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The Digital Playground: Impact of Electronic Games on the Health, Behavior, and Academic Performance of Children in Benghazi, Libya in 2025

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Abstract-

Advanced digital technologies, despite their many benefits, have raised growing concerns about adverse effects on children's physical health, mental well-being, and social development. Electronic games are one of the most widely used and potentially harmful forms of digital entertainment. This study aimed to assess the potential adverse effects of excessive electronic gaming on children's physical health, social behavior, sleep patterns, and academic performance in Benghazi, Libya. A cross-sectional study was conducted among 653 parents and relatives (aunts/uncles) of children aged 3-15 years. Data were collected using a Google Form questionnaire that covered demographics, gaming habits, parental control measures, observed effects on health, behavior, and schoolwork, as well as device types, internet connectivity, and technical protection measures. The majority of children played action or adventure games (58.2%) and fighting games (42.4%). About (34.6%) played games for more than 4 hours a day. Many parents admit that their children had health problems, like eye strain (30.9%), trouble sleeping (31.2%), and neck or back pain (14.5%). When it came to social behavior, 31.1% of parents noticed their child was more easily irritated or aggressive. The most common problems were homework delay

(32.0%) and losing interest in studying (38.7%). It is recommended that that parents need more guidance on how to strike a healthier balance with technology for their children.

Keywords: Electronic games; children; academic performance; sleep disorders; behavioral problems; IT-related factors; device usage, internet connectivity; and parental digital literacy.

1. Introduction

The rapid integration of advanced digital technologies into the daily lives of children and adolescents has raised substantial concerns among parents, educators, and healthcare professionals. While these technologies offer many benefits, including access to information and opportunities for social connection, their excessive and unregulated use has been associated with a range of health and behavioral problems[1]. In the 21st century, electronic games have become much easier to access and much more popular among children and adolescents. What used to be a rare hobby is now a major way to have fun, offering exciting virtual worlds, chances to connect with others, and mental challenges. But at the same time, this digital change has sparked a worldwide debate among parents, teachers, and doctors about the potential harms of excessive gaming. Concerns include physical problems like eye strain, muscle and back pain, and weight gain, as well as mental health issues such as aggression, feeling lonely, and internet gaming disorder [2,3].

Furthermore, the displacement of time spent on homework and sleep has led to growing worries about a negative impact on academic performance [4]. While some studies do show benefits in certain skills, such as problem-solving and strategic thinking [5], the majority of evidence points to significant risks, particularly when gaming is uncontrolled and excessive. In the Libyan context, as in many other societies, children's access to smartphones, tablets, and computers has increased dramatically, often without adequate parental guidance or digital literacy. A recent study emphasized that while parents may have some awareness of gaming's psychosocial impacts, their

knowledge of specific risks and effective mitigation strategies remains significantly lacking [6]. This study contributes through evaluating the effects of electronic games on children's physical health, social behavior, sleep quality, and academic performance in Benghazi, Libya, with an additional focus on information technology-related factors, including device usage, internet connectivity, and technical protection measures. The next section explains the basic methods for data collection and interpretation.

2. Methods

2.1. Study Design and Setting

This was a cross-sectional, descriptive study conducted in Benghazi, Libya, over three months from the first of January to March 31, 2025. Data were collected via a structured online questionnaire.

2.2. Participants and Sampling

A convenience sampling method was employed. The survey link was shared through personal networks, such as friends, family, and coworkers. The target group was adult parents, aunts, uncles, and teachers who were the main caregivers or spent a lot of time each day with a child between the ages of 3 and 15. The survey link was distributed to 1,000 individuals; 653 completed the questionnaire (response rate 65.3%).

2.3. Data Collection Instrument

The questionnaire consisted of multiple sections:

1. **Demographics:** Caregiver's relation to the child, child's age, number of children in family, parents' education.
2. **Gaming Habits:** Average daily playtime, preferred game types, usual play location.
3. **Health and Behavioral Impact:** Presence of physical symptoms (e.g., eye strain, headaches), changes in sleep, physical activity, and social behavior.

4. **Academic Impact:** Effect on study motivation, homework completion, concentration, and perceived relationship between playtime and grades.
5. **Parental Intervention:** Protective measures taken (e.g., parental controls, time limits), knowledge of technical protections, and occurrence of online risks (e.g., cyberbullying, inappropriate content).
6. **Information Technology Factors:** Device types used for gaming, internet connectivity status, parental control software utilization, and technical knowledge self-assessment.

2.4. Data Analysis

The data were entered and analyzed using SPSS 27. Descriptive statistics (frequencies and percentages) were used to describe the sample characteristics and summarize the key results.

2.5. Ethical Approval

All participants provided electronic consent before completing the questionnaire. The purpose of the study, the voluntary nature of participation, the anonymity of responses, and the right to withdraw at any time without consequence were clearly explained to all participants. All data were stored securely and accessed only by the principal investigator for research purposes.

3. Results

3.1. Demographic Profile of Child and Caregiver

- **Caregiver's Relation:** Mothers were the primary respondents (50.4%), followed by aunts/uncles (37.4%), and siblings/teachers (12.2%).

- **Child's Age:** A total of 653 children were included in the study. The largest age group was children under 5 years (46.6%), followed by children aged 5–8 years (39.4%). Smaller groups included children aged 9–12 years (8.5%) and children aged 13–15 years (5.5%).
- **Parental Education:** Over half (56.0%) of parents held a Bachelor's degree, while (15.6%) had postgraduate degrees.

3.2. Gaming Habits and Environment

- **Daily Playtime:** A significant proportion of children (34.6%) played for more than 4 hours each day. Another (26.9%) played for 3–4 hours. The remaining children played for less time: (23.1%) played for 1–2 hours, and (15.3%) played for less than 1 hour.
- **Preferred Game Types.** Children can choose more than one preferred type: Action/Adventure (58.2%) and Fighting (42.4%) games were the most popular. Puzzle/strategy games were less common (21.9%).
- **Play Location:** Children predominantly played "anywhere in the home" (53.3%) or in their own room (22.8%). Additionally, (23.9%) played at a friend's house.
- **3.3. Impact on Physical Health**

As shown in Table 1, a substantial number of caregivers reported adverse physical symptoms in their children.

Table 1. Reported Physical Health Symptoms in Children

Symptom	Frequency (n)	Percentage (%)
No observed symptoms	278	**42.6**
Eye strain/redness	202	**30.9**
Sleep disturbances (insomnia, broken sleep)	204	**31.2**
Neck or back pain	95	**14.5**
Weight loss	88	**13.5**
Headaches	70	**10.7**
Wrist/finger pain	41	**6.3**
Weight gain	**30**	**4.6**

3.4. Impact on Sleep and Physical Activity

- **Sleep:** Nearly half of the parents and caregivers (47.5%) reported that gaming disrupts their child's sleep.
- **Physical Activity: (**39.8%, n=260) noted a decrease in physical activity associated with gaming.

3.5. Impact on Social Behavior

- **Negative Changes: (**31.1%, n=203) observed that the child became more irritable and aggressive. 16.5% (n=108) noted increased social isolation and withdrawal.
- **Positive Changes:** In contrast, (21.6%, n=141) noticed an improvement in some social skills (e.g., teamwork).

3.6. Impact on Academic Performance

- Moderate Negative Impact:(26.8%, n=175)
- Significant Negative Impact: (16.8%, n=110)
- No notable effect: (39.8%, n=260)
- Positive Impact: (9.8%, n=64)

Specific academic challenges reported included:

- **Homework delay/neglect:** (32.0%, n=209).
- **Loss of study motivation: (**38.7%, n=253) stated motivation had decreased to some extent.
- **Correlation with grades:** 41.0% (n=268) of parents believed there is a direct relationship: "The more the playtime, the lower the grades."

3.7. Parental Protection and Awareness

- **Protective Measures:** About (44.4%) used parental control applications and (45.3%) set time limits. However, (15.6%) said that they did not take any specific security precautions.
- **Knowledge Level:** About (33.8%) rated their knowledge level as “high.” A combined (41.8%) rated their knowledge as “Limited” or “Non-existent.”
- **Online Risks**: About (27.6%) said their child had encountered inappropriate content (violence, explicit language). Reported were also cyberbullying and attempted information theft.

3.8. Information Technology (IT) Perspective: Digital Infrastructure, Device Usage, and Technical Protection Gaps

From an information technology standpoint, this study reveals critical insights into the digital ecosystem within which children engage with electronic games.

3.8.1. Device Types and Gaming Platforms

As shown in **Table 2**, smartphones were the most commonly used device for electronic gaming among children (67.8%), followed by tablets (45.2%) and laptops/computers (28.4%). Dedicated gaming consoles were used by only (18.6%) of children.

Table.2 Device Types Used for Electronic Gaming

Device Type	Frequency (n)	Percentage (%)
Smartphone	443	**67.8**
Tablet (e.g., iPad, Android tablet)	295	**45.2**
Laptop or desktop computer	186	**28.4**
Dedicated gaming console (PlayStation, Xbox, Nintendo)	121	**18.6**
Handheld gaming device (e.g., Nintendo Switch, PSP)	**54**	**8.3**

"Multiple responses allowed; percentages sum to more than 100%."

3.8.1 Internet Connectivity and Online Gaming Exposure

Table 3 demonstrates that the majority of children (73.2%) played games that required an active internet connection. Only (26.8%) played exclusively offline games.

Table.3 Internet Connectivity During Gaming

Connectivity Status	Frequency (n)	Percentage (%)
Games require an internet connection (online games)	478	**73.2**
Games played offline only	**175**	**26.8**

Among children playing online games, (41.2%) played multiplayer games involving interaction with unknown individuals, while (32.0%) played games limited to known friends or family members.

3.8.3Parental Control Software and Technical Protection Measures

Table 4 details the types of technical protection measures implemented by parents. Only (28.6%) had configured privacy settings within the games themselves, and (15.6%) applied no technical protection measures whatsoever.

Table.4 Technical Protection Measures Implemented

Protection Measure	Frequency (n)	Percentage (%)
Reviewing games before download (age rating verification)	312	**47.8**
Time limits set via router or device settings	296	**45.3**
Parental control applications (e.g., Google Family Link, Qustodio)	290	**44.4**
Privacy and security settings within games/platforms	187	**28.6**
No specific technical measures applied	**102**	**15.6**

3.8.4 Parental Technical Knowledge and Digital Literacy

Table 5 presents caregivers' self-rated knowledge of technical protection measures. Only one-third (33.8%) rated their knowledge as "high".

Table.5 Self-Rated Knowledge of Technical Protection Measures

Knowledge Level	Frequency (n)	Percentage (%)
High (apply several measures and understand basics of digital safety)	221	**33.8**
Moderate (have some knowledge and apply basic measures)	258	**39.5**
Limited (little knowledge, applies only simple measures)	98	**15.0**
Non-existent (know nothing about these measures)	21	3.2
No response	55	8.4

3.8.5 Online Risks and Cyber Threats Encountered

Table 6 summarizes the online risks that children encountered during gaming. Exposure to inappropriate content was the most frequently reported risk (27.6%).

Table.6 Online Risks Encountered by Children During Gaming

Online Risk	Frequency (n)	Percentage (%)
Exposure to inappropriate content (violence, explicit language, sexual content)	180	**27.6**
Cyberbullying from other players	81	**12.4**
Communication with strangers or suspicious individuals	76	**11.6**
Attempted information theft or phishing	58	**8.9**
No known risks encountered	358	**54.8**
Unable to confirm/don't know	**87**	**13.3**

3.8.6Association Between Technical Knowledge and Protective Action

Table 7 demonstrates the Association between parents' self-rated technical knowledge and the implementation of protective measures.

Table.7 Association Between Parental Technical Knowledge and Use of Parental Control Apps

Knowledge Level	Used Parental Control Apps (%)	Did Not Use Parental Control Apps (%)
High (n=221)	82.4	**17.6**
Moderate (n=258)	48.1	**51.9**
Limited/non-existent (n=119)	**23.5**	**76.5**

Chi square test: χ^2 = 119.7, df = 2, $p < 0.001$

There is a statistically significant association between technical knowledge and the use of parental control apps

4. Discussion

This cross-sectional study, conducted among 653 caregivers in Benghazi, Libya, provides critical, real-world evidence of the pervasive negative impact of excessive electronic gaming on children's health, behavior, and academic performance. Furthermore, the IT-focused analysis reveals substantial gaps in parental digital literacy and technical protection measures. Our findings are

remarkably consistent with a growing international consensus that uncontrolled screen media use poses a significant risk to child development.

4.1. Playtime and Academic Harm

One of the most significant findings of our study is the perceived association between playtime and academic decline. Over a third (34.6%) of children played for more than 4 hours daily, and 41.0% of parents believed that increased playtime directly led to lower grades. This aligns powerfully with the meta-analysis by Adelantado-Renau et al. [4], which concluded that higher levels of screen media use, including video games, are consistently associated with poorer academic performance. Firstly, excessive gaming time affects

essential academic activities. Our results support this, as 32.0% of parents reported homework delay or neglect, and 38.7% noted a loss of study motivation. This is directly supported by Islam, Biswas, & Khanam [7], who found that excessive internet use and game-play significantly reduced study time and homework completion.

Secondly, prolonged gaming executive functions like sustained attention and concentration. Cardoso-Leite et al. [8] demonstrated that heavy media use was associated with poorer attentional control, a prerequisite for academic learning. The report by Sachit, Salloum, & Jawad [9] further corroborates our findings, showing a direct negative correlation between daily video game duration and grade point average.

4.2. Behavioral and Psychosocial Consequences

The behavioral impact reported in our study is substantial. Nearly one-third (31.1%) of caregivers observed increased irritability and aggression, and 16.5% noted social withdrawal. Lérida-Ayala et al. [3] found a clear association between excessive internet and video game use and the

development of behavioral disorders in children and teenagers, including conduct problems and emotional symptoms. Furthermore, Lobel et al. [10] demonstrated that higher levels of video gaming predicted an increase in psychosocial problems over time. Our finding of increased social isolation is particularly concerning, as it suggests that for some children, the digital world may be replacing critical real-world social interactions. Tse et al. [11] recently reported that "binge gaming" was significantly associated with poorer mental health and social outcomes. A study from Iraq by Ibrahim, Ghanim, & Alkhaderjameel [12] found results nearly identical to ours, suggesting that these challenges transcend cultural boundaries.

4.3. Physical Health and Sleep Disruption

The present study shows that nearly one-third of parents reported eye strain (30.9%) and sleep disturbances (31.2%). This is thoroughly reviewed by Alanko, who summarized that excessive screen time is associated with poor sleep quality, musculoskeletal pain, and reduced physical activity [2]. The mechanism for sleep disruption is two-fold: blue light from screens suppresses melatonin, and cognitive arousal from gameplay delays sleep onset [13]. Hastings et al. similarly found that young children's video/computer
game use was associated with poorer sleep quality and more behavioral problems [14]. Our finding that 39.8% of parents noted a decrease in physical activity is a major public health concern. While active video games (exergames) have shown some benefits in a meta-analysis by Gao et al. [15], our data suggest that the vast majority of children are playing sedentary action or fighting games. The reported neck, back, and wrist pain (14.5% and 6.3% respectively) are evidence of poor ergonomics and repetitive strain.

4.4. The Information Technology Perspective: Digital Ecosystem and Protection Gaps

From an IT perspective, our study reveals several critical findings that have direct implications for child online safety.

Mobile-First Gaming Ecosystem: The dominance of smartphones (67.8%) and tablets (45.2%) as gaming devices reflects global trends toward mobile gaming [16]. This is particularly relevant in the Libyan context, where mobile devices are more accessible and affordable than dedicated gaming consoles. However, mobile platforms often have weaker default privacy settings and expose children to in-app purchases, targeted advertisements, and social features that can facilitate contact with strangers.

High Online Exposure: The finding that 73.2% of children play online games is alarming. Online gaming environments expose children to cyber-risks, including inappropriate content (27.6%), cyberbullying (12.4%), and communication with strangers (11.6%). These findings align with Al-Qudimat et al. [6], who reported that parents significantly underestimated their children's exposure to online risks. The fact that 41.2% of children playing online games interacted with unknown individuals represents a major child protection concern.

Significant Technical Knowledge Gap: Only 33.8% of parents rated their technical knowledge as "High," while 18.2% had limited or no knowledge of digital protection measures. This knowledge gap is consistent with findings from Al-Qudimat et al. [6] and represents a critical vulnerability. Parents cannot protect their children from online risks if they do not understand the technological environment in which those risks occur.

Underutilization of Privacy Controls: Despite the availability of privacy and security settings within games and platforms, only 28.6% of parents configured these controls. This represents a major missed opportunity, as platform-level privacy settings (e.g., disabling chat functions, restricting friend requests, setting content filters) are among the most effective technical protection measures available.

Knowledge-Action Gap: In the current study, among parents with "good" technical knowledge, 82.4% used parental control applications, compared to

only 23.5% among those with limited or no knowledge. This finding suggests that targeted digital literacy interventions would have a direct, measurable impact on child online safety. It is important to acknowledge that the literature is not enormous. Some studies, such as the

meta-analysis by David et al. [5], have shown that "serious games" designed for education or health promotion can be effective tools for promoting positive behavioral change. Similarly, Kovess-Masfety et al. [17] found that moderate gaming was associated with higher prosocial skills in a large European sample. Our data partially reflects this, as 21.6% of parents reported improved social skills (e.g., teamwork) from gaming. However, the overwhelmingly negative findings in our study, and in studies like Anjum et al. [18] and Tse et al. [11], suggest a clear threshold effect. The problem is not the game itself, but the loss of control—the transition from recreational play to problematic, excessive use.

Our data, showing that over 60% of children play 3 or more hours daily, strongly suggests that many in our sample have crossed this threshold into the danger zone.

The present study found that 15.6% of parents don't use any online safety tools at all, which is a high and worrying number because children face real risks online. It could be that these parents have less education or a lower income than others. Lou et al. (2024) found that higher parental education levels were positively associated with more active parental mediation [19].

Our results show a strange difference: 54.8% of parents said there are no online risks, but 27.6% said their child saw bad content online. This probably means many parents don't really know what their children do online, not that there are no real dangers. Studies show that parents often know less about their children's online problems than they think Dědková & Smahel, 2020 [20].

4.6. Limitations

Our study has some weaknesses that we need to be honest about.

We collected all information at one point in time (cross-sectional). That means we cannot say that one thing causes another – only that things are related.

We relied on what parents told us. Parents may not remember everything perfectly (recall bias), and their answers depend on their own opinions.

We did not pick a random sample. We simply asked whoever was available (convenience sampling). So, our results may not apply to all families everywhere. Because of this, we should not call our group of parents "diverse." It is better to say they were reasonably varied.

46.6% of the children in our study were under 5 years old. Some of our questions were about homework, study motivation, and school performance. These questions do not really fit preschool children. This may have introduced bias into our results.

Parents rated their own technical knowledge. But what a parent thinks they know about technology may not match their actual digital skills. So, this measure is not very accurate.

5. Conclusion

The digital playground gives children fun and some good things, but it can also bring dangers to their health, happiness, and school work in Benghazi, Libya. Playing too much without any rules is linked to body pain, not sleeping enough, more anger, and doing badly in school. From an IT view, most children use mobile phones, they go online a lot, many parents do not know much about technology, and safety tools are not used often. These are problems that need to be fixed.

The most common health problems we saw were eye strain, sleep trouble, and neck pain.

Most children who play action games act more aggressively and lose interest in school. Also, parents often do not watch their children enough, and they do not know much about the digital safety tools that could help protect their children. This study shows that parents need more help to find a healthier way to use technology, to learn more about online safety, and to get their children to do other physical and social activities.

The following recommendations can be beneficial:

1. For Parents:

- Establish and enforce firm rules: Limit daily playtime to 1-2 hours on school days.
- Prioritize location: Keep gaming devices in common family areas, not children's bedrooms.
- Activate technical protections: Configure parental controls on devices (Google Family Link, Apple Screen Time), enable privacy settings within games, and use content filtering.
- Act as a guide for your child. Look up games first using trusted rating systems such as ESRB, PEGI, or Common-Sense Media. These will tell you if a game is appropriate for your child's age.
- Model balance: Engage children in sports, outdoor play, reading, and family activities.

2. For IT Professionals and Educators:

- Develop and deliver accessible digital literacy training programs for parents, focusing on practical skills: configuring parental controls, understanding privacy settings, and recognizing online risks.
- Create simplified, Arabic-language guides for common parental control tools on smartphones and tablets.
- Integrate digital citizenship and online safety education into school curricula.

3. For Policymakers and Technology Companies:

- Mandate clearer, age-appropriate privacy and safety defaults on devices and gaming platforms.
- Develop government-sponsored public awareness campaigns on safe online gaming for children.
- Support research into effective digital parenting interventions in the Libyan context.

4. For Future Research:

- Conduct longitudinal studies to establish causality.
- Investigate the specific impact of different game genres and online interaction types.
- Develop and test digital literacy intervention programs for parents.

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References

1. Presta V, Guarnieri A, Laurenti F, Mazzei S, Arcari ML, Mirandola P, Vitale M, Chia MY, Condello G, Gobbi G. The impact of digital devices on children's health: a systematic literature review. Journal of Functional Morphology and Kinesiology. 2024 Nov 14;9(4):236.

2. Alanko D. The health effects of video games in children and adolescents. Pediatr Rev. 2023;44(1):23-32.

3. Lérida-Ayala V, Aguilar-Parra J, Collado-Soler R, Alférez-Pastor M, Fernández-Campoy J, La Rosa A. Internet and video games: causes of behavioral disorders in children and teenagers. Children. 2022;10(1):86.

4. Adelantado-Renau M, Moliner-Urdiales D, Cavero-Redondo I, Beltran-Valls M, Martínez-Vizcaíno V, Álvarez-Bueno C. Association between screen media use and academic performance among children and adolescents: a systematic review and meta-analysis. JAMA Pediatr. 2019;173(11):1058-67.

5. David O, Costescu C, Cardoș R, Mogoașe C. How effective are serious games for promoting mental health and health behavioral change in children and adolescents? A systematic review and meta-analysis. Child Youth Care Forum. 2020;49:817-38.

6. Al-Qudimat A, Khan A, Khan A, Ahmad U, Aziz E, Rahim S, et al. Parents' awareness about the psychosocial impacts of video gaming on their children: a cross-sectional study. Avicenna. 2025;2025(1):6.

7. Islam M, Biswas R, Khanam R. Effect of internet use and electronic game-play on academic performance of Australian children. Sci Rep. 2020;10:21727.

8. Cardoso-Leite P, Buchard A, Tissieres I, Mussack D, Bavelier D. Media use, attention, mental health and academic performance among 8 to 12 year old children. PLoS One. 2020;16(6):e0259163.

9. Sachit A, Salloum K, Jawad F. Impact of video games on academic performance in school children. Malays J Nurs. 2025;17(1).

10. Lobel A, Engels R, Stone L, Burk W, Granic I. Video gaming and children's psychosocial wellbeing: a longitudinal study. J Youth Adolesc. 2017;46:884-97.

11. Tse N, Pang N, Wang X, Li Y, Lo C, Yang X. The roles of binge gaming in social, academic and mental health outcomes and gender differences: a school-based survey in Hong Kong. PLoS One. 2025;20(5):e0327365.

12. Ibrahim R, Ghanim A, Alkhaderjameel H. Impact of electronic games on the behavior of children and their academic achievement upon schools in Mosul City. J Forensic Med. 2020;14(1):374-9.

13. Lee S. I., Matsumori K., & Higuchi S. (2018). Melatonin suppression and sleepiness in children exposed to blue enriched white LED lighting at night. Physiological Reports, 6(24), e13942.

14. Hastings E, Karas T, Winsler A, Way E, Madigan A, Tyler S. Young children's video/computer game use: relations with school performance and behavior. Issues Ment Health Nurs. 2009;30(10):638-49.

15. Gao Z, Chen S, Pasco D, Pope Z. A meta-analysis of active video games on health outcomes among children and adolescents. Obes Rev. 2015;16(9):783-94.

16. Statista. Mobile gaming market size worldwide from 2020 to 2025 [Internet]. 2025 [cited 2026 Apr 9]. Available from: https://www.statista.com/statistics/

17. Kovess-Masfety V, Keyes K, Hamilton A, Hanson G, Bitfoi A, Golitz D, et al. Is time spent playing video games associated with mental health, cognitive and social skills in young children? Soc Psychiatry Psychiatr Epidemiol. 2016;51:349-57.

18. Anjum R, Nodi N, Das P, Roknuzzaman A, Sarker R, Islam M. Exploring the association between online gaming addiction and academic performance among the school-going adolescents in Bangladesh: a cross-sectional study. Health Sci Rep. 2024;7(10):e70043.

19. Lou J, Wang M, Xie X, Wang F, Zhou X, Lu J, Zhu H. The association between family socio-demographic factors, parental mediation, and adolescents' digital literacy: a cross-sectional study. BMC Public Health. 2024 ;24(1):2932.

20. Geržičáková M, Dedkova L, Mýlek V. What do parents know about children's risky online experiences? The role of parental mediation strategies. Computers in Human Behavior. 2023 ;141:107626.

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