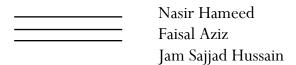
Aggressive Behavior among Minor Children: A Study of Excessive Use of Mobile



This study aims to investigate the phenomenon of excessive mobile usage habits among children leading towards developing aggressive behavior. The study employed qualitative methodology with focus group discussion method. A structured qualitative questionnaire was used for collecting responses through zoom by the housewives-cumrespondents hailing from upper-middle class families of lower Punjab. The findings revealed the housewives have serious concerns about health issues of their children especially the kids have developed aggressive behavior through mobile usage. Children between the age of 2-5 years have developed strain relationship with their mothers on the issue of using mobile even during dining. The study concluded that this was the unique phenomenon for the mothers dealing with their children but they were helpless in absence of any policy framework. The study recommended the government as well as cellular companies, service providers and media regulatory bodies should step forward and chalked out a comprehensive policy and chalk out rules and regulation for mobile usage. Awareness sessions should also be arranged in schools, colleges and universities to educate parents. The study further recommended there must be training sessions for the parents, students and fellows and a written manual should be distributed among the parents. This study may open new avenues for the researchers of media in Pakistan and this study may provide footings to future researchers.

Key Words: Aggressive Behavior, Cellular Companies, Health Issues, Qualitative Methodology, School-going Children

Introduction

Aggressive behavior among individual(s) generally emerges from an uninteresting movement, unpleasant thing or an uninterested object¹. Generally, children react in hostile way towards their parents, siblings and other adults when their demands go unaddressed². Aggressive behavior among children can be categorized into two major forms; 1) verbal aggression and 2) physical aggression. Commonly, there are several reasons behind aggressive behavior of the children. People show aggressive behavior at particular occasions including face-to-face fight, hurling threats, unveiling conspiracy or any other undeserving event. Aggression among children is believed to be a common factor in their routine life especially when they demand anything like feeders, juice boxes, toys or any other from mothers, parents or even from their elders including sisters or brothers. Aggressive behavior among children particularly kids leads to weeping and crying, which commonly results into their demands fulfilled by the elders³.

Over the past decade, screen time has become a major subject of discussion and researches keeping in view of the ever-expanding types of electronic and digital media devices which are easily accessible to the children across the world⁴. In today's era, the availability of smart phones, video games, tablets and computer/ laptop use are increasing day by day. Television viewing as well as watching games or excessive usage of smart phones / screen time has negatively affected the development of physical, social, cognitive and creative abilities of the children besides having negative effects on their mental and physical health including obesity, sleep problems, anxiety, tension and depression⁵. The incumbent era is believed to be the era of electronic as well as social media. Children and adolescents have become habitual of using digital media devices, including mobile phones, tabloids and other gadgets for their leisure. The usage of mobile screens more than two hour per day by a child is believed to be the excessive usage of a digital device. The youth of the western as well as eastern countries have recently witnessed a high tendency of using social media platforms as compared to the past era. For instance, in 2011, almost 52 percent of the 0 to 8-year-old children had direct access to the digital media devices; and the ratio jumped to 75 percent in 2013 and now it has almost 90 percent⁶. Likewise, the youth in their age group of 8-18 the usage of digital media device has been noticed to 7:38h per day. Moreover, almost 75 percent families own smart phones, which have become yet another source of leisure for the children as they snatch smart phones from their parents and start playing games. Most of the families own smart phones

which contain massive games whereas traditional phones are used merely for phone calls or messaging. Therefore, the families can also divert from smart phones to traditional phones to avoid excessive usage of digital media by the children⁷.

Likewise, elders have different stages in their life which demand depiction of aggression at their end. For instance, a sportsman shows aggression during a sports game. Many among the cricketers behave aggressively during a high voltage cricket match⁸. For instance, a former Captain of Pakistan Cricket Team Shahid Afridi, former Wicketkeeper Kamran Akmal, former Indian Cricketers Yuvraj Singh, Gautam Gambhir, Sourav Ganguly, Harbhajan Singh, Shanthakumaran Sreesanth, incumbent batsman Virat Kohli, a former fast bowler of West Indies Cricket Team Courtly Ambrose, former Australian Cricketer Andrew Symonds, South African pacer Kagiso Rabada, and Pakistan Cricket Team's pacer Shoaib Akhtar are commonly known for their aggressive behavior on the grounds⁹. In fact, aggression is part and parcel during a cricket match. Likewise, there are several football players who are known for their aggressive behavior during the football match. However, such aggression is a common feature of the game, but there is a different form of aggression among the children¹⁰.

Children usually learn aggression from their parents, siblings and adults. Environment, siblings, home-mates, classmates, teachers and even parents teach aggression to the children. Children are always vulnerable to aggression when they are exposed to aggressive behavior. For instance, the children start behaving aggressively when they are taught to behave aggressively. Smart phones having a lot of games indulge them to watch whatever the content was packed inside those games¹¹. Once the children are addicted to mobile screens, they start indulging in multiple diseases. For instance, almost 20-30 percent youth experienced sleep problems in the United Kingdom due to excessive time consumption on mobile devices consequently they suffered from neurodevelopment problems because of less sleeping time¹². Evidences have indicated that inadequate sleeping time significantly affects mental as well as psychosocial health problems among the infants and toddlers. There are lots of problems attached with the excessive usage of mobile devices at the end of the children¹³.

Mobile usage has become a major issue almost in every house because the kids in age between 2-5 years have become addicted to the mobile and other high-tech gadgets. In most of the developed nations, the authorities have chalked out effective rules and regulations and parameters for mobile usage

or consumption of times on mobile screens and other digital media devices. However, in Pakistan, most of the media houses have avoided following the government rules and regulations thus posing potential threat to the government writ. In such scenario, it seems the government departments i.e., ministries, media regulatory bodies and even private sectors have established no regulatory mechanism for mobile usage by the small kids. Now, the medical authorities have reported multiple health issues for the children. The researchers have made an effort to find out the solutions for this problem.

A. Research Questions and Objectives of the Study

This study seems having great significance in term of lacking aspect of academic research about the topic under study. School going children especially under the age of 2-5 years of age have become addicted to mobile screens. In some of the cases, housewives reported serious quarrels among their offspring on mobile usage. Children have left physical games like playing with toys, fighting for toys or playing with muds or playing and breaking plants inside their homes. Rather, the kids have started fighting on the issue of using mobile first. Therefore, this study is an effort to dig out the problem at length and find out the solutions for this problem.

Keeping in view of the existing body of literature, the following research questions were emerged to seek answers from this study:

- Why aggressive behaviors among children emerge from excessive usage of smart phones/ screens?
- What is the effect on mental health problems and socio-emotional development of children after they are exposed to excessive usage of smart phone screens?
- How physical activity is compromised as compared to screen time consumption among children in Pakistan?

The following research objectives have been set for this study:

• To examine aggressive behavior among children emerging from excessive usage of smart phones/ screens.

- To analyze mental health problems and socio-emotional development of children after they are exposed to excessive usage of smart phone screens.
- To examine physical activity as compared to screen time consumption among children in Pakistan.

B. Literature Review

According to a study, excessive usage of digital media cause adverse consequences of psychological, neurological, social and physical nature among the children. Mobile devices have proven to be the worst among other screens the children are exposed to during various timings of their routine life¹⁴. The study revealed that content of the games played on mobile screens; game type, after-dark-use, and other screen devices determine effects on the children. The study further revealed that the children receive negative physical effects like poor sleep, obesity, high blood pressure, cholesterol, mental stress and above-said cardiovascular diseases are common consequences among children due to excessive usage of mobile screens¹⁵.

According to a study, the children confront health consequences, which commonly include impaired vision and significant reduction in bone density of the children. Poor and improper sleep leads towards depiction of internalizing and externalizing behavior among the children. The study concluded that excessive usage of screens due to poor sleep generally emerge suicidal thoughts among the children as they become habitual of using digital devices and high mobile dependency. Likewise, violent content leads towards nurturing anti-social behavior among children. The consumption of violent content among children generally decrease prosocial behavior, social coping, and generates dependent behavior among them¹⁶.

A study indicated the children addicted to mobile phones suffer from several neurodevelopment and psychological problems which affect their school performance and physical games at schools¹⁷. The study revealed that less sleeping time may definitely affect the functioning of circadian rhythms due to severe negative effects on pineal hormone melatonin which either enhance immune system or decreases it due to the reasons given above. According to another study carried out among the children in their age group between 4-8 years indicated that short sleep can ignite fatigue on

the following day which definitely affects their physical, social and hormonal growth as well as having severe impact on their studying behavior¹⁸.

A study carried out measuring the theory of mind (ToM) examined that extensive exposure to nighttime television viewing, background television viewing or television noise can cause decrease in sleep among children and adults as well. Another related study also indicated that excessive usage of screen time damages physical activity which is medically beneficial for sleep; therefore, it can be argued that screen time always costs sleep time ¹⁹. The children belonging to the families with lower income are addicted to television viewing as compared to the children with high-income families, whose habits are quite different from the children from lower-come families. The children from elite class or upper middle class are habitual of using smart phone screens thus having great impact on their sleep time ²⁰.

According to another study, most of the children and toddlers use mobile phones during evening and nighttime with exposure to bright and blue light which is emitted by self-luminous mobile devices²¹. Such lights cause suppression of melatonin production among the children thus causing severe circadian disruption. A study revealed that the children having addiction of using mobile phones 4-7h per day become so habitual that they are awaken a few times a night when they feel audible mobile notifications²².

According to the guidelines given in the study carried out by American Academy of Pediatrics (AAP), the children below the age of 2 years should never be provided any opportunity to use smart phone i.e., digital media devices²³. The study recommended that excessive usage of smart phone has always an adverse impact on the childhood nourishment of the children. Likewise, the Health Department of Australia has provided strong recommendation in this regard that the children between 2-5 years should spend only one hour per day on mobile phone or consume on screens. However, several studies indicated that the parents of the children have altogether ignored guidelines of the AAP because increasing tendency among children was witnessed using mobile phones or spending time on screens. According to a study, most of the parents allow their children to watch television or spend times on screens because it enhances their brains and creative skills²⁴.

However, a study indicated that regular physical activities were directly associated with improved health conditions of the children. For instance, the children learn locomotive skills, and learn to crawl and walk and they learn playing with toys and start giving reactions on various acts of their parents, siblings or elders. Moreover, such children learn teamwork, coordination and fitness classes when they are grown up. According to the WHO, the youth between 5-17 years should spend at least one hour per day for rigorous physical activity as it enhances their brain as well as physical health condition²⁵.

According to a study carried out by the National Health and Nutritional Examination Surveys (NHANES) on 1000 children in the USA between 6-15 years of age, the physical activity has nothing to do with the negative effects of the children exposed to excessive screen time²⁶. The study concluded that the children exposed to higher television viewing were physically weak irrespective of their hectic physical activity. Moreover, all the children exposed to any kind of screen had same negative effects on their health. A study conducted in Canada also revealed that gross motor skills were significantly reduced among the children that were highly exposed to screen time. The children spending extra time on screens were facing headache, backbone problems and impaired vision²⁷.

A study shown that excessive usage of screens including television, smart phones, video games and other internet related games have severe negative impacts on psychological and mental health of the children. The study revealed that children affected by smart phone devices were suffering from physical problems, attention issues in class, less class participation and other ill-being symptoms²⁸. According to a study conducted in Australia revealed that children habitual of excessive usage of screens were facing loneliness, anxiety, depression, tension, aggression and withdrawal alike behavior. Likewise, another study examined the social behavior of the children exposed to mobile screens. The findings revealed that Norwegian children complained of back pain, headaches, suicidal ideation, suicidal planning, sadness and other issues²⁹.

A study carried out in American society revealed that children were addicted to social phobia which resulted into lower academic performance; depression and anxiety were the common features affecting their health. The study revealed that children exposed to violent games demonstrated aggressive behavior in their routine life³⁰.

We must admit that we are in the era of technology and technology has its benefits as well as drawbacks. Technological advancements have been noted at an exponential ratio, therefore, one cannot deny from the benefit as well as drawbacks. New technology should be utilized with complete awareness and with certain rules and regulations. Children are the asset of any nation and torch bearer for the future generations, therefore, they should be provided ample understanding about the smart phone devices or other social media platforms.

After detailed search of the existing body of the literature, it has been established that no systematic effort has been made in Pakistan for carrying out academic research to examine changing behavior of the children once they are exposed to mobile or digital media devices. The research in hand found a significant gap in literature search thus pointing towards making extra efforts to find solution of this problem that how children can be protected through following any rules or regulation for mobile monitoring, if existent. Furthermore, the researchers also established that this has become a major problem for the families of each class ranging from lower middle class to elite class in Pakistani perspective. Therefore, the researchers felt a dire need to carry out this research to fill the gap besides adding new knowledge in its existing body.

C. Theoretical Framework and Research Methodology

This study finds it roots in social learning theoretical perspective of Albert Bandura who experienced aggressive behavior among children using two different types of cartoons³¹. Bandura divided 21 children in two major groups each and experienced that how children learn behavior from two different nature of games. For instance, Bandura provided toys like dolls and combs to one group and restricted them to one room for particular time period, whereas he restricted 21 children in another room and provided them toy knife, guns and other plastic weapons³². Bandura played cartoons on LCD/ Television of the nature of the toys he provided to the children divided in two different groups. Consequently, the children learnt social behavior from the games they watched on television screens³³. After the close environment experience was over, Bandura put the children into two different parks and he learned, that one group, which was exposed to guns and knife toys behaved aggressively wherein the other group remained calm and cool. Bandura concluded that kids behave in the same manner whatever they learn from the environment. Therefore, this theory seems to have great relevancy for the study in hand because the researchers have made an effort

to examine the social learning behavior of the children using mobile phones and other digital media devices. This study may enhance existing body of the knowledge by providing amicable solution for this social problem existent almost in every house of Pakistan.

Qualitative methodology has been employed for this particular research. Although, the topic seems having roots in quantitative paradigm but the researchers found out that every mother-cum-respondent was unavailable to respond to the queries of the researchers owing to multiple reasons including privacy. Therefore, the researchers employed qualitative approach to find out this social problem.

Focus Group Discussion (FGD) research method has been employed for this research. The researchers employed qualitative questionnaire with indepth interview approach to seek maximum responses from the researchers about the topic under study.

The researchers chosen housewives in Pakistani society as a universe of the study because housewives have been reported the most appropriate respondents for this study.

Housewives of upper-middle class have been selected as population for this study because the literature search established that families of lower-middle class seemed worried about their children because they desired to shine future of the children but they were indulged in mobile games.

10 housewives from lower middle class were chosen as sample size for the focus group discussion. The researcher employed written qualitative questionnaire for conducting in-depth interview via zoom due to scarcity of time and time management at the end of the housewives.

The research in hand employed thematic analysis approach to analyze the responses of the housewives-cum-respondents. Based on the responses, different themes were extracted and analyzed with the lens of qualitative approach.

Keeping in view of the literature research, gap of knowledge and data analysis for this study, the researchers established three major themes for the study in hand given in following manner:

1. Children with Aggressive Behavior

- 2. Effects of Excessive Mobile Usage
- 3. Mobile Phones and Mothers vs Kids Relationship

In order to examine the responses of the housewives-cum-mothers, the researchers divided themes in different categories.

D. Children with Aggressive Behavior

According to a mother-cum-respondent of the focus group discussion,

"I've two kids in their age between 2-5 years and both fight with each other on the issue of mobile usage. In start I found it relaxing for me as I could easily accomplish my other household tasks by providing mobile to my children. However, with the passage of time, I found my children have no interest in physical activities rather every time starting from awakening to dining, they demand mobile phones".

Likewise, another respondent, who was working as a teacher in high school in Multan for the last 15 years, revealed as,

"I was satisfied with the children habits because they became calm and cool once they were provided mobile phone at homes. However, my colleague told me about negative effects of the excessive mobile usage. Later, I observed they have developed aggressive behavior and at each step, they start fighting with me over mobile usage".

According to Shamim Ara Khatun, who was working as a housewife as well as doing a clerical job with the District Government of Bahawalpur,

"I was shocked to know that my both kids had become heavy mobile users. It was unacceptable for me when I learnt they started using abusive language in the age of 4-5 years. However, I was again shocked when I snatched mobile phone from them because they practically hit me with their tiny hands in anger".

This theme has provided in-depth insight of the respondents suffering from serious problems about their children using mobile phones excessively.

According to the theme, the children exposed to mobile phone and digital media devices were more vulnerable as compared to those children engaged in physical games. Children health is the most serious concerns for the housewives and mothers of the children. However, the mothers have no other ways but to start beating their children and snatch mobile phones but such method was not working at all. The children habitual of excessive usage of mobile phones and digital media devices have developed aggressive behavior to the extent they were reporting fighting with their parents.

Excessive usage of mobile phone has been found major and most common factor among the children of age group between 2-5 years. According to a respondent,

"I learnt about negative effects of excessive mobile usage when my children complained about fatigue, hindrance in fast pacing or avoiding in physical games. In very start, I was unaware about the issue but later I learnt from my neighbor this was the result of excessive mobile usage".

Furthermore, another respondent, who impersonated her name as Shazia Perveen, working as a housewife in Muzaffargarh district, revealed as,

"My doctor suggested me to engage my children in physical games without wastage of further time because they had become sluggish in nature. I leant from the medical report of my daughter in 5 year of her age that her bones were beyond the average nourishment. This made me surprise because I was feeding her well but I learnt that she was using mobile phone excessively and it had bad effect on her memory, bones and mind as well".

This theme has explained the situation in detail especially the health conditions of the children using mobile phones excessively were deteriorating with each passing day. Health has become a major factor for all the mothers because the medical reports unveiled serious health problems for the children. Mental sickness, emotional behavior, continuous fatigue, fever, headache, back pain, weak bones and illness were the common psychological problems as well as health issues reported by most of the mothers. This theme further explained that aggressive behavior of the children leading towards physical fight with fellows, siblings and parents were increasing day by day.

Mobile Phones and Mothers vs. Kids Relationship

Excessive mobile usage was a dominant feature in developing behavioral traits among most of the children as reported by the housewives in Southern belt of the Punjab. According to a respondent, who claimed to have faced severe problems with nourishment of her children, revealed as,

"Excessive mobile usage has changed eating habits of my children. Now, I have to push rather plead my children for diet but they have become so addicted with tablets and mobile screens that they demand mobile phone first and then they would start eating".

Similarly, another respondent namely Rida Fatima, a mother of 3, revealed that Lodhran was a distant district and falls under rural population, but her kids were habitual of tablets, television, mobile phone.

"I was surprised when my 5-year-old kid demanded iPhone only then he would eat otherwise he become annoyed with me. I persuaded him for a precious car if he starts eating then abruptly he demanded Lamborghini first and then agreed to eat meal".

Likewise, Mah Rukh Mughal, a mother of 2, hailing from Rahim Yar Khan, shared her experience that her both kids were learning a lot from the mobile games. According to her,

"My children have changed their eating habits; they have learnt names of high-tech gadgets, cars, airplanes and airports even. So, I am quite satisfied with the kids learning maximum from the mobile phone usage. I have never seen any negative change in their behavior".

This theme is mixture of both negative as well as positive opinions about benefits and drawbacks of the mobile usage. Most of the respondents believed their children were facing severe health problems and they have strain relationship with their mothers, however, some of the mothers believed their children were learning a lot from the mobile usage. Overall, this theme reveals both positive and negative effects of the mobile usage.

Conclusion

The study concluded that excessive usage of social media devices especially the mobile screens among the children was hampering creation of psycho physiological resilience. According to the conclusion, the housewives were quite worried about the psychological wellbeing as well mental health of their kids in future. The study concluded that the government should come up with doable solution for indulging children in practical physical games instead of using mobile phones excessively. The study concluded that the children playing with their classmates and fellows physically were happier that the children using mobile screens excessively. The study further concluded that the kids using mobile phone screens were found slugging, sleepy and mental thickness as compared to the kids playing physically. The study, however, also concluded that a significant ratio of the families also revealed that their children learnt a lot from digital media devices including smart phones and tablets. They start thinking about new ideas, learning opportunities for social networking and assimilate social support for their problems thus enhancing their knowledge.

Findings and Discussion

Keeping in view of the data analysis, this study found that excessive mobile usage has led towards developing aggressive behavior among the school going children in age group of 2-5 years. Most of the mothers of the children addicted to mobile screens have firm faith that their offspring would suffer from serious disease in future especially impaired vision was the most common threat for the housewives for their children. The study further found out that mothers believed their children were engaged in some

sort of games on mobile phones or scary cartoons on television screens and they would easily manage other functions of the household. However, after certain time period, they started complains about aggressive behavior developed among the attitude of the children. Teachers reported that kids were suffering from insomnia and fatigue on the following day in schools. Teachers assessed the children were behaving like loneliness among their classmates and they were avoiding to participate in active physical games. Mothers also believed their children were addicted to the mobile screens and they were finding no ways to get rid of this bad habit developed among their children. The study also found out that the objectives set for the study were also approved by the findings as it thoroughly examined that mental health problems and socio-emotional development of children exposed to excessive usage of smart phone screens were highly compromised. Furthermore, it was also found out that the children involved in physical activity were sharper as compared to the children consuming time on mobile screens in Pakistan.

Suggestions and Recommendations

Based on the conclusion, findings and discussion of the study, the following suggestions and recommendations have been made to ensure safe environment for the children: -

- 1. Proper awareness courses should be launched in schools for massive awareness for the children about negative effects of the mobile usage.
- 2. Pakistan telecommunication authority should chalk out a comprehensive plan and design an awareness course for online training of the housewives for mobile usage.
- 3. The parents should be approached and written material should be provided by the Higher Education Commission as well as School Education System for general awareness of the parents.
- 4. In-house physical games should be designed by the schools in collaboration with the parents and the children should be engaged in practical games instead of indulging children in mobile screens.

Notes and References

- ¹ G. ParkB.C. Lim and H.S. Oh, Why Being Bored Might not be a Bad Thing After All. *Academy of Management Discoveries*, 5, 1 (2019): 78-92
- ²M.P. Desir and C. Karatekin, Parental Reactions to Parent-and Sibling-Directed Aggression within a Domestic Violence Context, *Clinical Child Psychology and Psychiatry* 23, 3 (2018): 457-470
- ³K.A. Schonert-Reichl, Promoting Children's Prosocial Behaviors in School: Impact of the "Roots of Empathy" Program on the Social and Emotional Competence of School-Aged Children, *School of Mental Health*, 4 (2012): 1-21
- ⁴ E.N. Patrikakou, Parent Involvement, Technology, and Media: Now What? *School Community Journal*, 26, 2 (2016): 9-24
- ⁵ R. Mustafaoğlu, The Negative Effects of Digital Technology Usage on Children's Development and Health. Addicta, *The Turkish Journal on Addictions*, 5, 2 (2018): 13-21
- ⁶ C.S. Marci, Rewired: Protecting Your Brain in the Digital Age, *Harvard University Press*, (2022)
- ⁷ M. Böhmer et al., Falling Asleep with Angry Birds, Facebook and Kindle: A Large Scale Study on Mobile Application Usage. *In:Proceedings of the 13th International Conference on Human Computer Interaction with Mobile Devices and Services*, (2011)
- ⁸ K. Bandyopadhyay, Feel Good, Goodwill and India's Friendship Tour of Pakistan, 2004: Cricket, Politics and Diplomacy in Twenty-First-Century India. *The International Journal of the History of Sport*, 25, 12 (2008): 1654-1670
- ⁹ A. Kumar and R. Yadav, A Comparative Study on Aggression Between Cricket and Volleyball Players. *IJMESS*, 3, 1 (2014): 30-31
- ¹⁰T. Webb M. Rayner and R. Thelwell, An examination of Match Official's Perceptions of Support and Abuse in Rugby Union and Cricket in England, *Managing Sport Leisure*, 24, 1-3 (2019): 155-172
- M. Prensky, Computer Games and Learning: Digital Game-Based Learning. *Handbook of Computer Game Studies*, 18, (2005): 97-122
- ¹²I. Belyaev et al., EUROPAEM EMF Guideline 2016 for the Prevention, Diagnosis and Treatment of EMF-Related Health Problems and Illnesses. *Reviews on Environmental Health*, 31, 3 (2016): 363-397
- ¹³ N. Imran M. Zeshan and Z. Pervaiz, Mental health Considerations For Children & Adolescents in COVID-19 Pandemic. *Pakistan Journal of Medical Sciences*, 36, 19-4S (2020): 67

- ¹⁴ C.L. Odgers and M.R. Jensen, Annual Research Review: Adolescent Mental Health in the Digital Age: Facts, Fears, and Future Directions. *Journal of Child Psychology Psychiatry*, 61, 3 (2020): 336-348
- ¹⁵ G. Lissak, Adverse Physiological and Psychological Effects of Screen Time on Children and Adolescents: Literature Review and Case Study. *Environmental Research*, 164 (2018): 149-157
- ¹⁶ C. Schokman et al., Emotional Intelligence, Victimisation, Bullying Behaviours and Attitudes. *Learning Individual Differences*, 36(2014): 194-200
- ¹⁷ P. Limone and G.A. Toto, Psychological and emotional effects of Digital Technology on Children in Covid-19 Pandemic. *Brain Sciences*, 11,9 (2021): 1126
- ¹⁸R.J. Reiter et al., The Photoperiod, Circadian Regulation and Chronodisruption: The Requisite Interplay Between the Suprachiasmatic Nuclei and the Pineal and Gut Melatonin. *Journal of Physiology Pharmacology*, 62, 3 (2011): 269
- ¹⁹ A.I. Nathansonet al., The Relation Between Television Exposure and Theory of Mind Among Preschoolers. *Journal of Communication*, 63,6 (2013): 1088-1108
- ²⁰ L. Hale and S. Guan, Screen Time and Sleep Among School-Aged Children and Adolescents: A Systematic Literature Review. *Sleep Medicine Reviews*, 21 (2015): 50-58
- Y. Touitou D. Touitou and A. Reinberg, Disruption of Adolescents' Circadian Clock: The Vicious Circle of Media Use, Exposure to Light at Night, Sleep Loss and Risk Behaviors. *Journal of Physiology-Paris*, 110, 4 (2016): 467-479
- ²²R.G. Stevens et al., Breast Cancer and Circadian Disruption from Electric Lighting in the Modern World. *CA: A Cancer Journal for Clinicians*, 64, 3 (2014): 207-218
- D. Shifrin et al., Growing Up Digital: Media Research Symposium. *American Academy of Pediatrics*, 1, 1 (2015): 1-7
- ²⁴S. Domingues-Montanari, Clinical and Psychological Effects of Excessive Screen Time on Children. *Journal of Paediatrics Child Health*, 53, 4 (2017): 333-338
- ²⁵I. Janssen and A.G. LeBlanc, Systematic Review of the Health Benefits of Physical Activity and Fitness in School-Aged Children and Youth. *International Journal of Behavioral Nutrition Physical Activity*, 7, 1 (2010): 1-16
- ²⁶A.R. Gelfand and C.C. Tangney, Dietary Quality Differs Among Cannabis Use Groups: Data From the National Health and Nutrition

Examination Survey 2005–16. Public Health Nutrition, 24, 11 (2021): 3419-3427

- ²⁷C. Chen et al., Are Screen Devices Soothing Children or Soothing Parents? Investigating the Relationships Among Children's Exposure to Different Types of Screen Media, Parental Efficacy and Home Literacy Practices. *Computers in Human Behaviour*, 112 (2020): 106462
- ²⁸L.D. Rosen et al., Media and Technology Use Predicts Ill-Being Among Children, Preteens and Teenagers Independent of the Negative Health Impacts of Exercise and Eating Habits. *Computers in Human Behavior*, 35 (2014): 364-375
- ²⁹ A. Heinz A. et al., Suicide Prevention: Using the Number of Health Complaints as an Indirect Alternative for Screening Suicidal Adolescents. *Journal of Affective Disorders*, 260 (2020): 61-66
- ³⁰J.Y. Yen et al., The Comorbid Psychiatric Symptoms of Internet Addiction: Attention Deficit and Hyperactivity Disorder (ADHD), Depression, Social Phobia, and Hostility. *Journal of Adolescent Health*, 41, 1 (2007): 93-98
- ³¹A. Rumjaun and F. Narod, Social Learning Theory-Albert Bandura. *Science Education in Theory Practice: An Introductory Guide to Learning Theor*, (2020): 85-99
- ³²J. Allan, An analysis of Albert Bandura's Aggression: A Social Learning Analysis. *CRC Press*, (2017)
- ³³ K. Habib and T. Soliman, Cartoons' Effect in Changing Children Mental Response and Behavior. *Open Journal of Social Sciences*, 3, 09 (2015): 248