine or time table, the individual can avoid using internet continuously. The individual must engage themselves to new curricular activities join new training classes for outdoor games, such as, tennis, cricket, football, basketball and so on. By being active at a regular basis the individual can maintain healthy lifestyle like, exercising daily, sleeping on time and having proper sleep, eating healthy food, engaging in positive works, etc (Bhattacharjee & Ghosh, 2022).

*Limiting Uses of electronic devices:* The teachers can help the students; by providing useful books and documents related to studies or else any novels, or story books of their interest, so that they spend less time on internet. The parents can also help the students by providing them exposure and training to some interesting activities such as, music, art, dance, craft, and so on.

*Indulging in Hobbies:* The students must involve themselves in various activities like gardening, reading books, painting, crafting, cooking, etc. rather than playing games online for long hours. Various researches show that individuals who actively indulge in hobbies are less likely to have mental problems, further; hobbies are a good way to distract oneself from spending too much time online (Bhattacharjee & Ghosh, 2022).

*Maintaining Parent-child relationships:* Usually adolescents are prone to use social media at bed time, so, the parents can restrict that by keeping away their phone and switching off other internet access at home, like Wi-Fi. Parents can also install parental control software in the mobile phones, by which it will be easier to monitor the activities the kids does on their phones. During leisure time, parents must encourage the child to engage in household works and communicate with other family members rather than using mobile phones (Ghosh, et al., 2018).

*Limiting Computer Use:* Parents must place the computer in a common area in the home, like the living room, rather than placing it in the study



room, so that the parents can keep an eye on the activities of the child and restrict the hours of use of the computer to a limited time period like, 1 to 2 hours in a day (Varela, 2019).

*Avoiding social media platforms:* The individual can avoid social media platforms by turning off the immediate notifications from those social media handles by changing the app settings on phone. The individual must set a schedule time in which they could manually look up to the emails and other social media handles after every two to three hours. By following a daily schedule, the individual will be able to maintain the usage of internet on a daily basis.

*Following the Plans:* The parents can help the child to maintain their routine by setting timer or alarms separately for everything the child does and keeping a track on their studies and also on how much time the child is spending on internet, so that they can stick to their plans and maintain a productive lifestyle.

*Doing offline works:* The individual must make a list of works that can be done offline rather than being online and addicted to internet. For instance, the child can spend more time with friends face to face rather than chatting online. The child can also play various sports and do physical workout rather than playing online games for hours. The child can do household works like, cleaning and organizing things at home during weekends and off days rather than being online and using internet unnecessarily. They can also turn off the internet connection while doing homework or tasks, which do not need any internet access.

*Maintaining Friendship in a better way:* Now days, kids who play online games, often faces peer pressure to continue the game, as it is all about making teams and gain more points and followers online. By involving in such activities the children hampers their studies and daily chores, resulting to video game addiction and unhealthy social relationships. To avoid gaming addiction, the elders of the family must look after such things and help the child to involve themselves in outdoor games and activities with their friends which will gradually help them to avoid online gaming and also maintain their friendship and a healthy social life in a better manner.

*Using Home-based Daily Journal of Smartphone Use (HDJ-S):* The HDJ-S was developed by Tae Young Choi and the Daegu Catholic University research team in Korea. This is created to monitor the day to day activities of severe internet-addicted adolescents. The HDJ-S is considered as a preventive measure for smart phone addiction, and it includes a checklist regarding the 'time of using the smart phone each day', 'contents used in the phone', 'tracking of locations where the phone was used', and 'reflective self-evaluation'. The child needs to perform this HDJ-S everyday for two weeks and discuss their problems with their parents regarding the urge of using mobile phones and playing games (Lee, et al, 2016). By using this HDJ-S the parents can help the child to get rid of internet addiction and lead a better lifestyle.

*Providing Therapies:* To help the individuals who are addicted to internet, therapies like, Cognitive Behavioral Therapy (CBT), Rational Emotive Behavior Therapy (REBT), Family Based Therapy (FBT), etc. can be provided. CBT helps the individuals in reducing stress, depression, and anxiety and manage problems, recognizing and changing thinking patterns and behavioral patterns and REBT helps the individual to identify and understand their negative thoughts and actions and change them to positive and productive behavior. By providing such therapies, it will surely help the individuals to maintain good social life and manage interpersonal relationships (Bhattacharjee & Ghosh, 2022).

Such activities and training will help the individual to maintain their routine and daily works; and develop their mental and physical health and they will also be socially active among peer mates and other elderly people. Ultimately, the individual will spend less time on internet and lead a productive lifestyle.

### **Conclusion**

At present, in this 21st century, internet is one of the most significant sources of information and entertainment around the world. Internet has made everything easy and quick. The individuals can connect with each other by using internet even if they are from different countries or

continents. Internet has become a valuable asset of life for the humans, and it is also affecting our job, education, family and peer relationships, mental and physical health and so on.

By this systematic review analysis, it is seen that, out of 53 studies, 41.5% of the studies depicts mental and emotional health, such as anxiety, loneliness, depression, stress and so on, as a predictors of internet addiction. It is also found that 37.7% of the studies depict family issues, such as, poor education of parents, low monthly income, and so on, as predictors of internet addiction. However, 15% of the studies depicted physical health issues as a predictor of internet addiction. Furthermore, 13.2% of the studies depicted excessive use of social media platforms as a predictor of internet addiction. Similarly, 18.8% of the studies depicted online gaming and watching gaming streams as a predictor of internet addiction as well as 9.4% of the studies found online friendships and relationships as a predictor of internet addiction, which includes, chatting and using dating apps for long hours. Moreover, 11.3% of the studies depict life-style as a predictor of internet addiction, which includes, ignoring household works, poor self-esteem, and poor self-perception and so on. Also, it is found that, 7.5% of the studies depicted substance use as well as pornography as a predictor of internet addiction.

### References

- Acikgoz, A., Acikgoz, B., & Acikgoz, O. (2022). The effect of internet addiction and smartphone addiction on sleep quality among Turkish adolescents. *PeerJ*, 10, e12876.
- Afrin, D., Islam, M. U., Rabbani, F., & Hossain, A. (2017). The school-level factors associated with internet addiction among adolescents: A cross-sectional study in Bangladesh. *Journal of Addiction and Dependence*, 3(2), 170-174.
- Agarwal, A. K., Verma, A., Agarwal, M., & Singh, S. K. (2020). Adolescents Sleep Quality And Internet Addiction. *Pediatric Oncall Journal*. 17(4): 116-120 Doi: <https://doi.org/10.7199/Ped.Oncall.2020.49>
- Ahmed, M., Ibrahim, E., & Mostafa, N. E. H. (2018). Relation between Internet Addiction and Sleep Problems among Adolescents. *Zagazig Nursing Journal*, 14(1), 18-28.
- Alexandraki, Kyriaki & Stavropoulos, Vasilis & Burleigh, Tyrone & King, Daniel & Griffiths, Mark. (2018). Internet pornography viewing preference as a risk factor for adolescent Internet addiction: The moderating role of classroom personality factors. *Journal of Behavioral Addictions*. 7. 1-10. 10.1556/2006.7.2018.34.
- Al-Hantoushi, M., & Al-Abdullateef, S. (2014). Internet addiction among secondary school students in Riyadh city, its prevalence, correlates and relation to depression: A questionnaire survey. *International Journal of Medical Science and Public Health*, 3(1), 10-15.
- Alimoradi, Z., Lin, C. Y., Broström, A., Bülow, P. H., Bajalan, Z., Griffiths, M. D., ... & Pakpour, A. H. (2019). Internet addiction and sleep problems: A systematic review and meta-analysis. *Sleep medicine reviews*, 47, 51-61.
- American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). <https://doi-org.ezproxy.frederick.edu/10.1176/appi.books.9780890425596>
- Andrie, E.K.; Sakou, I.I.; Tzavela, E.C.; Richardson, C.; Tsitsika, A.K. Adolescents' Online Pornography Exposure and Its Relationship to Sociodemographic and Psychopathological Correlates: A Cross-Sectional Study in Six European Countries. *Children* 2021, 8, 925. <https://doi.org/10.3390/children8100925>
- Anwar E. (2014). Internet addiction among secondary school children and its relation with their academic achievement. *Paripex- Indian J Res*; 3(12): 72-4.
- Arthanari, S., Khalique, N., Ansari, M. A., & Faizi, N. (2017). Prevalence & determinants of Internet Addiction among Indian adolescents. *Indian Journal of Community Health*, 29(1).
- Asrese, K., & Muche, H. (2019). Online activities as risk factors for internet addiction among students in Bahir Dar University, North West Ethiopia: Hierarchical regression model.
- Bahrainian, S. A., Alizadeh, K. H., Raeisoon, M. R., Gorji, O. H., & Khazaei, A. (2014). Relationship of Internet addiction with self-esteem and depression in university students. *Journal of preventive medicine and hygiene*, 55(3), 86.
- Bajwa, R. K., & Maheshwari, S. K. (2020). A Study to Assess the Internet Addiction among Adolescents Studying in Dyal Singh Government Senior Secondary School, Mirjajan, District Gurdaspur, Punjab.

- Banstola, R. S., Adhikari, M., & Bastola, N. (2018). Internet Addiction among School going Adolescents in Pokhara, Western Nepal. *Int. J. Polit. Sci. Develop*, 6(3), 90-6.
- Bashir, R., Kazmi, F., Khan, S., & Shams, S. (2021). A quantitative correlational study of parental neglect, conduct problems and social media addiction among adolescents. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(7), 2600-2609.
- Beard K. W. (2005). "Internet addiction: a review of current assessment techniques and potential assessment questions". *CyberPsychology & Behavior*. 8(1): 7-14. <https://doi.org/10.1089/cpb.2005.8.7>
- Bener, A., Al-Mahdi, H. S., & Bhugra, D. (2016). Lifestyle factors and internet addiction among school children. *International Journal of Community & Family Medicine*, 1(118), 1-6.
- Bennett, T. (2020). Internet Addiction: Definition, Symptoms, Causes, Treatment, and More, Thrive Works.
- Bernstein, S., Warburton, W., Bussey, K. et al. Mind the Gap: Internet Pornography Exposure, Influence and Problematic Viewing Amongst Emerging Adults. *Sex Res Soc Policy* (2022). <https://doi.org/10.1007/s13178-022-00698-8>
- Bhattacharjee, A., & Ghosh, T. (2022). COVID-19 Pandemic and Stress: Coping with the New Normal. *Journal of Prevention and Health Promotion*, 3(1), 30–52. <https://doi.org/10.1177/26320770211050058>
- Cash H, Rae CD, Steel AH, & Winkler A. (2012). Internet addiction: a brief summary of research and practice. *Curr Psychiatry Rev.*;8(4):292-298. doi:10.2174/157340012803520513
- Centre for Addiction and Mental Health. (2016). One-third of Ontario students report elevated psychological distress, CAMH survey shows. Retrieved from: [http://www.camh.ca/en/hospital/about\\_camh/newsroom/news\\_releases\\_media\\_advisories\\_and\\_backgrounders/current\\_year/Pages/One-third-of-Ontario-students-report-elevated-psychological-distress.aspx](http://www.camh.ca/en/hospital/about_camh/newsroom/news_releases_media_advisories_and_backgrounders/current_year/Pages/One-third-of-Ontario-students-report-elevated-psychological-distress.aspx)
- Černja, I., Vejmelka, L. & Rajter, M. Internet addiction test: Croatian preliminary study. *BMC Psychiatry* 19, 388 (2019). <https://doi.org/10.1186/s12888-019-2366-2>
- Is Internet addiction real? Monitor on Psychology, American Psychological Association.
- Chang, F. C., Chiu, C. H., Miao, N. F., Chen, P. H., Lee, C. M., Chiang, J. T., & Pan, Y. C. (2015). The relationship between parental mediation and Internet addiction among adolescents, and the association with cyberbullying and depression. *Comprehensive psychiatry*, 57, 21-28.
- Chen, H. C., Wang, J. Y., Lin, Y. L., & Yang, S. Y. (2020). Association of internet addiction with family functionality, depression, self-efficacy and self-esteem among early adolescents. *International Journal of Environmental Research and Public Health*, 17(23), 8820.
- Cheng, C., & Li, A. Y. L. (2014). Internet addiction prevalence and quality of (real) life: A meta-analysis of 31 nations across seven world regions. *Cyberpsychology, behavior, and social networking*, 17(12), 755-760.
- de Ávila, G. B., Dos Santos, É. N., Jansen, K., & Barros, F. C. (2020). Internet addiction in students from an educational institution in Southern Brazil: prevalence and associated factors. *Trends in psychiatry and psychotherapy*, 42, 302-310.
- Demir, G. (2020) Internet Addiction in High School Students and the Related Factors. *International Journal of Caring Sciences. Volume 13 | Issue 3| Page 1997-2005 ISSN: 1792-037X*
- Dey, S. P., Saha, R., & Saha, I. (2021). Prevalence and predictors of internet addiction among eastern indian undergraduate general college students: An institute-based study. *Indian Journal of Social Psychiatry*, 37(3), 289.
- Dhawan, V., Kang, T. & Sharma, S. (2021). Internet addiction among adolescents in India: a study of gender differences. 10. 1457-1463.
- El-Mawgood, A., Alya, E., Yousef, F., & Ali, R. A. (2021). Internet addiction among secondary school students in upper Egypt. *Journal of High Institute of Public Health*, 51(2), 67-75.
- Ghosh, A. K., Badillo-Urquiola, K., Guha, S., LaViola Jr, J. J., & Wisniewski, P. J. (2018, April). Safety vs. surveillance: what children have to say about mobile apps for parental control. In Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (pp. 1-14).
- Grover, D., & Joseph, J. (2020). The prevalence of internet addiction among school-going adolescents: A comparative assessment as per two screening criteria. *Journal of Mental Health and Human Behaviour*, 25(2), 133.

- Hamami, M., Aziz, G. G. A., & Sa'id, M. (2022). Stress and Internet Addiction in College Students During the COVID-19 Pandemic. *KnE Social Sciences*, 297-309.
- Hao, Q. H., Peng, W., Wang, J., Tu, Y., Li, H., & Zhu, T. M. (2022). The Correlation Between Internet Addiction and Interpersonal Relationship Among Teenagers and College Students Based on Pearson's Correlation Coefficient: A Systematic Review and Meta-Analysis. *Frontiers in psychiatry*, 13, 818494. <https://doi.org/10.3389/fpsyt.2022.818494>
- 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(1), 1-8.
- Hoeg, N. (2019). Internet Addiction, Addiction Center: Your guide for addiction and recovery. <https://www.addictioncenter.com/>
- Hossin, M. Z., Islam, A., Billah, M., Haque, M., & Uddin, J. (2022). Is there a gradient in the association between internet addiction and health?. *PloS one*, 17(3), e0264716.
- Ilesanmi, O. S., Afolabi, A. A., & Adebayo, A. M. (2021). Problematic internet use (PIU) among adolescents during COVID-19 lockdown: A study of high school students in Ibadan, Nigeria. *The African Journal of Information and Communication*, 27, 1-22.
- Jahan I, Hosen I, Al Mamun F, Kaggwa MM, Griffiths MD, Mamun MA. How Has the COVID-19 Pandemic Impacted Internet Use Behaviors and Facilitated Problematic Internet Use? A Bangladeshi Study. *Psychol Res Behav Manag*. 2021; 14:1127–1138. doi: 10.2147/PRBM.S323570.
- Jain, A., Sharma, R., Gaur, K. L., Yadav, N., Sharma, P., Sharma, N., ... & Yadav, K. S. (2020). Study of internet addiction and its association with depression and insomnia in university students. *Journal of Family Medicine and Primary Care*, 9(3), 1700.
- Jameel, S. N., Shah, S. A., & Zahoor, S. Z. (2018). Perceived stress and parental neglect as determinants of internet addiction among adolescents. *AGU International Journal of Research in Social Sciences & Humanities*, 6, 628-637.
- Jhala, J., & Sharma, R. (2016). Internet Use Among Adolescents. *Journal of Indian Association for Child & Adolescent Mental Health*, 12(1).
- Kapus, K., Nyulas, R., Nemeskeri, Z., Zadori, I., Muity, G., Kiss, J., ... & Feher, G. (2021). Prevalence and risk factors of internet addiction among hungarian high school students. *International Journal of Environmental Research and Public Health*, 18(13), 6989.
- Karki K, Singh DR, Maharjan D, K. C. S, Shrestha S, Thapa DK (2021) Internet addiction and sleep quality among adolescents in a peri-urban setting in Nepal: A cross-sectional school-based survey. *PLoS ONE* 16(2): e0246940. <https://doi.org/10.1371/journal.pone.0246940>
- Kaur, J. & Cheema, P. K. (2018). A study to assess the prevalence of internet addiction and its association with depression, anxiety and stress among students of holy nursing school, Singhwala, Punjab. *International Journal of Sciences & Applied Research*. 5(8), 2018; 09-15
- Kaur, S. (2020). Internet gaming addiction: a gender-based study of Indian adolescents. *International Journal of Indian Psychology*, 8(2), 49-52.
- Kiran H Mali, Pradeep Sawardekar, Seema Anjenaya, V J Mahadik adolescent junior college students of Navi Mumbai, India <http://www.medpulse.in> (accessed 14 December 2015).
- Krishnamurthy, S., & Chetlapalli, S. K. (2015). Internet addiction: Prevalence and risk factors: A cross-sectional study among college students in Bengaluru, the Silicon Valley of India. *Indian journal of public health*, 59(2), 115.
- Kumar, G., Dash, P., Jnaneswar, A., Suresan, V., Jha, K., & Ghosal, S. (2022). Impact of internet addiction during COVID-19 on anxiety and sleep quality among college students of Bhubaneswar city. *Journal of education and health promotion*, 11, 156. [https://doi.org/10.4103/jehp.jehp\\_396\\_21](https://doi.org/10.4103/jehp.jehp_396_21)
- Kumar, S., Singh, H., Shankar, P., & Chail, A. (2022). Study of prevalence of internet addiction among adolescents in a cantonment school. *Journal of Marine Medical Society*, 24(3), 59.
- Kuss, D. J., Van Rooij, A. J., Shorter, G. W., Griffiths, M. D., & van de Mheen, D. (2013). Internet addiction in adolescents: Prevalence and risk factors. *Computers in Human Behavior*, 29(5), 1987-1996.
- Lam, L. T., Peng, Z. W., Mai, J. C., & Jing, J. (2009). Factors associated with Internet addiction among adolescents. *Cyberpsychology & behavior*, 12(5), 551-555.
- Lee, H., Seo, M. J., & Choi, T. Y. (2016). The effect of home-based daily journal writing in Korean



- adolescents with smartphone addiction. *Journal of Korean Medical Science*, 31(5), 764-769.
- Lin M. P. (2020). Prevalence of Internet Addiction during the COVID-19 Outbreak and Its Risk Factors among Junior High School Students in Taiwan. *International journal of environmental research and public health*, 17(22), 8547. <https://doi.org/10.3390/ijerph17228547>
- Lukács, A. (2021). Predictors of Severe Problematic Internet Use in Adolescent Students. *Contemporary Educational Technology*, 13(4), ep315.
- Mahmoud, O. A. A., Hadad, S., & Sayed, T. A. (2022). The association between Internet addiction and sleep quality among Sohag University medical students. *Middle East Current Psychiatry*, 29(1), 1-6.
- Malak, M. Z., Khalifeh, A. H., & Shuhaiber, A. H. (2017). Prevalence of Internet Addiction and associated risk factors in Jordanian school students. *Computers in Human Behavior*, 70, 556-563.
- Mane, D. S., Salunkhe, D. S., Batta, D. M., Agarkhedkar, D. S., Kumar, D. G., & Bharaswadkar, D. R. (2018). Internet addiction in school going adolescents of different socio economic classes in Western India. *Pediatr. Rev. Int. J. Pediatr. Res*, 5, 60-65.
- Missaoui SG, Brahim T, Bouriga W, Abdelaziz AB (2015) Prevalence and Consequences of Internet Addiction in a Cohort of Tunisian Adolescents: A Pilot Study. *J Child Adolesc Behav* 3:257. doi:10.4172/2375-4494.1000257
- Mohamed, G., & Bernouss, R. (2020). A cross-sectional study on Internet addiction among Moroccan high school students, its prevalence and association with poor scholastic performance. *International Journal of Adolescence and Youth*, 25(1), 479-490.
- Mozafari, S., Sepahvandi, M. A., & Ghazanfari, F. (2018). Study of the relationship between Internet addiction with social Anxiety and Loneliness among high school students in Yasuj. *J Adv Pharm Educ Res*, 8, 143.
- Musetti, A., Cattivelli, R., Giacobbi, M., Zuglian, P., Ceccarini, M., Capelli, F., Pietrabissa, G. & Castelnovo, G. (2016). Challenges in internet addiction disorder: is a diagnosis feasible or not?. *Frontiers in psychology*, 7, 842.
- Nagori, N., Vasava, K., Vala, A., & Ratnani, I. (2019). Association of sleep quality and internet addiction among the medical students. *International Journal of Research in Medical Sciences*, 7(7), 2703-2707. doi:<http://dx.doi.org/10.18203/2320-6012.ijrms20192903>
- Nayak, A., Saranya, K., Fredrick, J., Madumathy, R., & Subramanian, S. K. (2021). Assessment of burden of internet addiction and its association with quality of sleep and cardiovascular autonomic function in undergraduate medical students. *Clinical Epidemiology and Global Health*, 11, 100773.
- Nithya. R., & Jith George. (2022). Internet addiction, loneliness and social anxiety among adolescents. *International Journal of Indian Psychology*, 9(1). <https://doi.org/10.25215/0901.109>
- Oh, W. O. (2003). Factors influencing internet addiction tendency among middle school students in Gyeong-buk area. *Journal of Korean Academy of Nursing*, 33(8), 1135-1144.
- Prabhakaran, M. A., Patel, V. R., Ganjiwale, D. J., & Nimbalkar, M. S. (2016). Factors associated with internet addiction among school-going adolescents in Vadodara. *Journal of family medicine and primary care*, 5(4), 765.
- Reid Chassiakos, Y. L., Radesky, J., Christakis, D., Moreno, M. A., Cross, C., Hill, D., Ameenuddin, N., Hutchinson, J., Levine, A., Boyd, R., Mendelson, R. & Swanson, W. S. (2016). *Children and adolescents and digital media. Pediatrics*, 138(5).
- Sabina, C., Wolak, J., Finkelhor, D. The nature and dynamics of internet pornography exposure for youth. (2008) *Cyberpsychology and Behavior*, 11 (6), pp. 691-693.
- Sarıalioğlu, A., Atay, T., & Arıkan, D. (2022). Determining the relationship between loneliness and internet addiction among adolescents during the covid-19 pandemic in Turkey. *Journal of pediatric nursing*, 63, 117-124.
- Şaşmaz, T., Öner, S., Kurt, A. Ö., Yapıcı, G., Yazıcı, A. E., Buğdaycı, R., & Şiş, M. (2014). Prevalence and risk factors of Internet addiction in high school students. *The European Journal of Public Health*, 24(1), 15-20.
- Savci, M., & Aysan, F. (2017). Technological addictions and social connectedness: predictor effect of internet addiction, social media addiction, digital game addiction and smartphone addiction on social connectedness. *Dusunen Adam: Journal of Psychiatry & Neurological Sciences*, 30(3), 202-216.



- Shahrezagamasaei, M., & Shahyad, S. (2022). Prevalence of Internet Addiction during the COVID-19 Outbreak and Its Psycho-Demographic Risk Factors in a Sample of Iranian People. *Novelty in Clinical Medicine*, 1(2), 108-115.
- Sharma, A., Sahu, R., Kasar, P. K., & Sharma, R. (2014). Internet addiction among professional courses students: A study from central India. *Int J Med Sci Public Health*, 3(9), 1069-73.
- Sharma, D., & Nitakumari, G. (2019). An Exploratory Study to Assess the Level of Internet Addiction and its Impact on the Health of Adolescents in Selected Schools of District Mohali, Punjab. *Amarjeet Kaur Sandhu*, 11(2), 12.
- Shek, D. T., Zhu, X., & Dou, D. (2019). Influence of family processes on internet addiction among late adolescents in Hong Kong. *Frontiers in psychiatry*, 10, 113.
- Singh, N., & Barmola, K. C. (2015). Internet addiction, mental health and academic performance of school students/adolescent. *Int J Indian Psychol*, 2, 98-108.
- Siomos, K. E., Dafouli, E. D., Braimiotis, D. A., Mouzas, O. D., & Angelopoulos, N. V. (2008). Internet addiction among Greek adolescent students. *CyberPsychology & Behavior*, 11(6), 653-657.
- Siste K, Hanafi E, Sen LT, Murtani BJ, Christian H, Limawan AP, Siswidiani LP and Adrian (2021) Implications of COVID-19 and Lockdown on Internet Addiction Among Adolescents: Data From a Developing Country. *Front. Psychiatry* 12:665675. doi: 10.3389/fpsy.2021.665675
- Smahel, D., Brown, B. B., & Blinka, L. (2012). Associations between online friendship and Internet addiction among adolescents and emerging adults. *Developmental psychology*, 48(2), 381.
- Sriati, A., Lukman, M., & Agustina, H. S. (2022). Relation of Academic Stress Levels and Internet Addiction in Adolescents: A Cross-Sectional Study. *Malaysian Journal of Medicine and Health Sciences*. 18(SUPP3): 110-114.
- Srivastava, M., Kumar, A., & Jaiswal, S. (2020). Prevalence and risk factors of Internet addiction among the students of Banaras Hindu university. *Indian Journal of Social Psychiatry*, 36(3), 191.
- Stiglic, G., Masterson Creber, R., & Cilar Budler, L. (2022). Internet Use and Psychosomatic Symptoms among University Students: Cross-Sectional Study. *International Journal of Environmental Research and Public Health*, 19(3), 1774.
- Subudhi, R., & Palai, D. (2020). Impact of internet use during COVID lockdown. *Horizon J. Hum. & Soc. Sci*, 2, 59-66.
- Taechoyotin, P., Tongrod, P., Thaweerunruangkul, T., Towattananon, N., Teekapakvisit, P., Aksornpusitpong, C., Sathapornpunya1, W., Hempatawee, N., Rangsin, R., Mungthin, M., & Piyaraj, P. (2020). Prevalence and associated factors of internet gaming disorder among secondary school students in rural community, Thailand: A cross-sectional study. *BMC research notes*, 13(1), 1-7. <https://doi.org/10.1186/s13104-019-4862-3>.
- Tereshchenko, S., Kasparov, E., Smolnikova, M., Shubina, M., Gorbacheva, N., & Moskalenko, O. (2021). Internet addiction and sleep problems among russian adolescents: a field school-based study. *International Journal of Environmental Research and Public Health*, 18(19), 10397.
- Top 10 Most Internet Addicted Countries. TMA World, Borderless learning. IPSOS survey research. 10 January 2018.
- Tóth, G., Kapus, K., Hesszenberger, D., Pohl, M., Kósa, G., Kiss, J., Pusch, G., Fejes, E., Tibold, A., & Feher, G. (2021). Prevalence and risk factors of internet addiction among Hungarian high school teachers. *Life*, 11(3), 194. <https://doi.org/10.21203/rs.3.rs-109349/v1>.
- Tsitsika, A., Critselis, E., Louizou, A., Janikian, M., Freskou, A., Marangou, E., ... & Kafetzis, D. A. (2011). Determinants of Internet addiction among adolescents: a case-control study. *The scientific world journal*, 11, 866-874.
- Upadhyay, P., Jain, R., & Tripathi, V. N. (2017). A study on the prevalence of internet addiction and its association with psychopathology in Indian adolescents. IP Innovative Publication Pvt. Ltd. *Indian Journal of Neurosciences*. <https://doi.org/10.18231/2455-8451.2017.0014>
- Vadher, S. B., Panchal, B. N., Vala, A. U., Ratnani, I. J., Vasava, K. J., Desai, R. S., & Shah, A. H. (2019). Predictors of problematic Internet use in school going adolescents of Bhavnagar, India. *International Journal of Social Psychiatry*, 65(2), 151-157.
- Varela, E. (2019). Addiction to the Internet. Prevention of Internet Addiction. <https://www.clinicbarcelona.org/en>

- Vig, P., & Gill, D. S. A study of Internet addiction among adolescents. A study of modernity Behaviour of university students of Punjab in relation to Altruism and Activism\* Dr. Kulwinder Singh, 69.
- Walrave, M., & Heirman, W. (2011). Cyberbullying: Predicting victimisation and perpetration. *Children & Society, 25*(1), 59-72.
- Wang, L., Luo, J., Bai, Y., Kong, J., Luo, J., Gao, W., & Sun, X. (2013). Internet addiction of adolescents in China: Prevalence, predictors, and association with well-being. *Addiction Research & Theory, 21*(1), 62-69.
- Wu C-Y, Lee M-B, Liao S-C, Chang L-R (2015) Risk Factors of Internet Addiction among Internet Users: An Online Questionnaire Survey. *PLoS ONE 10*(10): e0137506. doi:10.1371/journal.pone.0137506
- Wu, C. S. T., Wong, H. T., Yu, K. F., Fok, K. W., Yeung, S. M., Lam, C. H., & Liu, K. M. (2016). Parenting approaches, family functionality, and internet addiction among Hong Kong adolescents. *BMC pediatrics, 16*(1), 1-10.
- Xin, M., Xing, J., Pengfei, W., Houru, L., Mengcheng, W., & Hong, Z. (2018). Online activities, prevalence of Internet addiction and risk factors related to family and school among adolescents in China. *Addictive Behaviors Reports, 7*, 14-18.
- Yen, J. Y., Yen, C. F., Chen, C. C., Chen, S. H., & Ko, C. H. (2007). Factores familiares de adicción a Internet y experiencia en el uso de sustancias en adolescentes taiwaneses. *Cyberpsychology & Behavior, 10*, 323-329.
- Zenebe, Y., Kunno, K., Mekonnen, M., Bewuket, A., Birkie, M., Necho, M., Seid, M. Tsegaw, M. & Akele, B. (2021). Prevalence and associated factors of internet addiction among undergraduate university students in Ethiopia: a community university-based cross-sectional study. *BMC psychology, 9*(1), 1-10.

**Anjana Bhattacharjee**, Ph.D. Associate Professor, Department of Psychology, Tripura University. Email : [anjanabhattacharjee@tripurauniv.ac.in](mailto:anjanabhattacharjee@tripurauniv.ac.in)

**Arundhuti Roy**, Research Scholar, Department of Psychology, Tripura University. Email : [arundhuti.psychology@tripurauniv.ac.in](mailto:arundhuti.psychology@tripurauniv.ac.in)

**Tatini Ghosh**, Research Scholar, Department of Psychology, Tripura University. Email: [tatini.psychology@tripurauniv.in](mailto:tatini.psychology@tripurauniv.in)