
IMPACT OF POST-COVID INTERNET AVAILABILITY ON ADOLESCENCE PSYCHOLOGY: A STUDY ON DHAKA, BANGLADESH

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ABSTRACT

The COVID-19 pandemic significantly disrupted daily life, with prolonged lockdowns accelerating digital transformation across the globe. This study investigates the impact of increased internet availability on the psychological well-being of adolescents in Dhaka, Bangladesh, during and after the pandemic. A mixed-methods approach was employed, combining surveys, interviews, and psychological assessments to understand the changes in behavior, mental health, and social interactions among adolescents aged 13–18. The findings reveal a dual-edged effect: while improved internet access facilitated remote learning, social connectivity, and entertainment, it also contributed to increased screen time, exposure to cyberbullying, and heightened risks of anxiety and depression. Socioeconomic disparities amplified these outcomes, with underprivileged adolescents facing challenges in digital accessibility and support systems. The study underscores the need for targeted interventions, including digital literacy programs,

mental health support, and parental guidance, to mitigate adverse effects and promote healthier internet usage among adolescents in post-pandemic Dhaka.

Keywords: Post-COVID internet availability; adolescence psychology; anxiety and depression of adolescents; mental health of adolescents.

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1. INTRODUCTION

One of the most populous nations in the world is Bangladesh, and its capital, Dhaka, is the ninth-largest and seventh-most densely populated metropolis in the world. "Around 18 million people live here together. COVID-19 was first reported in Bangladesh on March 8, 2020" (GARDAWORLD, 2020). In response to COVID-19, "the Bangladesh Government declared to close all schools, colleges, and universities since March 17, 2020, to control the situation" (Bari & Sultana, 2021). "About 3.7 million students and more than a million teachers are staying at home" (Ahmed, 2020) and continue education activities through an alternative online education method. But with this online activity, Students are losing motivation to study and many children, especially school-going adolescents are being psychologically affected. "Adolescence is a phase of rapid development that embodies physical, sexual, social, and emotional changes as a person transition from childhood to adulthood. During the lockdown in Bangladesh, a large percentage of adolescents experienced mental health disorders" (Yeasmin et al., 2020).

“When Educational institutions remain open, it is possible to interact with teachers and friends physically and they remain active with different kinds of sports activities. But this prolonged closure in Bangladesh as well as globally significantly affects the mental health and growth of these young minds” (Barua, 2020). Adolescents' lives are being impacted by the internet more and more during COVID-19 because of their online class. Guardians have to ensure a full-time Wi-Fi facility. But these available internet facilities make them more engaged on the internet. They are getting more addicted to the internet and other social media platforms. They become addicted to different types of online games and socially become disconnected from relatives, friends, and neighbors. “Addiction hurts a person's biological, mental, and bodily functions, as well as their daily activities, causing them to lose their balance and show abnormal behavior.” (Islam et al., 2023). They feel depressed about their education activities, fight with siblings, show arrogance toward their parents, and suffer sometimes have obsessive-compulsive disorders. “The concept of internet addiction was first proposed by Goldberg, who suggested that internet addiction is a behavioral addiction disorder” (Goldberg, 1994). “However, based on several studies on the physical and mental development characteristics of adolescents and the standard definition of internet addiction used by most researchers, this study defines internet addiction as spending a long time on internet activities (such as using different social networking sites, online games and online chatting), resulting in behavioral and psychological disorders in daily life” (Zhang et al., 2022).

During Covid-19, suicidal tendencies have risen at an alarming rate among students. According to the study of world Health, Asia Pacific, “49% of suicide victims were between the ages of 20 and 35, and 57% were women.” (Sakib, 2021). The long-term effects of COVID-19 on adolescent psychology have not been studied in Bangladesh. Therefore, it's critical to identify the behaviors that indicate excessive internet use by school-age adolescents and the effects this has on their mental health. Therefore, this study sought to ascertain the effects of parental and institutional efforts to alleviate adolescents' mental stress as well as the psychological effects of internet availability during the COVID-19 epidemic.

1.1 Objectives of the Study

The prime objective of the study is to evaluate the impact of COVID-19 internet availability on adolescent psychology. To achieve these objectives, the researchers selected the following specific objectives:

- a. To explore the impact of school-going adolescents' activities for overusing the Internet after COVID-19
- b. To find out the impact of internet availability on adolescent psychology and mental health in Bangladesh
- c. To analyze the initiatives taken by the parents and Institutions to improve the psychological impact of School adolescence

1.2 Research Questions

The effects of the COVID-19 pandemic are potentially enduring on adolescents' psychology. After reviewing several related papers, the researchers raised the following questions.

- a. What kind of activity shows in school-going adolescents for overusing the internet after COVID-19?
- b. What effects does excessive internet use have on the mental health of school teenagers?
- c. What policy recommendations are there to solve Bangladesh's adolescent mental health crisis?

This research will try to find solutions to these questions.

2. REVIEW OF LITERATURE

"COVID-19 Pandemic and Its Effects on Youth Mental Health in Bangladesh" shows that "Young adults are facing critical situational conditions such as acute economic hardship, constant conflict with family members, a hazardous mental condition during quarantine, growing pressure for marriage especially young girls, increasing addiction to the internet and virtual world, and so on. Of this situational unfavorable condition, young ages are suffering several psychological crises, including suicidal tendencies, hopelessness, loneliness, anxiety, depression, low self-confidence, and overall psychological trauma in their life. Among all these critical mental conditions, the suicidal tendency is acute among the young generation. However, some young people have recognized COVID-19 not only as a curse but also as a blessing in the sense that they have time to enjoy quality time with family members after a long

time, which enhances their family bonding. Mental health conditions are not considered seriously by our society, however, they should be. Therefore, young ages need to be strong mentally to cope with the pandemic and should be influential for society." (Haque et al., 2021)

The study "The Mental Health of Adolescents Following the COVID-19 Pandemic in Bangladesh" explores that in Bangladesh, the frequency of teenage mental illnesses, including general mental health issues, is rising. The pandemic's effects on teenagers' mental health have already had a significant impact and will continue to do so. Mental health services should be included in Bangladesh's national health coverage in order to reduce the negative effects on mental health and address current issues. As a result, comprehensive health coverage needs to encompass mental health. The government ought to improve the current mental health care system and build a strong staff. (Rezvi et al., 2022)

According to the study "Post-COVID-19 Symptoms and Conditions Among Children and Adolescents – United States," researchers found that "the highest aHRs (adjusted hazard ratios) were linked to potentially serious conditions like acute pulmonary embolism, myocarditis and cardiomyopathy, venous thromboembolic event, acute and unspecified renal failure, and type 1 diabetes. These increased incidence rates of several symptoms and conditions occurred 31–365 days after a diagnosis of COVID-19 among children and adolescents aged 0–17 years. Patients with COVID-19 had a lower incidence of certain symptoms and problems (such as respiratory signs and symptoms, mental health symptoms and conditions,

neurological illnesses, muscular disorders, and sleeping disorders) than patients without COVID-19. The discovered correlations have multiple contributing factors, one of which could be that patients without COVID-19 were less healthy at baseline and were chosen from a cohort of patients who had a potential COVID-19-related healthcare interaction.” (Kompaniyets et al., 2022)

2.1 Post-Covid-19 Internet Availability in Bangladesh

“Using hierarchical regression analysis, it was found that Problematic internet use was significantly and favorably correlated with younger age groups, higher educational attainment, living in nuclear families, less physical activity, avoiding housework, playing video games online, using social media, and participating in leisurely online activities.” (Islam et al., 2020)

Similarly, Naciri et al. (2020) emphasized “the challenges faced by educators in maintaining student interest, multitasking in online classes, poor audio and video quality, and network problems. Students in our survey stated that their online learning experience was directly impacted by the quality of their internet connection. They also mentioned how tired they felt from the prolonged screen time and how frustrated they were. Experts suggested structuring shorter, more participatory sessions with the use of technologies like live chat, pop quizzes, virtual whiteboards, polls, and reflections in order to solve these problems.”

2.2 Internet Usage Trends during Post-COVID-19

According to the study “Online gaming and its effect on academic performance of Bangladeshi university students: A cross-sectional study,” published on 15 December 2023, “62.7% of students play online games over 30hours every week. The findings also show that “male students are more inclined than female students to show signs of addiction. Also, regular online gaming can result in long-term problems, and factors, including age, internet access, educational background, and frequency of play, can influence the likelihood of these problems. The findings show that a lower cumulative grade point average (CGPA), less physical activity, and less study time are associated with playing online games for at least 30hours per week. Moreover, the study found that playing online games, playing for a long time, and skipping class can all have an adverse effect on a student's academic performance.” (Mahmud et al., 2023)

According to the study “Parent-Perceived Benefits and Harms Associated with Internet Use by Adolescent Offspring,” researchers confirmed that in 2022, there will be conflicting effects of digital technology use on families. Parents reported that their children's usage of the internet enhanced their feeling of family unity by facilitating the sharing of happy memories, strengthening the bond between family members, increasing family flexibility, and providing advantages for quality time spent together. One advantage of using the internet could be better communication inside the family network, as indicated by the correlation between youths' use of social networking platforms and their family impact scores.

Additionally, “they echoed recent cautions from the US Surgeon General by saying that parental concerns about social networking sites' potential to contribute to internet addiction offset the perceived benefits of internet use. Concerns about the dangers of cyberbullying and exposure to improper or dangerous content were also strongly expressed by parents. Prior research has indicated that “these risks are more pertinent to certain age groups and social contexts. Immersion and virtual reality technologies demonstrated a very clear benefit-risk balance, as they were seen to both improve family connectivity and raise the risk of PIU. Additionally, this association highlighted a significant rise in parent use. Early adopters of this new technology—that is, tech-savvy parents with positive perceptions of the internet who nevertheless use it in ways that elevate their IAT scores—may be the reason for the association between parent virtual reality use and both parent and offspring PIU (Problematic Internet Usage) levels as well as positive family impact scores. In general, parents did not seem to be concerned about immersive platforms, indicating that there is still time to learn more about the perceived and actual risks associated with this new technology.” (Kimball et al., 2023)

The study “Structural equation modeling analysis of risk factors for digital game addiction in adolescents: A web-based study” found that “adolescents who are male, who started playing digital games before the age of six, whose play is unlimited and unsupervised, who play for >10 h a day, who play digital games on the computer, and who do not participate in any other activities are the most at-risk group for digital addiction.” (Kaya & Pazarcıkcı, 2023)

2.3 Psychological Impact of Increased Internet Usage

According to the study Problematic Internet Use among Young and Adult Population in Bangladesh: Correlates with Lifestyle and Online Activities during the COVID-19 Pandemic. The study of PIU is especially significant in nations like Bangladesh, where the expansion of internet use is outpacing socioeconomic progress, particularly amid the COVID-19 outbreak. The study's findings might help mental health practitioners in their clinical work, especially when treating people who have internet addictions. Furthermore, policymakers may be able to identify problematic internet user groups and devise intervention programs to stop excessive internet use with the use of the study's findings. In addition, appropriate preventive actions are required, such as teaching the public and schools about safe internet use and providing counseling to those who are already internet addicts." (Islam et al., 2020)

Islam et al. (2023) state that "children's and teenagers' health and well-being were negatively harmed by the COVID-19 pandemic. In Bangladesh, school-age children and adolescents showed a significant frequency of both loneliness and IA, according to the current study. The extended shutdown of educational institutions and the COVID-19 pandemic may have contributed to the rise in unusual internet usage and mental health issues. Thus, it is imperative that policymakers and healthcare authorities in Bangladesh focus more on fostering the mental health of children and adolescents. Facilities for outdoor activities, mental health support, and parental knowledge would all help to lower the high rates of loneliness

and anxiety among school-age children. Therapeutic psychiatrists and psychotherapists should also take this into account while speaking with patients and carrying out interventions in their therapeutic settings.”

According to Islam et al. (2021), “The social networking sites (SNS) are popular among people of all levels. Here, we aimed to evaluate the relationship between the use of SNS and the mental health of the young generation in Bangladesh. We have measured the levels of loneliness, depression, generalized anxiety, and sleep disturbance using the recommended mental health assessment scales. The estimations of loneliness, depression, generalized anxiety, and sleep disturbance among the respondents were 64%, 38%, 63%, and 75%, respectively. Young adults, female sex, unmarried individuals, students, and urban residents reported higher psychological issues regarding SNS use. Reported mental health issues were associated with time spent in SNS, the number of friends and groups connected with, personal beliefs, and feelings about SNS. A notable association between the use of SNS and the mental health issues of users has been ascertained. The present study findings might have significant implications in the field of clinical psychology and psychotherapy. Therefore, we recommend more comprehensive clinical interventions to find the tangible impact of SNS on the mental health of users.”

2.4 Research Gap

Based on the above literature, it is seen that after the pandemic, tales of late-night Zoom calls churning into relationships, screams about coming out over FaceTime Time, and the likes are not unheard of, the way the internet has Western settings

regarding internet availability and adolescent psychology. There is a marked dearth of studies on South Asian countries, specifically Bangladesh, that have made the ways of adolescents have a significant impact on their psychology as a whole. A complete multilayered understanding of these impacts is still far from what conclusive research has suggested. Still, there remain several research gaps that need to be acknowledged for better understanding (especially in the case of Dhaka- Bangladesh).

Most of the literature in this area has focused on Western settings regarding internet availability and adolescent psychology. There is a marked dearth of studies on South Asian countries, specifically Bangladesh. The internet itself can also have a psychological impact on adolescents, and these impacts may be compounded by cultural differences, socioeconomic factors, and other aspects of the education system in Dhaka.

Many studies that took place during or just after COVID-19 have been cross-sectional, so they can only give an instant camera shot in time of the effect. Longitudinal research is needed to clarify the psychological impacts of more Internet use on adolescent personality.

Few data is also available on altered mental health outcomes and increased internet usage post-COVID. Further investigation into detailed metrics of anxiety, depression, attention disorders, and other mental health disorders in the adolescent population in Dhaka is crucial.

3. RESEARCH METHODOLOGY

The researchers use both quantitative and quasi-qualitative methods of data analysis. Researchers collect data from both primary and secondary sources of information.

3.1 Sources of Information

Primary data were collected by preparing a close-ended questionnaire using Google Forms. The questionnaire was distributed via email and WhatsApp to respondents, encouraging them to share it within their network. The respondents were the parents of school-going adolescents of Dhaka City Corporation with at least one child aged between 10 and 18.

The questionnaire comprised several sections, including:

- Demographic Information: Details such as occupation, age, educational level, number of children, and grade levels.
- General Information about Adolescents: Information on how much time adolescents spend using the internet for education and entertainment, the types of social networking apps they use, and questions regarding internet availability.
- Psychological Impact: Questions addressing the psychological effects of internet use on school-going adolescents.

- Child's Activities and Parental Attitudes: Insights into children's activities and the parents' attitudes toward their children's internet use.

3.2 Sampling

The researchers employed a non-probability purposive sampling technique to select the study sample. The required sample size was calculated using the formula:

$$n_0 = \frac{z^2 p^2}{d^2}$$

Based on this formula, the required sample size was 384, and 380 respondents were finally selected.

3.3 Data Analysis

The researchers analyzed data using pie charts, percentage analysis using Microsoft Excel and SPSS software.

4. ANALYSIS AND FINDINGS

Parents of adolescents between the ages of 13 and 18 enrolled in Dhaka city's primary and secondary schools made up the respondents. They attended MDIC, SAGC, Rajwok, Mirpur Cantonment Public School and College, BAF Shaheen College, Dhaka, and BAF Shaheen College, Kurmitola, and ranged in class from fifth to eighth. Since all of these institutions offered online courses during COVID-19, parents must ensure their kids have internet and WiFi around the clock. The study was conducted among educated people who appeared to be honest about their child's behavioral changes and psychological effects.

4.1 General Information

Figure 1. Occupation

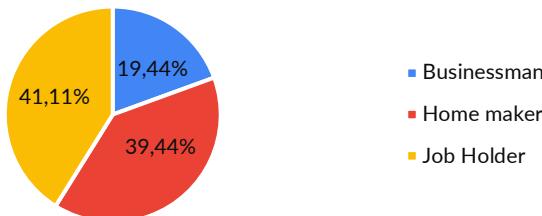


Figure 1 shows the Occupational status of respondents: 156 respondents worked in various educational Institutions and corporate houses, 150 were Homemakers, and 74 were in Business.

Figure 2. Age

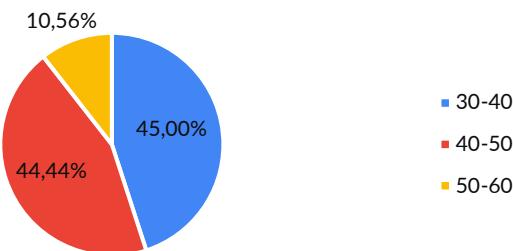


Figure 2 shows the age range of respondents: 171 respondents were from the 30-40 age range, 169 respondents were from

the 40-50 age range, and 40 respondents were from the 50-60 age range.

Figure 3. Education level

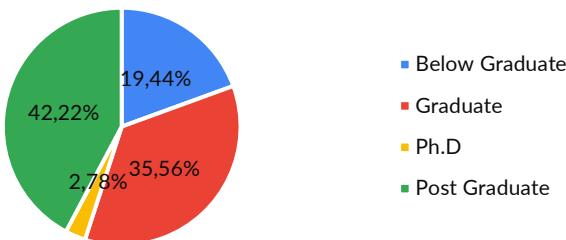


Figure 3 shows the educational status of respondents: 160 were postgraduates, 135 were graduates, 74 were below graduate, and 11 had Ph.D. So, a survey was conducted among the educated society of Dhaka city.

Figure 4. How many children do you have?

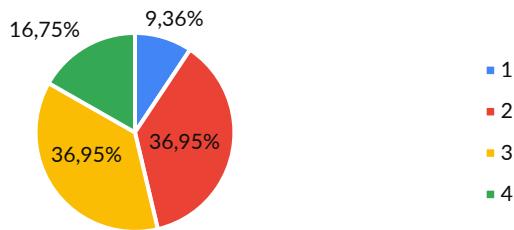


Figure 4 shows the number of children of respondents. 36.95% have two children, 36.95% have three children, 16.75% have four children, and 9.36% have one child.

Figure 5. What class is your child reading in?
(only for your 13-18 age rang child)

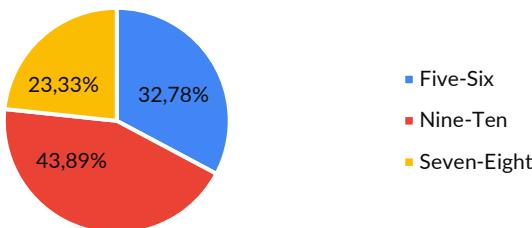


Figure 5 shows the education level of adolescents, where 167 respondents were from class nine to ten, 125 respondents were from classes five to six, and 88 respondents were from class seven to eight.

4.2 Impact of Post-COVID Internet Availability on Adolescence Activity

Due to online classes and social isolation during COVID-19, every family must ensure a 24-hour internet facility. This trend will continue "because of the low cost of internet connectivity and the extended availability of low-cost devices. This ease of access may increase the number of individuals engaged in online activities, raising the possibility of online dependency" (VI24). "Young divided internet addiction into five subtypes: online game addiction, internet communication addiction, internet information collection addiction, internet technology addiction (compulsive online gambling, shopping, or trading), and internet pornography addiction" (Young, 1996). This study

only focuses on Internet communication addiction using various platforms of social media and online game addiction.

Figure 6. Do you have 24 hours Wi-Fi facility?

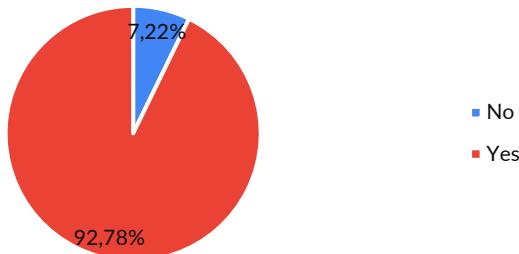


Figure 6 shows the WiFi facilities of adolescents. 353 (92.78%) respondents have a 24-hour WiFi facility, and only 27(7.22%) respondents have no 24-hour WiFi facility.

Figure 7. Does your child use full time mobile data?

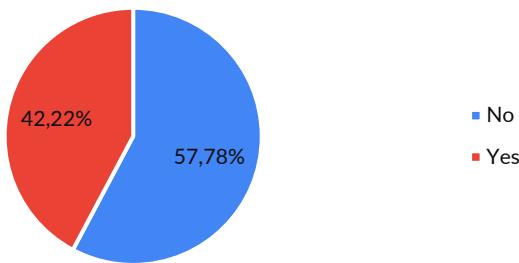


Figure 7 shows the Mobile Data facility of adolescents, where 150 (57.78%) respondents use mobile data and 203 (42.22%) respondents do not use this facility. Based on the result of

Figure 7, it is seen that most of them use WiFi facilities, which is why the percentage of using mobile data is comparatively lower.

Figure 8. Do they need to conduct any online classes now?

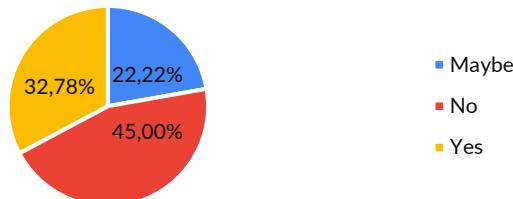


Figure 8 represents the need to conduct online class. During COVID-19, Education activities were conducted online all over Bangladesh. As the people of Bangladesh are now used to doing online classes, sometimes many schools have to use this facility due to sudden situations like rainy days, strikes, Overheating, etc. Here, we see 32.78% of respondents say they still need to conduct online classes sometimes.

Figure 9. Do they need to maintain any WhatsApp/Viber group mandatorily at their institutions?

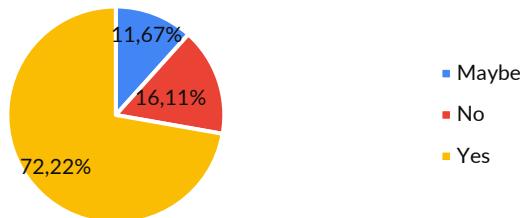
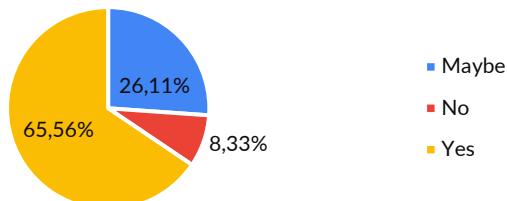


Figure 9 shows that their institution makes the use of WhatsApp or Viber GRP mandatory for educational purposes. After COVID-19, most schools used this facility to facilitate internal communication.

Figure 10. Do you think that internet availability makes their educational activities easier?



Here, it is seen that most of the respondents think that internet availability makes their education activities easier. Internet availability not only makes their communication easier, but it has also become an effective tool for searching for knowledge

through Google or other apps. In Figure 10, 65.56% of respondents show positive responses, whereas only 8.33% show negative opinions.

Figure 11. How much time do they spend on the internet for their educational Purpose?

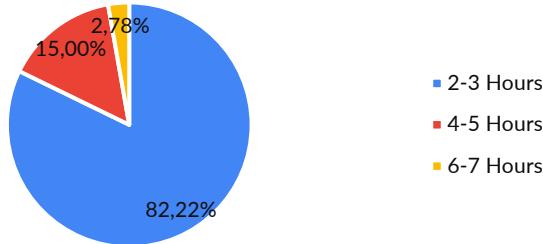


Figure 11 shows that most of the respondents (82.22%) use the internet only 2 to 3 hours for educational purposes. But very few (2.78%) use 6 to 7 hours, which is very unusual.

Figure 12. How much time do they spend on the internet for their entertainment Purpose?

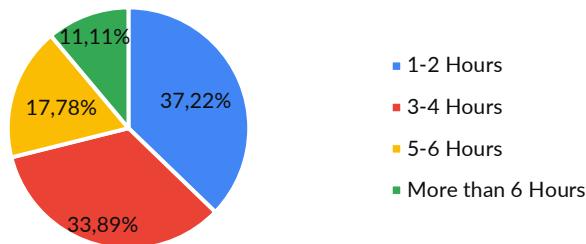
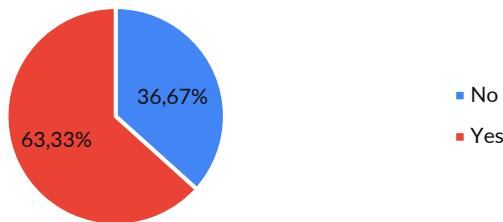


Figure 12 illustrates that 141 (37.22%) of the respondents use the internet only 2 to 3 hours for entertainment purposes, 129 (33.89%) use 3 to 4 hours, 68 (17.78%) use 5 to 6 hours, and only 41 (11%) use the internet more than 6 hours.

Figure 13. Do They Spend more time on social media now?



Likes, comments, and shares are examples of interactions on social media platforms that are referred to as social media engagement. Figure 13 shows the engagement of adolescents on social media: 222 (63.33%) respondents spend more time on social media, and 128 (36.67%) respondents spend less time.

Figure 14. Do they use snapchat?

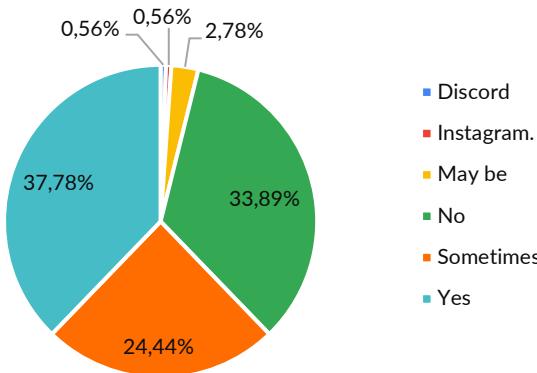


Figure 14 explores the use of Snapchat by adolescents. Usually, female teenagers are more interested in using this app than male teenagers because of the photo-editing facility. 150 (57.78%) respondents use mobile data, and 203 (42.22%) respondents do not use this data facility. Based on the result of Figure 1, it is seen that most of them use WiFi facilities, which is why the percentage of using mobile data is comparatively lower.

Figure 15. Do they use Instagram?

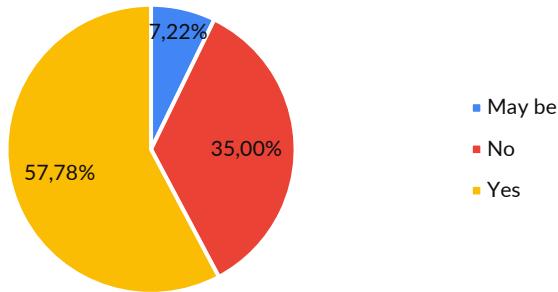


Figure 15 shows the use of Instagram by adolescents. 150 (57.78%) respondents use this social communication app, and ... % (35%) respond no. 7.22% of respondents are unsure about using Instagram for their child.

Figure 16. Do they use Tiktok?

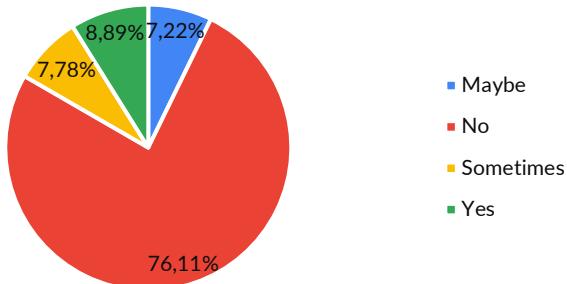


Figure 16 shows the use of TikTok in adolescents. Most of the respondents (76.11%) responded no, whereas 8.89% said 'yes,' 7.78% used it sometimes, and only 7.22% were not sure.

Figure 17. Do they use Telegram/ LinkedIn?

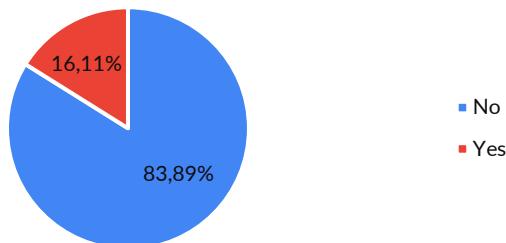
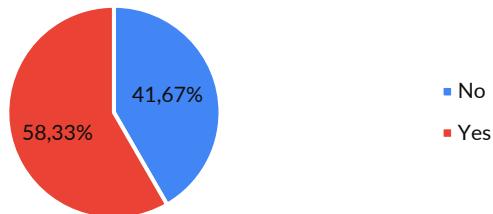


Figure 17 represents the use of Telegram/LinkedIn by adolescents. Most of the respondents don't use this app, and only 16.11% responded positively.

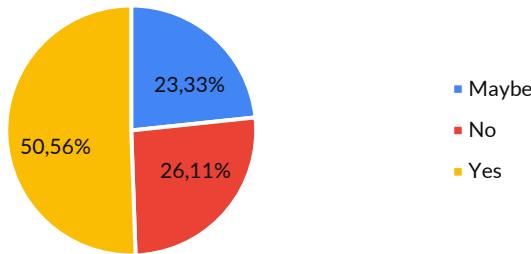
Figure 18. Do they spend more time playing games using a smartphone or other electronic device rather than before Covid-19?



Playing games using smartphones involves playing online games, video games over the internet, and sometimes with other players nationwide. Figure 18 shows gaming activities

using smartphones in adolescence. 221 (58.33%) respondents say that their children spend more time on smartphones to play games, and 159 (41.67%) respondents say 'No'.

Figure 19. Do you think that Excessive internet availability demotivates your child to move outside?



This generation used to communicate through social media rather than physical movement. Here, 192 (50.56%) respondents say that available internet facility demotivate their child to go out. Only 26.11% say 'No'.

Figure 20. Do you think that your child showing interest now to stay at home with their electronic devices?

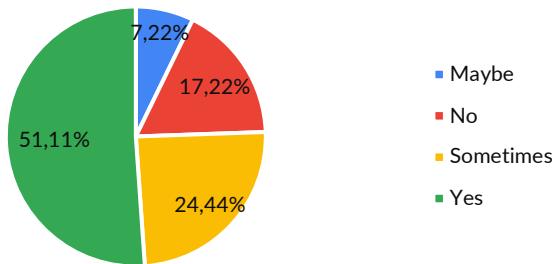
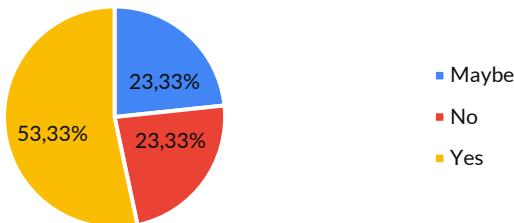


Figure 20 interpret that 51.11% of respondents say that their children are now showing interest in staying at home with their electronic devices. They would like to spend time using social media and gaming online.

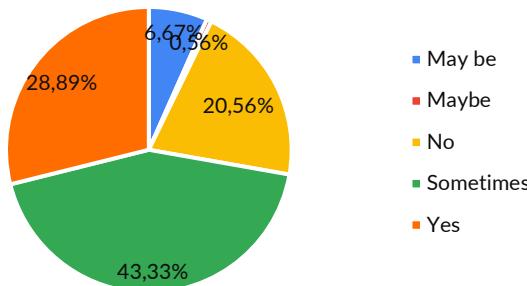
Figure 21. Do they Enjoy their educational activities now?



It is very alarming that only 53.33% of respondents feel that their school-going children are enjoying their educational

activities. Long-term online classes create educational gaps, and the availability of Internet facilities may be responsible for this.

Figure 22. Do they Feel bored with their educational activities now?



It is alarming that 43.33% of respondents feel that their school-going children are now feeling bored with their educational activities. 35% are also not confident. Only 20.56% of respondents say 'No' regarding this issue. Due to available internet facilities, they would like to involve themselves in social media and gaming rather than engaging in educational activities.

4.3 Impact of Post-COVID Internet Availability on Adolescence Psychology

"Children are particularly vulnerable to internet addiction because their developing brains are more susceptible to the reward mechanisms associated with online activities, such as social media, gaming, and instant gratification from online content. The COVID-19 pandemic further accelerated this trend, as remote learning and social isolation increased children's reliance on the internet." (Vladimir, 2024). "While

maximum makes the use of the internet in a controlled fashion, a progressive loss of the ability to control the frequency and duration of Internet activities emerges in some users. As a consequence, the excessive time devoted to Internet use and the behavioral narrowing can lead to serious psycho-social outcomes" (Enagandula, 2018)

Figure 23. Do they Feel Depressed, anxiety for over using internet?

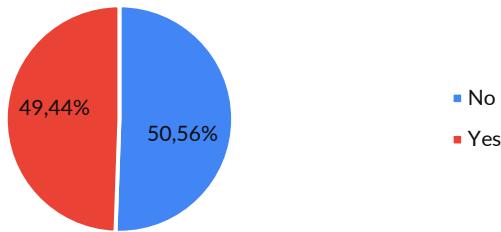


Figure 23 shows that 50.56%, or 192 parents, feel that their child doesn't feel depressed and anxious due to overusing the internet, but 188 parents observe the opposite situation.

Figure 24. Do they Feel stress regarding educational activities?

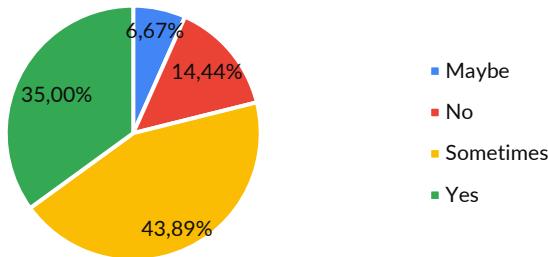
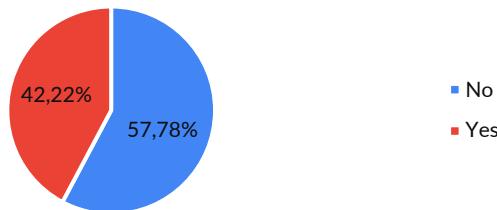


Figure 24 represents that 35%, 133 parents, feel that their child feels stress regarding their educational activities, 167 students feel stress sometimes, 54 students don't feel stress, and the remaining are confused regarding this issue.

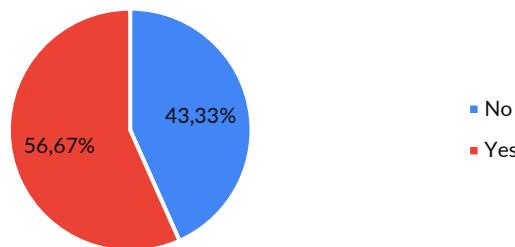
Figure 25. Do they fight more with siblings rather than before COVID?



After COVID-19, most students' lifestyles changed. Now, they spend the maximum amount of time with their devices without moving out. This has an impact on their behavior, and out of

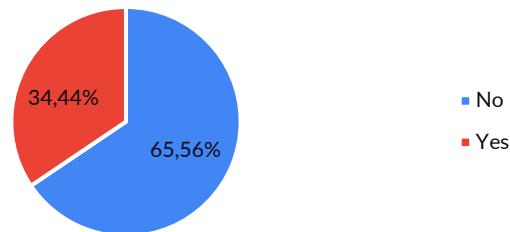
380 parents, 160 feel that they are fighting more with their siblings than before COVID-19.

Figure 26. Do they Show Arrogance with parents
rather than before?



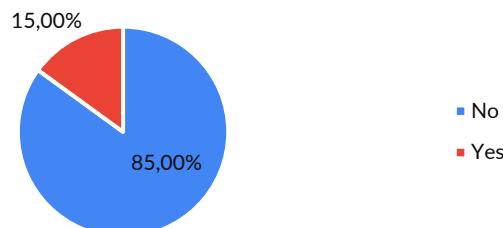
Due to their over dependency on the internet, the student's behavior changed negatively, and, unfortunately, 215 parents feel that their child shows an arrogant attitude toward them now compared to before.

Figure 27. Do they suffer from Attention deficit
hyperactivity disorder?



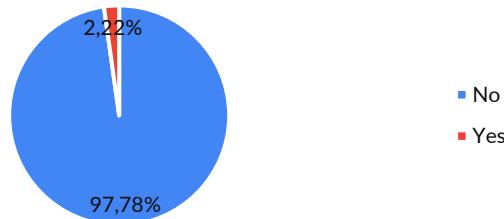
Out of 380 parents, 247 responded that their child does not have attention deficit hyperactivity disorder, whereas 133 parents face this problem with their child.

Figure 28. Do they suffer from Obsessive-compulsive disorder?

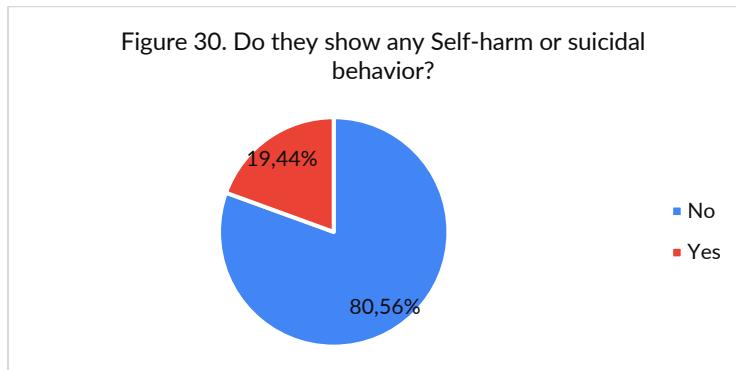


Out of 380 parents, 323 responded that their child does not suffer from obsessive-compulsive disorder, but 57 parents face this problem with their child, which is very unfortunate.

Figure 29. Do they Use drugs, and any other harmful alcohol now?



From this figure 29, it is observed that 368 parents responded that their child does not use drugs or any other harmful alcohol, which means that overusing the internet is not the reason for this type of addiction.

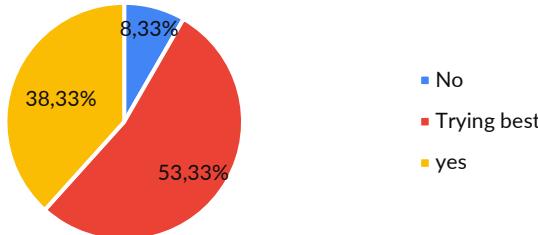


From this figure 30, it is observed that 304 parents responded that their child does not show any self-harm or suicidal behavior, which indicates that over the internet is not responsible for suicidal behavior.

4.4 Steps to Overcome Bad Impacts on Adolescence Psychology

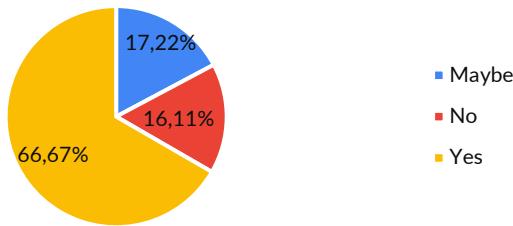
"It is extremely important for parents to provide a good growth environment during childhood to enhance adolescents' physical and mental development. A warm family atmosphere helps individuals develop a healthy personality, thereby reducing or preventing the occurrence of internet addiction" (Haishan)

31. Do you ensure quality time for your child?



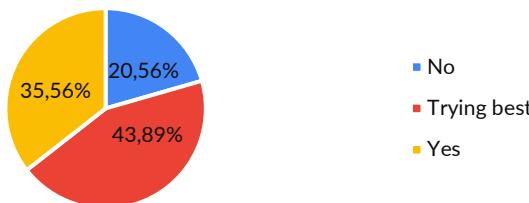
From the above figure, it is seen that 203 (53.33%) Guardians are trying their best to ensure quality time for their child, whereas 146 (38.33%) parents show confidence in providing quality time to their child. However, 30 parents gave an opinion that they are not providing quality time, which is very unfortunate.

Figure 32. Do they have opportunity to spend time with friends?



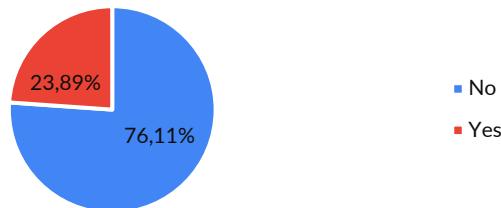
Two hundred fifty-three parents confidently answered that their adolescents have good opportunities to spend their leisure time with friends, whereas the remaining have no opportunity.

Figure 33. Do you arrange available parties or get together with their friends and other family members?



The above figure 33 shows that 167 parents are trying their best to arrange parties or get-togethers with their friends and other family members, 133 of whom answer confidently. However, the remaining 76 parents don't arrange such parties for their entertainment.

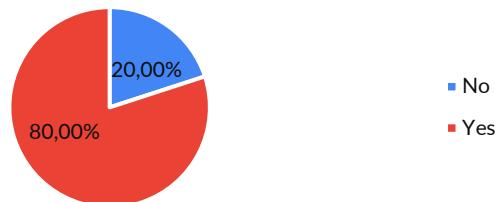
Figure 34. Do you need to arrange counseling from psychologists for your child?



Though adolescents somehow become highly dependent on the internet, using social media or online games, this doesn't create any psychological impact on their minds. Two hundred eighty-

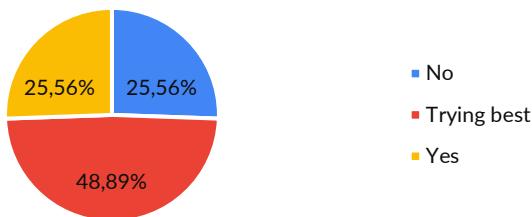
eight parents responded negatively that they don't need adolescent counseling.

Figure 35. Do they have opportunity to enjoy holiday visiting different places?



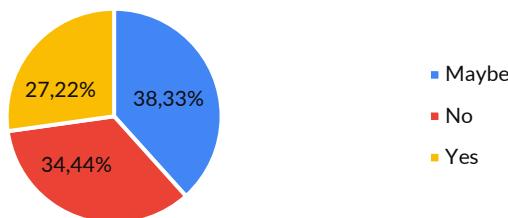
From the above figure 35, 304 parents responded that they had the opportunity to enjoy a holiday visiting different places. However, only 76 parents responded that they did not understand this issue.

Figure 36. Do you ensure available alternative of device addiction for your child?



This figure 36 represents 186 parents who are trying their best to ensure available alternatives to device addiction 95 parents confidently answered positively, and the remaining 95 have no available alternative to internet addiction.

Figure 37. Does School pay special attention to COVID -19 adolescence



The figure 37 shows that 144 parents are unsure about school attention for adolescent children; 102 answered positively, whereas 129 parents responded that their school is not paying special attention.

5. FINDINGS

RQ 1: What kind of activity is showing in school-going adolescents for overusing the internet after COVID-19?

Findings:

This research was conducted among parents of school-going adolescents in Dhaka City. Most school-going adolescents are now highly dependent on the internet to maintain constant connectivity with friends, employing reward mechanisms,

breeding an emotion of missing out, and encouraging psycho-neurotic internet use to stay connected and informed with each other. Based on their opinion from the above analysis, after COVID-19, out of 380 respondents, 353 have 24-hour Wi-Fi facilities. At the same time, 150 adolescents also use mobile data in the temporary absence of Wi-Fi. As most families in Dhaka now use 24-hour internet, some educational institutions have been used to arrange online classes or meetings in some emergencies. 125 out of 380 parents said that their children still need to do some online courses and must also be active in WhatsApp or Viber groups created by their class teacher.

Three hundred and twelve parents said that their children need to use the internet for at least 2 to 3 hours for educational purposes. Unfortunately, 239 parents said that students now use the internet for more than 2 to 3 hours for entertainment, whereas 41 respondents said that more than 6 hours may be alarming.

The researcher tried to find out the area of their entertainment using the internet, focusing on some everyday internet activities like social media and gaming activities, which are used by school adolescents, and saw that out of 380 adolescents, 140 students use Facebook, 144 use Snap-chat, 150 students using Instagram. In contrast, only 34 used TikTok, and 61 used LinkedIn.

The researchers also saw that most adolescents are also highly dependent on online gaming using the internet. These games often provide a cognizance of achievement, social interaction, and competition among friend circles. Sometimes, it leads to excessive intent in gaming, focusing it on academic

responsibilities and other emergency activities. From the above research, it is seen that out of 380 respondents, 221 replied that their children are spending more time on gaming activities using the internet, and 192 (50.56%) respondents feel that available internet facilities demotivate their children to go out. They are now loving to stay at home with their device. Though 50% of parents responded that their child is enjoying their academic activities, 43.33% of respondents feel that their school-going children are now bored with their educational activities.

RQ 2: What effects does excessive internet use have on the mental health of school teenagers?

Findings:

Overusing the internet impacts not only academic performance but also behavior. It leads to dysfunctional critical thinking and increases the possibility of mental health disorders like anxiety, arrogance, depression, obsessive-compulsive disorder, and social isolation.

The researcher observed that 380 parents say that their child feels depressed and anxious due to overusing the internet, 133 children feel stress regarding their educational activities, and 167 students feel stress sometimes.

After COVID-19, most students' lifestyles changed. Now, they love to spend the maximum amount of time with devices without moving around, which impacts their behavior. Out of 380 parents, 160 feel that they are fighting more with their siblings than before COVID-19, and 215 parents feel that their child shows an arrogant attitude toward them now compared to before.

Out of 380 parents, 247 responded that their child doesn't have attention deficit hyperactivity disorder, whereas 133 parents face this problem with their child, 57 responded that their child suffers from obsessive-compulsive disorder, which is very unfortunate.

But out of 380, 368 parents responded that their child doesn't use drugs or any other harmful alcohol, and 304 parents responded that their child doesn't show any self-harm or suicidal behavior, which indicates that overusing internet is not responsible for this type of psychological impact which may leads to go for suicidal behavior or other extreme attitude.

RQ 3: What policy recommendations are there to solve Bangladesh's adolescent mental health crisis?

Findings:

Technological Advancement is a positive symptom of any society, but over-dependency on technology sometimes creates a toxic environment. As social beings, we should be connected with others because it reduces stress, anxiety, and depression, increases self-worth, provides happiness and comfort, and reduces loneliness. But now, most of us, especially the teenage generation, rely primarily on social media platforms such as Facebook, Snapchat, YouTube, TikTok, and Instagram to search and connect. But it can never be an alternative to face-to-face communication. Instead, spending too much time on social media can make them feel lonelier and more isolated—and aggravate mental health problems such as anxiety and depression. So, parents, society, and schools should be careful

about this issue. They should take some initiative to change adolescent mentality individually or collectively.

This research shows that 203 (53.33%) Guardians are trying their best to ensure quality time for their child, whereas 146 (38.33%) parents show confidence in providing quality time to their child. However, 30 parents thought they were not providing quality time, which is unfortunate.

253 parents confidently answer that their adolescence is a good time to spend leisure time with friends, while the remaining have no opportunity. One hundred sixty-seven parents try to arrange parties or get-togethers with their friends and other family members.

Three hundred and four parents responded that they have the opportunity to enjoy a holiday visiting different places. Only 76 parents responded 'no' regarding this issue. One hundred eighty-six parents are trying their best to ensure an available alternative to device addiction. Ninety-five parents confidently answered positively, and the remaining 95 had no available alternative to internet addiction.

Out of 380, 144 parents are unsure about school attention for their adolescent child. One hundred two answered positively, whereas 129 parents responded that their school does not pay special attention.

Though adolescents become highly dependent on the internet using social media or online games, this doesn't create an extreme psychological impact on their minds. Two hundred eighty-eight parents responded negatively that they don't need adolescent counseling.

6. CONCLUSION

This study offers insight into Bangladeshi school-going adolescents' behavioral and psychological shifts. The findings reveal that increased internet accessibility post-COVID has significantly influenced their daily activities and mental well-being.

The prolonged periods of online education and social isolation during the pandemic led to a surge in internet usage among adolescents, not only for educational purposes but also for entertainment and social interaction. While the internet served as a crucial tool for learning and maintaining connections during the pandemic, excessive use has resulted in notable psychological and behavioral effects, including increased screen time dependency, social withdrawal, and changes in emotional regulation.

Parental attitudes and involvement have also played a critical role in shaping adolescents' internet usage patterns. Many parents expressed concerns about the negative impacts of excessive internet use, such as reduced physical activity, disrupted sleep cycles, and heightened stress or anxiety levels. At the same time, some parents acknowledged the positive aspects, such as access to educational resources and staying connected with peers.

The study highlights the need for balanced internet use among adolescents and the importance of parental guidance in fostering healthy digital habits. It also emphasizes the necessity of promoting offline activities, mental health awareness, and

digital literacy to mitigate the adverse effects of excessive internet use.

As Dhaka, like many urban centers, experiences rapid digitalization, further research, and initiatives are essential to ensure that technological advancements positively contribute to adolescents' holistic development and address their educational and psychological needs.

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Appendices:

Questionnaire link:

https://docs.google.com/forms/d/e/1FAIpQLSeJ7LtzF6j7N4aWAzAKLhowWDctvH4wNT68tffzt3PvKlnOBg/viewform?usp=sf_link