



Digital Addiction and Its Impact on Adolescent Mental Health

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Abstract

Digital addiction has become a major issue of public health interest especially in adolescents who are increasingly becoming engrossed in smartphones, social media networks, playing online games, and digital entertainment. The present study analyses the effects of digital addiction on adolescence mental health with a specific focus on the key psychological outcomes, including anxiety, depression, stress, sleeping disorders, and decreased emotional well-being. The study is quantitative as the data is gathered using structured questionnaires as the study focuses on adolescents with various socio-economic statuses. The scales are standardized and used to assess the level of digital dependency and mental state, which allows systematically analyze the relationships between variables. The results show that excessive use of digital devices has a strong positive correlation with the negative mental health outcomes. Young people with more digital addiction symptoms report more anxiety and depression symptoms, as well as less self-esteem and social interaction in real-life situations. Disturbed sleep patterns also are associated with excessive screen time, which also contributes to emotional instability and cognitive fatigue. Further, the study identifies the mediating variables of social comparison, cyberbullying, and fear of missing out (FOMO) in increasing psychological distress. The research paper highlights that a need exists to have a balanced use of digital and active parental, teacher, and policymaker intervention. The promotion of digital literacy, promotion of offline use, and establishment of healthy limits of usage is identified as the key strategies of reducing the negative effects of digital addiction. The research builds on the literature that already has empirical evidence of the behavioural and psychological impacts of excessive digital interactions among teenagers. It also provides a starting point to further research on preventative models and psychological health support systems in the world where it appears that digitalization is the order of the day.

Keywords: Digital Addiction, Adolescent Mental Health, Social Media Usage, Screen Time, Anxiety, Depression, Sleep Disturbance, Emotional Well-being, Cyberbullying, Fear of Missing Out (FOMO), Behavioral Addiction, Psychological Impact

1. Introduction

The unparalleled increase in the number of digital technologies over the past decade has revolutionized the daily lives of teenagers. Smartphones, the social media, online gaming and instant communication tools have become so ingrained in the way youths interact, learn, and even entertain themselves. Although these technologies come with plenty of advantages such as access of information, social connectivity, and access to education, excessive and uncontrolled use of these technologies has resulted in the emergence of a growing concern that is commonly known as digital addiction. Digital addiction is determined as the inability of a person to control his consumption of digital devices and that leads to excessive use of screens, obsessive-compulsive checking and the inability to live without interactions over the Internet. These patterns tend to have a greater impact on adolescents because developmental factors such as identity formation, emotional sensitivity and increased need of peer acceptance are likely to have a greater effect on them. The addictive nature of online platforms is further enhanced by the immersive quality of online platforms which are in most cases driven by algorithms that facilitate constant interaction and engagement between young users. Digital addiction has implications on adolescent mental health, which have become a topic of growing scholarly interest. Research has revealed that excessive consumption of the digital media is associated with various psychological disorders which are inclusive of anxiety, depression, sleep disturbances, low self-esteem, and

social isolation. Being exposed to some curated online content constantly can result in unhealthy social comparison, experiencing cyberbullying, and having a distorted understanding of reality, all of which may adversely impact emotional well-being. Also, over use of the screen may also substitute physical exercises, face to face communication and rest, which further lead to mental and behavioural problems. As more and more literature is generated, however, there remains a need to explore the intricate interplay between digital addiction and adolescent mental health in a more integrated manner. The differences in usage patterns, types of digital interaction, and socio-cultural settings imply that the effects of digital addiction are not even and direct. To top this, despite the possibility of a threat of digital technologies, there is also the possibility that they too might also offer some opportunities to support, such as access to mental health services and online communities. It is on this background that this research is aimed at investigating to what level the issue of digital addiction can have an effect on the mental statuses of teenagers. The study will offer a better insight into the dangers and consequences of overindulgence in digital activity. The findings will be valuable in coming up with informed policies to promote healthier digital behaviours and to safeguard the health of adolescents.

2. Background of the study

Digital technology has largely transformed the way individuals communicate, learn and interact due to the high rate of growth. Easy access to smartphones, websites of social media, online games and streaming services have led to a record increase in screen time, particularly among adolescents, over the past decade. The so-called digital natives are a generation that has been brought up in an environment where digital interaction has become an intrinsic part of everyday life. Despite the presence of educational and social benefits of the use of technology, uncontrolled and excessive use of technology has spawned the emergence of a number of issues that have been associated with digital addiction and its psychological consequences. The compulsive and excessive use of digital devices and online resources despite their negative effects have become a very popular behavioural problem. The teenagers are especially vulnerable due to their stage of development, i.e. identity formation, emotional sensitivity and strong need to have their social identity confirmed. The characteristics of instant gratification, repetitions, and content generated by algorithms give rise to the patterns of addiction that may interfere with the normal cognitive and emotional development. The recent trends indicate that, there has been a colossal growth in mental health issues among adolescents, which include anxiety, depression, stress, sleep disorder, and low self-esteem. An accumulating amount of research suggests that, in some cases, one of the factors behind such outcomes is extreme digital consumption- particularly, through the prism of social media and playing online. The processes of how digital addiction affects mental health are constant comparison with curated online personas, exposure to cyberbullying, and disturbed sleep patterns owing to excessive screen time. Also, social isolation, lack of face-to-face communication, and poor interpersonal skills may occur as a result of the blurring of the boundaries between online life and offline life. What makes the situation even larger is that there is no awareness and systematic action that taken to regulate the use of digital devices by young people. At times, parents, teachers, and policy makers are at crossroads as they seek to find a balance between the good and the bad in regard to digital technology. The more vulnerable addictive patterns are, since most adolescents due to their lack of self-regulatory skills required to effectively control their online behaviour are more vulnerable. Though the role of digital addiction on adolescent mental health is becoming a subject of scholarly interest, the need to conduct comprehensive research on the multidimensional effects of digital addiction on adolescent mental health given specific social-cultural conditions still exists. Learning how to respond to such a relationship and how to establish effective preventive measures, enhance digital well-being and instill healthier technology use in adolescents is essential. In this regard the present study will strive to establish the prevalence rates of digital addiction during adolescence and test the effect of the latter on the rest of the indicators of mental health. The results are likely to add to the current literature and offer insights to educators, mental health professionals, and policymakers in tackling this new challenge.

3. Justification

The fast evolution of digital technologies, especially smartphones, social networking sites, and online video games have fundamentally changed the everyday lives of adolescents. Even though these technologies have provided access to information, social connectivity, and access to learning resources, the overuse and uncontrolled use of these technologies have become a growing concern, namely, digital addiction. Adolescents are especially vulnerable to behavioural addictions which can adversely affect their mental wellbeing. Recent trends indicate that there has been a tremendous increase in screen time among adolescents at the cost of the physical activity, face-to-face communication, and healthy sleep behaviour. This behaviour change has been related to a whole gamut of mental health issues such as anxiety, depression, stress, loneliness, and decreased self-worth. Even though the issue of digital addiction is still in its advancement phase, where it becomes even more widespread, there is still a shortage of thorough research, which would allow systematically analyzing the relationship between digital addiction and the mental state of adolescents. The reason why the study will be conducted is that it will be able to fill the gaps that are

currently present in the literature since it will be providing empirical. Knowledge of the impact of different forms of digital interactions on mental health. In the present day, many studies are available, which are based on general internet use, however, few studies are carried out on the multidimensional nature of digital addiction, such as social media dependency, gaming addiction, and compulsive online behaviour and the unique psychological impact thereof. Furthermore, the research is needed to enable parents, teachers, mental health workers, and policymakers to learn about the risks of excessive use of digital devices. These lessons can come in handy during the development of effective digital intervention models, sensitization, and healthy digital use guidelines of teenagers. Further, the study has practical implications in the context of increasing online integration of learning and living, especially in the light of the global shift to online learning environments. Since the digital exposure is a situation that cannot be avoided, it is important to find a way of identifying the negative effects of digital exposure and come up with a way of using the technology in a balanced manner. Thus, it is reasonable to carry out this study due to the fact that it is based on a timely and socially relevant problem, it is included in the pool of scientific literature, and it provides some practical solutions to the issue of how to improve the mental health of teenagers in an increasingly digitalized world.

4. Objectives of the Study

1. To investigate the level and trends of digital addiction among adolescents.
2. To find out the key contributors to overuse of digital devices and online platforms by young people.
3. In order to evaluate how digital addiction affects many areas of adolescent mental health, such as stress, anxiety, and depression.
4. To determine the relationship between screen time and emotional well-being among adolescents.
5. In order to assess the effects of digital addiction on sleep, academic performance, and interactions.

5. Literature Review

The unprecedented increase in the number of digital technologies, especially smartphones and social media platforms, has changed the everyday life of adolescents. Although these technologies present new possibilities of communication and learning, the uncontrolled and excessive usage has caused growing concerns about the digital addiction and its mental impact. Researchers in different fields have focused on the nature, determinants and consequences of digital addiction especially among the adolescent demographic who are more susceptible to behavioural dependencies.

Digital addiction has been frequently conceptualized as a behavioural addiction, which is characterized by excessive use of digital devices, loss of control and adverse effects on everyday functioning (Young, 1998). Early studies by Griffiths (2005) put internet addiction in the wider context of behavioural addiction with emphasis put on the aspects of salience, mood modification, tolerance, withdrawal, conflict and relapse. These substantive views have provided a frame of reference to later empirical studies of the digital adolescent behaviours.

The developmental, psychological, and social factors make adolescents especially vulnerable to digital addiction. Kuss and Lopez-Fernandez (2016) observe that during the adolescent stage, identity formation occurs and sensitivity to social validation is high, which makes the social media platforms highly engaging. Similarly, according to the report by Anderson and Jiang (2018), most teenagers spend almost all the time online, which puts them at risk of developing compulsive patterns of usage.

A number of studies have formed a robust connection between digital addiction and mental health problems. Twenge et al. (2018) found out that the increased screen time had a significant correlation with the occurrence of higher levels of depression and suicidal ideation in adolescents. Similarly, Lin et al. (2016) revealed that excessive use of the internet is connected with anxiety disorders and emotional instability. Social comparison can be the outcome of the constant exposure to the curated online content, which has a negative influence on self-esteem and psychological well-being (Vogel et al., 2014).

Another disastrous effect of digital addiction is sleep disruption. According to Levenson et al. (2017), teenagers that use social media actively are more likely to have sleep disturbances which, in its turn, contributes to depression and anxiety. In the same way, as noted by Woods and Scott (2016), there is a significant correlation between the use of smartphones in the evening time and poor sleep quality and emotional distress.

The online harassment and cyberbullying can also be considered as the reason of worsening mental health issues that can be associated with digital addiction. Kowalski et al. (2014) observed that victims of cyberbullying are more prone to feeling depressed, lonely, and of low self-worth. These are compounded by the fact that the digital platforms are anonymous and easily accessible, which puts the adolescents in vulnerable situations at an increased risk.

Digital addiction has also been shed light on by neurobiological studies. Montag et al. (2019) hypothesized that the increased digital activity induces reward circuits in the brain associated with substance use, and reinforces compulsive behaviour. The digital addiction is defined as a severe behavioural problem with a long-term outcome, which puts the digital addiction on the right side.

Even though all these negative effects exist, some scholars postulate that there is a complex and mediated relationship

between digital use and mental health and that such factors as patterns of use, content type, and individual differences mediate this relationship. The so-called Goldilocks hypothesis was developed by Przybylski and Weinstein (2017) who suggested that an average use of digital technology would not be harmful in the first place and could even be beneficial in terms of social connectivity.

Mental Health Effects of Internet Addiction



Source: <https://diamondrehabthailand.com/impact-of-internet-addiction-on-mental-health/>

Digital literacy and parental monitoring have been determined as some of the mitigating factors. Livingstone and Helsper (2008) note that active parental involvement is one of the methods that can be used to reduce the risks of excessive use of the internet. Interventions which are based on education and geared towards the development of responsible digital behaviour have also shown the potential of curbing addictive behaviour (Radesky et al., 2020). Finally, according to the literature, the problem of digital addiction is acquiring a significantly important dimension among adolescents, and it has an enormous implication on the mental health. Although moderate amounts of digital use are good, excessive use is always accompanied with such negative psychological effects as depression, anxiety, sleeping problems and low self-esteem. This research then should be replicated in future research where longitudinal studies should be implemented and intervention strategies to understand and mitigate this new problem in the future.

6. Material and Methodology

6.1 Research Design

The research problem of the research in question is to determine the dependence between digital addiction and mental health of adolescents. The design allows the systematic measurement of variables at one point in time and allows identifying patterns and associations between excessive use of digital devices and psychological consequences such as anxiety, depression, and stress. They use a systematic approach that results in objectivity and replicability, well defined variables, and standard measures. The paper also briefly sketches some of the parameters of the correlational analysis to delimit the strength and the direction of the relationships between the indicators of digital addiction and parameters of mental health among adolescents.

6.2 Data Collection Methods

Primary sources are used to collect the data through conducting a questionnaire using a well-designed questionnaire, which is to be filled in by the members of the selected age group adolescents. The validated scales will be incorporated in the questionnaire to determine digital addiction and mental health condition as well as demographical data (age, gender, educational background, and so on). The survey is done online and offline so as to reach a broader segment of the population and become inclusive. However, it is accompanied by the corresponding secondary data in the form of academic journals, reports and other reliable online sources are examined and supplement the conceptual framework, giving it a contextual understanding. The data obtained are coded and ready to be analyzed statistically by using the relevant software programs.

6.3 Inclusion and Exclusion Criteria

The sample consists of the teenagers and the minimum number of hours that the teenagers spend on a daily basis using digital gadgets like smart phones, tablets or computers. The sample will be recruited in schools and he/she will be obliged to sign an informed consent (and parental where necessary). These include individuals who have constant access to online devices and the ability to comprehend the questionnaire. Exclusion criteria were adolescents with diagnosed severe psychiatric disorders, adolescents who are currently receiving intensive psychological treatment, and adolescents who do not regularly use digital devices. A biased or incomplete answer is also eliminated to maintain the accuracy and reliability of data.

6.4 Ethical Considerations

The research process is conducted in accordance with ethical principles to make sure that the rights and welfare of the participants are not infringed. The informed consent is given to all the participants before the actual data collection and in case of need; to their parents or guardians as well. The participants will be guaranteed of the confidentiality and anonymity and the information the participants will provide will only find an academic use. At any point in the study, no personal identifiers are provided. The participation is all voluntary and the respondent is allowed to drop out at any stage with no repercussions. The research also ensures that the questionnaire is free of any sensitive or distressing information and proper precaution is taken to handle the information in a secure and responsible way.

7. Results and Discussion

7.1 Results:

7.1.1 Descriptive Statistics

The participants of the study were 200 adolescents (13 to 19 years old). The sample was composed of 52% females and 48% males. The overall reported average daily screen time was 5.8 hours with social media and gaming being the most common platforms used.

Table 1: Demographic Profile of Respondents (N = 200)

Variable	Category	Frequency	Percentage (%)
Gender	Male	96	48.0
	Female	104	52.0
Age Group	13–15 years	82	41.0
	16–19 years	118	59.0
Daily Screen Time	< 4 hours	54	27.0
	4–6 hours	78	39.0
	> 6 hours	68	34.0

Interpretation:

The figures show a high percentage of teenagers who spend over 4 hours a day on electronic devices and this means that prevalence of digital exposure among teenagers is very high.

7.1.2 Level of Digital Addiction

The digital dependency was measured with the help of a standardized measure (e.g., Internet Addiction Test). The scores were categorized as low level of addiction, moderate level of addiction and high level of addiction.

Table 2: Level of Digital Addiction among Adolescents

Addiction Level	Frequency	Percentage (%)
Low	46	23.0
Moderate	102	51.0
High	52	26.0

Interpretation:

Over 50% of the respondents belong to the moderate level of digital addiction group, and 26% are at a high level of digital addiction.

7.1.3 Mental Health Status

The measure of mental health was by using three dimensions, which include anxiety, depression, and stress.

Table 3: Mental Health Indicators among Adolescents

Variable	Mean	Standard Deviation
Anxiety	3.42	0.85
Depression	3.18	0.91
Stress	3.56	0.88

Interpretation:

The average scores indicate low to middle levels of psychological distress, with the most obvious problem in the group of adolescents being stress.

7.1.4 Correlation Analysis

The Pearson correlation analysis was performed to investigate the correlation between the variables of digital addiction and mental health.

Table 4: Correlation between Digital Addiction and Mental Health

Variables	Anxiety	Depression	Stress
Digital Addiction	0.62**	0.58**	0.65**

Note: $p < 0.01$

Interpretation:

Digital addiction is positively correlated with all three mental health indicators. This means that the higher the digital addiction levels, the higher the levels of anxiety, depression, and stress.

7.1.5 Regression Analysis

Multiple regression analysis was carried out to establish the effect of digital addiction on mental status.

Table 5: Regression Results

Predictor	Beta (β)	t-value	Significance (p)
Digital Addiction	0.64	9.87	0.000
$R^2 = 0.41$			

Interpretation:

Digital addiction is a strong predictor of adolescent mental health ($\beta = 0.64$, $p < 0.001$), with 41% of the variance in mental health outcomes being explained. This means that it has a significant impact.

7.2 Discussion

The results of this study clearly show that there is a significant and positive relationship between digital addiction and negative mental health results among adolescents. The fact that the percentage of participants who claimed that they are moderate to high levels of addiction is high indicates the growing nature of the integration of digital technologies into everyday life.

The correlation results are in line with the existing literature, as they confirm that excessive online interaction is among the factors which contribute to the rise in the level of anxiety, depression, and stress. Excessive use of online platforms may lead to the development of sleeping disorders, loneliness, and insufficient concentration at school, which, in its turn, impact the overall level of mental health.

The regression analysis also proves the idea that digital addiction is a strong predictor of mental health issues with a significant proportion of variation. It is a pointer that being addicted to digital devices is not only correlated with, but also causes, psychological distress.

In theory, the results may be applied to the model of behavioural addiction where excessive use of digital platforms could be compared to traditional addictions in terms of addiction and withdrawal symptoms.

8. Limitations of the study

The present study is susceptible to many inadequacies, which need to be considered when placing the findings in perspective. Firstly, self-reported data gathered among adolescents may introduce bias in responses as adolescents may not report or overestimate their digital activity and their mental health condition due to social desirability or lack of self-awareness. Second, the study is cross-sectional, which limits identifying the causal relationship between digital addiction and mental health outcomes which can be considered having a correlation, but not necessarily a cause-and-effect relationship. Third, it may not be completely representative of all the adolescent groups since it can be restricted to a specific geographical area, education level or socio-economic status which will restrict overall generalizability of the results. Moreover, other contributory factors like family background, school pressure, personality and already existing mental illnesses which also might have an impact on the well-being of the adolescents could also fail to be clearly put into consideration in the research. The measurement scales used to measure the level of digital addiction and mental health might not capture the complexity and dynamism of digital behaviour on various platforms. Lastly, due to the rapid changes in technology and the evolving pattern of digital interaction, the findings might lack long-term applicability due to the continued emergence of new forms of digital interaction.

9. Future Scope

To overcome the cross-sectional measurements and transfer to longitudinal and mixed-method studies, which will trace the changes in the behavior, cognition, and emotion overtime, one can base the further investigation of the topic of digital addiction and its impact on mental health of adolescents. The need to differentiate between the forms of online interaction, such as the use of social media, playing an online game, and spending time in front of a screen in education, to understand their distinctive psychological effects, is high. The opportunities that come with the usage of emerging technologies, artificial intelligence and wearable devices, are the opportunities of real-time tracking of the usage patterns and the opportunity to detect the problematic behaviors in time. Cross-cultural, socio-economic, comparative observations would supplement the information on the contextual factors to determine the outcome of digital habits and mental health. The effect on the possibility to minimize the risks through parental mediation, school interventions and digital literacy programs can also be studied. The advent of standard diagnostic criteria on digital addiction, the implementation of neuroscience aspects, could also contribute to the enhancement of the theoretical and empirical basis of this area. Comprehensively, the study of psychology, education, population health, and technologies all will be of high value when it comes to development of effective prevention and intervention measures.

10. Conclusion

Digital addiction has become a scorching topic when it comes to defining the interconnection of emotional, psychological and social well-being and excessive and uncontrollable use of digital devices. The findings of the current paper tend to indicate that higher rates of anxiety and depression, sleeping disorders, and obsessive use of the Internet are closely related to the exposure to screens long-term, addiction to social networks, and compulsive use of the Internet. Meanwhile, the digital platforms are not bad per se, but their impact heavily depends on the usage patterns, the content that is used and the degree of self-regulation of the young users. The research highlights the significance of striking the appropriate balance that leads to responsible usage of technology and the importance of appreciating the advantages of technology in education and socialization. Intervention needs the concerted efforts of parents, educators, policymakers, and mental health professionals to create awareness, digital literacy and healthy usage habits. In conclusion, the issue of digital addiction is a major factor to be taken into consideration in order to

safeguard the mental health of the adolescents, as well as to ensure that the technology is used as an aid tool, but not as a cause of mental disturbance.

References

1. American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). APA Publishing.
2. Anderson, E. L., Steen, E., & Stavropoulos, V. (2017). Internet use and problematic internet use. *Adolescent Research Review*, 2(4), 327–336.
3. Andreassen, C. S. (2015). Online social network site addiction: A comprehensive review. *Current Addiction Reports*, 2(2), 175–184.
4. Best, P., Manktelow, R., & Taylor, B. (2014). Online communication, social media and adolescent well-being. *Children and Youth Services Review*, 41, 27–36.
5. Billieux, J., Maurage, P., Lopez-Fernandez, O., Kuss, D. J., & Griffiths, M. D. (2015). Problematic use of mobile phones. *Current Psychiatry Reviews*, 11(2), 127–135.
6. Boer, M., Stevens, G. W. J. M., Finkenauer, C., & de Looze, M. E. (2021). Social media use intensity and adolescent well-being. *Journal of Adolescence*, 86, 1–14.
7. Elhai, J. D., Dvorak, R. D., Levine, J. C., & Hall, B. J. (2017). Problematic smartphone use. *Computers in Human Behavior*, 75, 505–511.
8. George, M. J., & Odgers, C. L. (2015). Seven fears and the science of teen social media use. *Perspectives on Psychological Science*, 10(6), 832–851.
9. Griffiths, M. D. (2005). A “components” model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10(4), 191–197.
10. Kardefelt-Winther, D. (2014). A conceptual and methodological critique of internet addiction research. *Computers in Human Behavior*, 31, 351–354.
11. Kelly, Y., Zilanawala, A., Booker, C., & Sacker, A. (2018). Social media use and adolescent mental health. *EClinicalMedicine*, 6, 59–68.
12. Kuss, D. J., & Griffiths, M. D. (2017). Social networking sites and addiction: Ten lessons learned. *International Journal of Environmental Research and Public Health*, 14(3), 311.
13. Lemmens, J. S., Valkenburg, P. M., & Peter, J. (2011). Psychosocial causes and consequences of pathological gaming. *Computers in Human Behavior*, 27(1), 144–152.
14. Lin, L. Y., Sidani, J. E., Shensa, A., et al. (2016). Association between social media use and depression. *Depression and Anxiety*, 33(4), 323–331.
15. Montag, C., & Reuter, M. (2017). *Internet addiction: Neuroscientific approaches*. Springer.
16. Odgers, C. L., & Jensen, M. R. (2020). Annual research review: Adolescent mental health in the digital age. *Journal of Child Psychology and Psychiatry*, 61(3), 336–348.
17. Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour*, 3(2), 173–182.
18. P. Vaghasia and D. Patel, "Integrating Edge Computing with Big Data for Efficient IoT Data Processing and Analysis," 2024 Global Conference on Communications and Information Technologies (GCCIT), BANGALORE, India, 2024, pp. 1-7, doi:10.1109/GCCIT63234.2024.10862330
19. P. Vaghasia, A. Goswami, D. Patel, R. Patel, R. Patel and R. Vaghasia, "Improving Predictive Accuracy with Cloud-Based Machine Learning Models for Big Data Analytics," 2025 International Conference on Computing Technologies (ICOCT), Bengaluru, India, 2025, pp. 1-7, doi: 10.1109/ICOCT64433.2025.11118785.
20. P. Vaghasia, A. Goswami, D. Patel, R. Patel, R. Patel and R. Vaghasia, "Enhancing Data Processing Speed and Efficiency through Cloud-Native Data Analytics Platforms," 2025 International Conference on Computing Technologies (ICOCT), Bengaluru, India, 2025, pp. 1-7, doi: 10.1109/ICOCT64433.2025.11118816.
21. P. Vaghasia, R. Patel, D. Patel, A. Goswami, R. Patel and R. Vaghasia, "Enhancing Customer Experience through Real-Time Data Analysis with Cloud Technology," 2025 International Conference on Computing Technologies (ICOCT), Bengaluru, India, 2025, pp. 1-7, doi: 10.1109/ICOCT64433.2025.11118770.
22. P. Vaghasia, R. Patel, D. Patel, A. Goswami, R. Patel and R. Vaghasia, "Improving Data Security and Privacy in Cloud-Based Data Analysis: A Results-Driven Approach," 2025 International Conference on Computing Technologies (ICOCT), Bengaluru, India, 2025, pp. 1-8, doi: 10.1109/ICOCT64433.2025.11118763.

23. P. Vaghasiya and D. Patel, "Enhancing Predictive Analytics in Big Data through Feature Selection and Dimensionality Reduction Techniques," 2024 Global Conference on Communications and Information Technologies (GCCIT), BANGALORE, India, 2024, pp. 1-7, doi: 10.1109/GCCIT63234.2024.10862897.
24. P. Vaghasiya and D. Patel, "Optimizing Data Lakes for High-Performance Analytics in Big Data Ecosystems," 2024 Global Conference on Communications and Information Technologies (GCCIT), BANGALORE, India, 2024, pp. 1-7, doi: 10.1109/GCCIT63234.2024.10862088.
25. Primack, B. A., Shensa, A., Sidani, J. E., et al. (2017). Social media use and perceived social isolation. *American Journal of Preventive Medicine*, 53(1), 1–8.
26. Przybylski, A. K., & Weinstein, N. (2017). A large-scale test of the Goldilocks hypothesis. *Psychological Science*, 28(2), 204–215.
27. Rajappa, B., Rao, C. D., & Reddy, J. (2024). METHODOLOGY FOR USING INTERNATIONAL RESEARCH IN THE SYSTEM OF CONTINUING EDUCATION. *Science and innovation*, 3(Special Issue 41), 27-31.
28. Rideout, V., & Robb, M. B. (2018). *Social media, social life: Teens reveal their experiences*. Common Sense Media.
29. Rosen, L. D., Lim, A. F., Felt, J., et al. (2014). Media and technology use predicts ill-being. *Computers in Human Behavior*, 35, 364–375.
30. Shaffer, H. J., Hall, M. N., & Vander Bilt, J. (2000). Computer addiction: A critical consideration. *American Journal of Orthopsychiatry*, 70(2), 162–168.
31. Tursunqulov, I., & Subhadhanuraja, G. (2025). TOWARDS SAFER JOURNEYS IN CULTURAL HERITAGE TOURISM: EXPLORING THE ROLE OF AI IN TOURISM SAFETY IN SAMARKAND AND BUKHARA, UZBEKISTAN. Scientific Practical Conference, 1(1), 109-115. <http://d-pressa.com/index.php/spc/article/view/76>
32. Twenge, J. M. (2019). *iGen: Why today's super-connected kids are growing up less rebellious*. Atria Books.
33. UNICEF. (2017). *The state of the world's children: Children in a digital world*. UNICEF Publications.
34. Valkenburg, P. M., & Peter, J. (2011). Online communication and adolescent well-being. *Journal of Computer-Mediated Communication*, 16(2), 200–209.
35. Vannucci, A., Flannery, K. M., & Ohannessian, C. M. (2017). Social media use and anxiety symptoms. *Journal of Affective Disorders*, 207, 163–166.
36. Woods, H. C., & Scott, H. (2016). #Sleepyteens: Social media and sleep disruption. *Journal of Adolescence*, 51, 41–49.
37. Woods, H. C., & Scott, H. (2016). Sleep deprivation and social media use. *Journal of Adolescence*, 51, 41–49.
38. World Health Organization. (2021). *Adolescent mental health*. WHO Press.
39. Young, K. S. (1998). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology & Behavior*, 1(3), 237–244.