



The Impact Of Children's Digital Addiction On Their Lifestyle And Academic Performance: An In-Depth Review

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ABSTRACT

In the contemporary world, children are increasingly influenced by technology which leads to a phenomenon often termed as 'digital addiction'. This paper presents an in-depth review of the impact of children's digital addiction on their lifestyle as well as their academic performance. It scrutinizes various studies from different parts of the world. It concludes on how excessive screen time such as encompassing social media, gaming, and other digital activities affects the various facets of children's lifestyle and academic performance. It examines the lifestyle changes associated with digital addiction. It depicts how prolonged and excessive digital engagement disrupts sleep patterns, reduces physical activity, promotes unhealthy lifestyle practices, results in poor academic performance, and impairs social interactions, contributing to a sedentary lifestyle and potential mental health issues such as anxiety and depression. This shows that excessive digital engagement affects the holistic well-being of children, as most of their personal growth is limited to the screen. In addition, this paper also explores the mechanisms through which digital addiction impairs cognitive functions necessary for learning, memory retention, critical thinking capacities, and classroom distractions as well as their ability to concentrate.

By integrating findings from diverse sources from different areas and perspectives, this paper provides a comprehensive understanding of how digital addiction reshapes children's daily lives and educational accomplishments. It concludes with recommendations for parents, educators, and policymakers

to limit engagement and mitigate the negative impacts of digital addiction by emphasizing the need for balanced digital engagement and promoting healthy lifestyle patterns.

Keywords: Children, Digital Addiction, Technology, Academic Performance, Lifestyle

Introduction

Internet use has become an essential aspect of daily life in these modern digital times, particularly for children. Addiction to the Internet has also become a significant problem. However, the common negative effects and influences on children's cognitive growth are still a mystery to many parents. It is incumbent to address this issue by limiting their screen time as which otherwise may result in detrimenting circumstances. Understanding the influence of 'digital addiction' or excessive screen time among teenagers and evaluating its correlation with stress, anxiety, and depression were the goals of this study.

Whether on a computer, tablet, or mobile device, the screen represents our contemporary era. The "digital natives," is referred to children who have spent their entire childhood immersed in digital entertainment and information on screens. Screen time has become a significant aspect of modern living and concern over its effects on the health of kids and teens has grown tremendously. Therefore, the goal of the study is to comprehend the prevalence of digital addictions in any form, including excessive use of smartphones, laptops, and other devices, as well as the different impacts that digital devices have on kids.

Digital technologies have become essential to many facets of daily life in the current period of the digital revolution, and they have changed how societies work all around the world (Zhou et al. 2022). Many digital devices and systems, including laptops, smartphones, tablets, social networking sites, and other online platforms, have become widely used by people of all ages since the introduction of mobile technologies and sophisticated digital systems like artificial intelligence or the Internet of Things (Bucci et al. 2019; Wiraniskala and Sujarwoto, 2020; Chang et al. 2022). Nearly half of the world's population is thought to have already shifted to digital technology, and digital interactions are pushing people to alter their lifestyles, even those with little access to digital resources (Elliot, 2018).

Digital technologies are used for a wide range of purposes, including entertainment, communication, relationship building/maintenance, socialization, self-documentation, information sharing, and exploration. They have improved people's quality of life in several ways (Chakraborty, 2016; Hughes and Burke, 2018; Foroughi et al. 2022). Notwithstanding these advantages, excessive use of digital technologies or their improper application has sparked severe worries about their detrimental impacts on people's physical and mental health, especially through the development of digital addiction (Bucci et al. 2019).

Research on digital addiction, a more recent type of behavioral addiction, has grown worldwide (Karakose et al. 2022). It has been shown to negatively impact people's well-being either directly or indirectly by resulting in emotional impairments like depression as discussed in most of the studies by Carli et al. 2013 & Guo et al. 2020. Depression is a serious, long-term health condition that presents as sadness, loss of interest, sleep issues, fatigue, changes in appetite, aimless activity, feelings of guilt or worthlessness, difficulty thinking, poor concentration, and decreased life satisfaction (Koo, 2018). It is distinguished from people's normal mood fluctuations or short-lived emotional responses (WHO, 2022). According to the World

Health Organisation (WHO), 2022, depression is regarded as one of the main causes of disability globally and research on the relationship between depression and digital addiction has shown that there are strong correlations between the two (Geng et al. 2021).

Concept of Child/Children

In general, the United Nations Convention on the Rights of the Child (UNCRC) defines a child as someone under the age of 18. According to most of the acts and legislations in India, an individual becomes an adult when they reach 18 years of age. The social, economic, and cultural aspects of a culture greatly influence how a child is defined. A person's status as a child can be influenced by a variety of factors including customs, beliefs held by the community, behavior, physical development, place of residence, and the living circumstances of a child.

Children and Statistical Facts on Digital Addiction

Yang Y et al. 2023 conducted a cross-sectional study among 110 students with Non-Suicidal Self-Injury (NSSI) behaviors between December 2019 and December 2021. Results showed that 40.9% of the participants reported being addicted to online gaming. The likelihood of developing an addiction to Internet gaming was higher among male participants and those residing on school campuses. The three main indications for diagnosing Internet gaming addiction were "preoccupation," "unsuccessful attempts to control playing," and "withdrawal."

Gaming Addiction Report released by UK in 2022 found that there is a growing concern about gaming addiction. According to a 2021 thorough review, 3-4% of players globally suffer from video game addiction, which could suggest that up to 60 million people are affected. Video game addiction was formally recognized as a mental health issue by the World Health Organisation (WHO) in 2022. A person's inability to control their want to play video games, prioritizing gaming over other hobbies and responsibilities, and continuing to play despite unpleasant side effects are characteristics that define the diagnosis.

According to recent findings by Baatu Tech, 2024 in India, over 60% of kids aged 5 to 16 display characteristics suggestive of possible digital addiction, highlighting the critical need for practical solutions to lessen these detrimental impacts. The poll with a sample size of 1,000 parents highlights the hazards associated with increased screen time, such as poor sleep, decreased physical activity, social disengagement, and worse academic performance. The findings reveal that a staggering 60% of children exhibit behaviors indicative of potential digital addiction, and an overwhelming 85% of parents express difficulties in managing their children's online content consumption. Another recent finding revealed that screen usage had a highly alarming effect on children's behavior, as anxiety is just one of the behavioral problems. It is concerning that youngster as young as seven years old demonstrated the severe effects of excessive screen usage, which negatively influenced their behavior.

A study and an OPD analysis by the All India Institute of Medical Sciences (AIIMS) Bhopal highlighted this concerning trend by showing that anxiety affected 24.9% of youngsters in the Madhya Pradesh state. For example, a seven-year-old kid who spent 8 hours a day on screens was unable to speak at

all. Besides, a two-year study of 413 teenagers, aged 14 to 19, that examined their social media usage patterns during and after the COVID-19 pandemic found that 56% of them were impatient, 59% were anxious and frequently had anger management problems. They also concluded that too much screen usage causes problems like delayed speech in younger kids and irritation, obesity, and violence in teenagers. Most parents frequently underestimate the negative effects of prolonged gadget use.

Sulaiman, R et al. 2021 studied mobile phone addiction among children between the age group of 5-12 years on 222 children in Kerela and reported that 42.3% of these kids were addicted to their phones. It was found that there was a statistically significant correlation between mobile phone addiction and factors such as a higher socio-economic standing of the family, an educated father, children who were of normal weight for their age, the prevalence of vision issues, headaches, poor focus, and disrupted sleep. Regression analysis revealed that children with normal weight for age, greater socioeconomic level, sleep disturbances, and poor concentration were the predicting variables.

Findings and Discussions

In this particular study, the findings of the study are an in-depth analysis of previous studies of different scholars from different regions related to different aspects comprehensively. The previous findings are carefully analyzed to have an equal representation of different nations, as these findings will prove that digital addiction is a global phenomenon and not just of a particular region or nation. As children are facing such issues across the globe, the in-depth review particularly concentrated on the studies related to children. The findings of the study are arranged in chronological diverse order to comprehend the latest findings. Some of the major findings are as follows:

Lou, Jiaxue & Wang, et al. (2024) conducted a study on *"The association between family sociodemographic factors, parental mediation, and adolescents' digital literacy: a cross-sectional study"* and investigated the separate effects of family socio-demographic factors and varied dimensions of parental mediation on adolescents' digital literacy separately. It also explored the appropriate parental mediation strategies even in the absence of favorable family status by adopting a cross-sectional survey among 1894 Chinese adolescents in junior and senior high schools. Adolescents' parental mediation and digital literacy were favorably correlated with higher parental education levels, whereas parental divorce and improved family economic status were adversely correlated. Adolescents' digital literacy was substantially correlated with the parental mediation features of active mediation, restrictive mediation, and supervision. Teenagers' digital literacy was significantly positively correlated with active mediation and monitoring. The influence of family sociodemographic characteristics on teenagers' digital literacy has been lessened by parental mediation. To sum up, to help adolescents acquire digital literacy and navigate the digital world, effective interventions are required to support parental active mediation and supervision. This is especially true for adolescents whose parents are divorced or lack a high level of education.

Anjum, Ramisa & Nodi, et al. (2024) conducted a study *"Exploring the association between online gaming addiction and academic performance among the school-going adolescents in Bangladesh: A cross-sectional study"* and explored the intricate ramifications of online gaming addiction on the academic

performance and social dynamics of children in Bangladesh. The data is collected among 502 participants between the age group of 6 and 17 years by adopting a simple random sampling method. The results showed that the majority were between the ages of 13 and 17 (75.50%), primarily male (58.57%), and enrolled in secondary school (83.27%). Academic performance was higher among the children who were not addicted to internet gaming, according to a strong inverse association. Therefore, it is critical to put specific solutions into place to assist youngsters in Bangladesh who are addicted to internet gaming. It is essential to encourage cooperation between educational institutions, mental health providers, parents, and legislators and suggest early intervention, academic programs, and holistic therapy.

Failde Garrido, Jose & Coonde, et al. (2024) conducted a study on *“Problematic Use of Video Games in Schooled Adolescents: The Role of Passion”* and determined the predictive value of sociodemographic, academic, and other variables. It is conducted through a descriptive cross-sectional study among 2,533 Galician students (a region located in the northwest of Spain) between the age group of 11 and 20 selected through multistage random sampling. The data analysis appears to suggest that a variety of factors are coupled to predict problematic video game use, with enthusiasm playing a significant role. Furthermore, problematic video game use is linked to a higher prevalence of negative emotional and behavioral symptoms, ADHD diagnosis, poor academic achievement, poor parental control, and the use of addictive substances or an earlier onset. The findings of this study could be useful in the planning and execution of remedial and preventative measures meant to lessen problematic or compulsive video game use.

Li, Huanhuan & Luo et al. (2024) conducted their study on the area of *“Family socioeconomic status and young children digital addiction: a moderated mediation model”* among 403 parents of young children through online questionnaires by adopting a cross-sectional study design including the Internet Addiction Test-10 (IAT-10) the Chinese version of the Parenting Style Questionnaire (C-EMBU). The findings reveal that Parenting methods (emotional warmth and compassion, punishment, and severity) buffer the association between family socioeconomic status and early children's digital addiction, which is strongly and negatively correlated with family socioeconomic level. Furthermore, the association between family socioeconomic level, emotional warmth and understanding parenting styles, discipline and severity parenting styles, and early children's digital addiction is moderated by the gender of the children. In conclusion, by enhancing parenting practices, family socioeconomic position can help prevent young children from being addicted to technology. Nonetheless, the socioeconomic position of families continues to have a detrimental overall impact on young children's addiction to technology.

Sütçü, Neşe & Dinle, Seher (2024) conducted a study on *“Investigation of the Relationship Between Children's Digital Game Addictions and Spatial Reasoning Skills”* and examined children's digital game addiction and spatial reasoning skills in terms of various variables to determine the relationship between them. There are 318 students from 4th and 5th grades participated in this study selected through a simple random sampling method in the central districts of Diyarbakır province. According to the study, students who attended private schools showed much better spatial reasoning abilities than those who attended public schools, and male students exhibited significantly greater levels of digital gaming addiction and spatial

orientation than female students. Additionally, it was discovered that children of parents with greater educational attainment exhibited much better spatial thinking abilities and less addiction to digital games than children of parents with lower educational attainment. Furthermore, it was discovered that in comparison to children with higher grades, those with typically poorer arithmetic scores were more addicted to digital games and possessed less spatial reasoning abilities. However, there was a weak, negative, and significant correlation between students' spatial reasoning abilities and their addiction to digital games.

Toska, A. & Karampelas et al. (2024) conducted a study on “*Computer and Internet Use Among Children and Adolescents in Greece: Levels of Addiction*” and evaluated the computer and internet addiction levels in children and adolescents through their parents' reports. By following a cross-sectional study in the region of Megara (Attica, Greece) for two months (September-November 2022). In this study, 205 parents including 74 fathers and 131 mothers of school-age children participated. In terms of internet usage, 62% of children had an internet connection in their bedroom, 58.5% of children had access to the internet via a smartphone, and 46.1% of children accessed the internet for one to two hours per day. The availability of computers and the internet in children's bedrooms was found to be significantly positively correlated with internet addiction, and children whose parents used the internet for more than five hours a day showed a larger degree of addiction. In summary, 5.1% of girls and 7.2% of boys had parents who reported moderate or severe addiction. In conclusion, only a few parents reported engaging in severely addictive behaviors. Nonetheless, there is a clear link between parents' increased internet use and a much higher risk of addiction in their children.

Kurt, Aylin & Uzun et al. (2024) conducted a study “*The Relationship Between Digital Game Addiction and Sleepiness in Adolescents: A Cross-Sectional Study*” and examined the relationship between digital game addiction and sleepiness among 263 adolescents aged between 12-18 years who were studying in three high schools in a district center in the Western Black Sea Region, Zonguldak. The study adopted the "Introductory Information Form", "Digital Game Addiction Scale (DGAS)" and "Epworth Sleepiness Scale". According to the findings of the study, thirty percent of the teenagers showed signs of daytime sleepiness, according to the Epworth Sleepiness Scale. Teenagers' Epworth Sleepiness Scale scores and the Digital Game Addiction Scale showed a somewhat good link. Adolescents with higher mean total scores on the Digital Gaming Addiction Scale were 51 times more likely to display daytime sleepiness. It was discovered that people who were sleep-deprived as a result of playing video games had a 32-fold higher prevalence of daytime sleepiness. In conclusion, teens with a high level of digital game addiction were shown to be drowsy.

Sevtap, Kanat. (2024) conducted a study on “*The Relationship Between Digital Game Addiction, Communication Skills and Loneliness Perception Levels of University Students*” and investigated the digital game addiction, communication, and loneliness perception levels of university students in terms of demographic variables among 646 students studying at İnönü University in the year 2018-2019. The results show that the participants' addictions to digital games differ by gender, grade, number of siblings, daily playing duration, and parental educational attainment. However, addiction to digital gaming is unaffected by financial level. Communication abilities are influenced by gender, grade level, mother's educational

background, playtime, and sibling count, but not by father's educational or financial status. Students' feelings of loneliness are significantly correlated with their gender, parents' educational attainment, and amount of playing time. While there is no statistically significant association between digital game addiction and loneliness, one of the study's key findings is that there is a substantial relationship between digital game addiction and communication abilities.

Ran, F., Wu, R., Luo, Y. *et al.* (2024) in their study “*Internet addiction and social support in the association between learning burnout and emotional behavioral problems among returned migrant middle school students: a serial Multiple mediations Analysis*” explore the Emotional Behavioral Problems (EBP) associated with Learning Burnout (LB) among returned migrant middle school students. Furthermore, the role that Social Support (SS) and Internet Addiction (IA) play as mediators in this relationship was examined. The sample was taken from 36 secondary schools in Guizhou Province, China, as part of the Health Status Survey of Middle School Students. According to this study, among middle school kids who are returned migrants, EBP brought on by LB can be successfully decreased with reduced IA and increased SS. To prevent and avoid EBP, it is advised that parents, schools, and government agencies pay attention to IA and SS issues brought on by LB in middle school students who are returned migrants.

Tok, Hümeýra & Kesgin, Makbule. (2024) conducted a study on “*Awareness and Determination of Digital Game Addiction Levels among Nursing Students*” and determined nursing students’ awareness of digital game addiction and their addiction levels using a cross-sectional study among 362 participants using the known sample selection method. The result indicated that phone-computer usage and phone game playing time rise, and so do scores for digital game addiction. Males, people with a history of mental illness, people who learned through digital games, and people who spent a lot of time on their phones were more likely to develop a digital addiction. The following groups are more aware of digital game addiction: women, those with high incomes, those with low scores, and those with heightened awareness of the problem.

Theopilus, Yansen & Mahmud (2024) conducted a study on “*Digital Interventions for Combating Internet Addiction in Young Children: Qualitative Study of Parent and Therapist Perspectives*” and investigated the experiences, perceptions, and considerations of parents and therapists regarding digital interventions for combating internet addiction in young Indonesian children. The study adopted a qualitative exploratory approach and collected information from 22 parents who have children between the age group of 7 and 11 years and 6 experienced internet addiction therapists working with children. The study's participants identified Google Family Link, YouTube Kids, and Apple parental control as the three digital remedies currently in use to address internet addiction. They believed that digital interventions could help parents with supervision and consistently encourage children to behave healthily online. However, because of issues including data privacy, cultural incompatibility, parent-child connections, parental competency, and app functioning and usability, the current therapies were not widely implemented.

Ural, Bedriye & Sezgin et al. (2024) conducted a study on “*Eating Behavior, Sleep Disorders and Digital Game Addiction in Children and Determination of Associated Factors by CHAID Analysis*” and investigated the relationship between digital game addiction, eating behavior, and sleep disorders in children.

It is conducted among 252 mothers with children between the age group of 4 and 7 years through a convenient sampling method. The Digital Game Addiction Scale, Children's Eating Behavior Questionnaire, and The Sleep Disturbance Scale for Children (SDSC) were utilized to collect the sample. Addiction to digital games has a detrimental impact on children's sleep and eating habits. Digital gaming addiction was found to have a weakly significant but generally beneficial link with children's eating behaviors whereas the sleep disorder scale's sleep hyperhidrosis sub-dimension showed a very significant relationship. The mother's age, the parent's educational attainment, and the child's gender all have an impact on eating habits while gender has an impact on digital game addiction. In conclusion, it is possible to establish intervention programs for children and families that address the reasons for digital gaming addiction, its impact on children's development, and how to utilize the digital world responsibly.

Karakose T, et al. (2023) conducted a study on *“A comprehensive review on emerging trends in the dynamic evolution of digital addiction and depression”* and adopted secondary techniques such as fusing science mapping analysis and bibliometric techniques. The final data collection had 241 items that were collected from the Web of Science Core Collection. According to the findings, internet addiction was the most prominent theme throughout all three decades, followed by social media addiction, according to the data analysis conducted during the first three periods (1983–2016), 2017–2019, and 2020–2022). A major subject throughout Period 1 was depression, which was later covered under the theme of anxiety disorders. Several characteristics, including cognitive distortion, sleeplessness, loneliness, self-esteem, social support, alexithymia, cyber victimization, and academic achievement, have been linked to both addiction and depression.

Chaudhry, Zoraiz & Zulfiqar, Anum & Hassan, Ifra. (2023) conducted a study on *“Nexus between Addiction to Mobile Phones and Sense of Loneliness among Students of Social Sciences in Sargodha”* and investigated the adverse impact of excessive mobile phone use, focusing on addiction. It explores the correlation between mobile phone addiction and loneliness, particularly among social sciences students at Sargodha University, Pakistan among 170 students via a purposive sampling method by ensuring representation across academic levels. The results emphasize the impact on emotional well-being and show a substantial correlation between smartphone addiction and increased loneliness among students. The study's findings encourage critical analysis of how technology either promotes or hinders social relationships, highlighting the necessity of specialized treatments and educational initiatives to promote positive technology use and lessen the negative consequences of smartphone addiction.

Tso, Winnie & Reichert, et al. (2022) conducted a study on *“Digital competence as a protective factor against gaming addiction in children and adolescents: A cross-sectional study in Hong Kong”* and investigated the effects of digital competence on the risk of gaming addiction among adolescents. It explored whether the students with good digital competence were protected from the adverse effects of media use and the risk of gaming addiction among 1956 students (690 primary and 1266 secondary) through a digital competence assessment and a self-report questionnaire of their mental health status, use of digital devices, and experiences of cyberbullying. According to the study, regression analysis shows that children who were

more proficient with technology had a lower chance of becoming addicted to gaming and were less likely to engage in cyberbullying as both perpetrators and victims. It was discovered that the association between gaming addiction and the amount of time spent on digital devices was mediated by digital competence. Interpretation: By lowering the dangers of gaming addiction and cyberbullying, digital competency is linked to fewer cases of gaming addiction and may even improve mental health. The study suggested that to optimize the positive effects of media consumption while minimizing the possible negative consequences of improper usage of digital devices, education that fosters digital competency is crucial.

Zhen, Rui & Li, Lu & Li, Guoqiang & Zhou, Xiao. (2021) conducted a study on “*Social Isolation, Loneliness, and Mobile Phone Dependence among Adolescents During the COVID-19 Pandemic: Roles of Parent-Child Communication Patterns*” and examined the mediating role of loneliness and the moderating role of parent-child communication patterns on social isolation. A total of 684 adolescents from a middle school in Huang’gang City, China, participated in this study. According to the findings, loneliness caused by social isolation significantly and favorably impacted Mobile Phone Dependence (MPD). Furthermore, three categories of communication patterns between parents and children were noted viz., maladaptive, adaptive, and complicated. Compared to adolescents with maladaptive parent-child communication, those with complex parent-child communication have a less indirect relationship between social isolation and MPD through loneliness. It reveals the patterns of communication between parents and children and it also reduces the indirect impact of social isolation on MPD through loneliness.

Kaya, Ayla & Karatas et al. (2021) conducted a study on “*A grounded theory study to explore the digital gameplay experiences of adolescents at risk of addiction in Turkey*” and explored the experiences of adolescents at risk of digital game addiction in Turkey among 14 adolescents through one-on-one in-depth interviews. As per the findings of the study, The participants played digital games to pass the time and satisfy their need for social interaction. Digital gaming, however, has a cultural, psychological, and physical impact on teenagers. Early childhood education and family support are two solutions that can greatly lower the chance of developing an addiction to digital games. Implications for practice The goal of preventing digital game addiction is significant, and the first step in putting preventative measures in place is determining the hazards that contribute to digital game addiction. The results of this study might raise parents', teachers', and school nurses' knowledge of the topic. Future research aimed at reducing digital game addiction and incorporating lessons about the appropriate and advantageous uses of digital technology into school curricula are two examples of possible corrective actions.

Saikia AM, Das J, Barman P, Bharali MD. (2019) conducted a cross-sectional study on “*Internet Addiction and its Relationships with Depression, Anxiety, and Stress in Urban Adolescents of Kamrup District, Assam*” among students of higher secondary schools/colleges in the urban areas of Kamrup district in Assam and assessed 103 government and private higher secondary school/colleges where a total of 440 students participated in the study. The study adopted Young's Internet Addiction Scale, and Depression Anxiety Stress Scales 21 (DASS21) and found that the main purpose of using the Internet was social networking (71.4%) followed by study (42.1%), and the majority (42.1%) reported spending 3-6 hours a day

on the internet. There was a significant association between Internet addiction and stress among the respondents.

Kırık, Ali Murat & Kuyucu, Mihalıs (2018) conducted a study on “*The Role of Family Factor in Digital Game Addiction Among Children*” and determined the role and effects of families in the use of digital games by children by adopting a random sampling in-depth interview in the Şişli District of Istanbul. The study's findings show that environmental and familial factors contribute to children's addiction to digital games. Families' lack of awareness regarding their children's addiction to digital games was another significant finding. It was found that families were as engaged in digital games as children were and that they primarily used their smartphones to play them. One noteworthy finding is that children mostly play computer games for fun, which puts their everyday lives and academic performance at risk. Addiction to digital games has a direct impact on children's physical and mental environments in addition to their social lives. Increasing family awareness, spending more time with children, and getting psychological support are some ways to combat digital gaming addiction. In addition to these, another recommendation for preventing digital game addiction is to raise the public's degree of digital media literacy.

Dufour, Magali & Brunelle et al. (2016) conducted a study on “*Gender Difference in Internet Use and Internet Problems among Quebec High School Students*” and compared the influence of gender on Internet use and addiction among 3938 adolescents from grades 9 to 11. The findings show that as compared to girls, boys spend a lot more time online. While a larger percentage of the boys used online games, adult websites, and massively multiplayer online role-playing games extensively, a larger percentage of the girls used social networks. Depending on the cut-off used, different percentages of teenagers had a possible IA problem. 1.3% of the adolescents were deemed to have an IA and 41.7% were deemed to be at risk. Regarding the percentage of teenagers deemed to be at risk or exhibiting IA issues, there was no discernible gender difference.

Kawabe, Kentaro & Horiuchi et al. (2016) conducted a study on “*Internet addiction: Prevalence and relationship with mental states in adolescents: Internet addiction in adolescents*” and investigated the prevalence of Internet addiction in junior high school students, elucidated the relationship between Internet addiction and mental states and determined the factors associated with Internet addiction in adolescents. It was conducted among 853 adolescents and as per the findings of the study, smartphones were significantly associated with Internet addiction. Besides, students in the Addicted and possibly addicted groups were considered "problematic" Internet users. The use of smartphones warrants special attention being among the top factors contributing to Internet addiction.

Conclusion & Suggestions

The studies related to digital addiction by different scholars show similar findings in certain aspects despite the regional variations. Ding K. and Li H (2023) summarised earlier research on therapies and their impact on digital addiction in children under the age of 18. According to the study, cognitive-behavioral therapy (CBT) or CBT-based interventions were the most common means of treating digital addiction in kids and teenagers. These treatments have the potential to alleviate anxiety, despair, and other symptoms

associated with digital addiction. Second, some family-based therapies try to improve family ties and functioning rather than specifically addressing addictive behaviors. Besides, digital-based therapies, including those based on websites, applications, and virtual reality, show promise in treating teenage digital addiction.

Some of the suggested treatments are as follows:

Behavioral treatments: In light of earlier research, individual characteristics may be crucial in determining internet use and the emergence of internet addiction. The following characteristics of adolescents were positively associated with internet addiction: low self-esteem, reward reliance, low collaboration, and high harm avoidance. Low self-esteem and behavioral issues such as sleep difficulties, violent or depressive symptoms, school dropout, antisocial personality disorder, and alcohol misuse may be linked to poor academic performance.

Cognitive Behavioral Approach (CBT): The standard mental health treatment for psychological symptoms like obsessive-compulsive disorder is cognitive behavioral therapy (CBT). Cognitive behavioral therapy (CBT) can help someone with internet addiction disorder identify the sensations and beliefs that lead them to use the Internet inappropriately for personal purposes. As found in DSM 5 '*gaming disorder*' has been classified as a mental health disorder which highlights the need for using therapeutic interventions for addressing the disorder. The therapy has been found to be effective by number of researchers where it has helped people to improve their mental and emotional health and subsequently lead to behavioral change.

Motivational Interviewing (MI): MI is a quick, directive, patient-centered method that emphasizes individual responsibility and choice. In general, MI presents the most obstacles for organizations that treat substance use disorders. Most people who are addicted to anything do not seek rehabilitation and instead deny the issue. Therefore, MI is for those who are not prepared to alter their behavior on their own.

Mindfulness Behavioral Cognitive Treatment (MBCT): Segal Z. et al. [99] discovered that practicing "mindfulness," a form of meditation that aids in decentering from pessimistic ideas and the depressing emotions they are linked to, maybe a potential remedy. In individuals with three or more depressive episodes, MBCT seemed to avoid relapse. Fundamentally, addiction is a habit. It is thought that an addict acts "mindlessly" or automatically, with minimal understanding of the triggers that lead to substance abuse. Therefore, encouraging mindfulness may show to be a useful strategy for treating other addictions as well.

Complementary treatment: Complementary therapies employ a variety of activities and a greater emphasis on environmental variables to treat internet addiction. Numerous researches have been conducted to determine whether particular activities, like music, art, or even exercise, are most successful in reducing the rate at which people use smartphones.

Therapeutic recreation: The professional solution for leisure is therapeutic recreation. People who need individualized help to reach their goals and dreams because of illness, disability, or other life circumstances can benefit from therapeutic recreation, which is the deliberate and careful facilitation of

quality leisure experiences and the development of personal and environmental strengths. Those who are addicted to high-risk games engage in less family-friendly leisure activities than those who are addicted to low-risk games. Their desire for hobbies or leisure activities increases as their addiction to the game grows. They responded to engaging in leisure activities with family (27.6%) or friends (46.4%). 65.3% of young people who are addicted to the game desire to engage in family-friendly leisure activities. Strangely, wealthy or highly educated parents can likewise become addicted to the game.

Music therapy: As per findings, drumming and associated shamanic and communal activities have been integrated into the substance misuse rehabilitation program. Drumming circles are a valuable adjunctive therapy, especially for recurrent relapses and in situations where other forms of counseling have not worked. Drumming promotes relaxation, hypnotic receptivity, and shamanic experiences. Other rhythmic auditory stimuli, like drumming, force a driving pattern on the brain, especially in theta and alpha ranges.

Art therapy: Park KA, et al. used art therapy to help young people with game addiction develop better self-control skills. Consequently, there was a decrease in hostile attitudes and an increase in social interaction with family members and peers.

Exercise rehabilitation: Numerous physical and psychological issues can be addressed by exercise rehabilitation thanks to its evidence-based exercise science knowledge. It employs exercise science-based rehabilitation programs for patients. It adheres to the scientific method. It is necessary to establish baselines in the clinical subfield, including physical capacity, health information, medical history, work status, and prior exercise experience. Following the evaluation, supervised rehabilitation sessions were held to accomplish the specified objectives. The goal of exercise rehabilitation is to recover from neurological or metabolic disorders, persistent pain or weariness, musculo-articular rehabilitation following surgery, and even psychological disorders like anxiety and depression.

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