

Screen Time in Children, A Survey of School Students in Jordan

Dema Atoum¹, Dalia Rimawi²

Abstract

Aim: over the last few years, screen time has become a serious issue for children, we conducted a survey to evaluate the size of this problem and to look for solutions.

Methods: a survey was distributed to the students in 6th and 9th grades to assess screen time, parental supervision, and other related issues.

Results: 240 students completed the survey; the results are summarized in table 1. In our study, we found that most children spent more than the recommended time in front of screens. Many parents allow screens exposure during mealtime and before bedtime, do not set limits on the children screen time, and do not supervise what their children see during the screen time. 70% of the students own a handheld electronic device. in 47% of the cases, babies under 2 years of age are exposed to screens. Regarding video games, almost half of the students play violent video games and may copy what they see on video games.

Conclusion: most students spend too much time in front of the screen without any clear limits set by the parents, and do not spend enough time outdoors which can negatively affect their weight, development and health.

Keywords: American Academy of Pediatrics (AAP), electronic devices, school children, screen time, video games.

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Introduction

With the expanding technology and the availability of a huge variety of electronic devices, screen time becomes a big problem for children worldwide (1), with all its detrimental effects on health and development. The purpose of this study is to evaluate the issue of screen time in school children in Jordan, and to assess the compliance with the general guidelines regarding the limit on screen time for children as recommended by the American Academy of Pediatrics (AAP) (2).

Methods

A questionnaire composed of 11 questions as in appendix(1) was distributed to students in 6th, 7th,

8th and 9th grades in three different schools (one private, and two public) in two cities, all parents were informed about the survey and signed a consent, the study was approved by the IRB and the regional ethics committee and adhered to the tenets of the Declaration of Helsinki.

The answers to the survey were counted and analyzed as in table 1. Statistical analysis was done using SPSS software, Descriptive statistics were reported. Chai Square test was used to determine the statistical significance between different aspects of the study.

Results

240 students participated in the survey (100 females, 140 males), the average age was 13.5

¹ Assistant Professor at School of Medicine, Al-Yarmouk University,
E-mail: dema.atoum@yu.edu.jo

² King Hussein Cancer Center

years, the questionnaire was handed to the students in the 6th, 7th, 8th and 9th grades randomly, the answers were collected and analyzed: 26% of the students watch more than 2 hours of TV every day, among this subgroup, 38% have a TV/computer in their bedroom and the association between these two factors was statistically significant (p value 0.031).

32% of the students watch more than 2 hours on their handheld devices, among this subgroup; there was a significant association with: 1. Allowing screens during mealtime and before bedtime (p value 0.002), 2. Lack of parental supervision during the screen time (p value 0.034), 3. Absence of limits on the kids screen time (p value 0.04). Only 27% of the students spend time outside on daily basis, among those; there was a significant association with having a screen in the bedroom (p value 0.029). In our study, babies under 2 years of age were allowed to watch screens in 47% of the cases. 70% of the students have their own electronic device, among those, there was a significant association with watching screens during mealtime and before bedtime (p value 0.0001). In 40% of the participants, violent video games were played, and we found significant association between the type of video games played and the time spent on TV (p value 0.038). In 54% of the cases, children may copy what they see in the video games.

Analysis was also done to see if there is any difference between males and females, and between different schools, and in our sample, we did not find any significant difference.

Table (1): the results of the survey

Discussion

Excessive screen time is a big issue for today's children, children tend to spend several hours in front of the screen for many reasons; the availability of the electronic devices, the

wide variety of material to watch and games to play, the ease to use and download, and the lack of consistent parental supervision who use screens as a way to entertain the children while they finish their chores(1).

The American Academy of Pediatrics (AAP) recommends limiting screen time for children 2 to 5 years of age to 1 hour per day of high-quality programs. Parents should co-view the media content with their children and make sure it is appropriate. For the older children, parents should set limits on the screen content and time and make sure it does not affect the child's sleep, homework or physical activity. Parents should designate a tech-free time during the day, also the screens should be kept in the shared areas in the house and not in the kid's bedroom (2).

The current problem lies in spending above the recommended time in front of the TV or the handheld electronic devices which can seriously affect the child's health; data from the most recent NHANES (National Health and Nutrition Examination Survey) study showed that children aged 2-4 years who spend more than 2 hours in front of the TV are more likely to have obesity(3), in our study 26% of the children spend more than 2 hours/day watching TV (which was significantly associated with having a TV in the child's bedroom, p value 0.031), and 32% spend more than 2 hours on their electronic devices every day (which associated significantly with lack of parental supervision, p value 0.034) which can lead to decrease in physical activity and childhood obesity(4).

Another issue is the presence of screens in the child's bedroom, there is a significant evidence that children with a TV in their bedroom are at higher risk of diminished sleep duration and quality, obesity, substance use and exposure to sexual content(5-7). In our study 55% of children have a TV or a computer in

their bedroom which may lead to an excessive and unsupervised screen time (p value 0.031).

Many parents allow their kids to watch screens because they believed the media content is educational(8). One survey found that 29% of the 1000 parents interviewed allowed their babies who are less than two years of age to watch television (TV) because it has a learning value(9). Other parents did not limit their children's screen time to keep them entertained while they finish some work or when eating out(10). In our survey 31% of the children do not have any set limits on their screen time and 33% do not have any parental supervision while they are on the screens, which was associated with excessive screen time (p value 0.04).

The (AAP) recommends avoiding media and screens in children less than two years of age(2); many studies showed the risk of language delay increased proportionately with time spent watching TV(11), in addition, a negative correlation between TV viewing and intelligent quotient was found(12). Another study showed that TV exposure from 6 to 18 months of age was associated with emotional reactivity and aggressive behaviors(13). In our survey 47% (23% consistently, 24% sometimes) of the families allow babies to watch screens which has a negative effect on the child's development; since there is usually

no human interaction or parental co-viewing during the time spent on the screen.

Another problem associated with excessive screen watching is the risk of myopia progression with of all its associated ocular complications, many studies showed that spending too much time playing games on handheld devices is a risk factor for myopia progression, whereas outdoor activities and spending time outside may decrease its progression(14, 15).

In conclusion, excessive screen time is a problem we face nowadays in Jordan and worldwide, parents need to be aware of the negative social, cognitive and psychological effects of screens on their children, we recommend following the (AAP) guidelines regarding media exposure, and developing a media plan for the children that put in consideration the health, learning and specific needs of each child in addition to the whole family.

Our study has few limitations; first, wider age range may give better idea regarding the size of the problem, another limitation is; screen time was not correlated with the educational, financial, and social state of the family which may reveal other aspects of the problem, and finally; the survey did not contain questions directed to the parents, which may help evaluate the causes of the problem, and probably increase awareness among parents and caregivers.

References

1. Domingues-Montanari S. Clinical and psychological effects of excessive screen time on children. *Journal of paediatrics and child health*. 2017;53(4):333-8.
2. Children, Adolescents, and the Media. *Pediatrics*. 2013;132(5):958-61.
3. Twarog JP, Politis MD, Woods EL, Boles MK, Daniel LM. Daily television viewing time and associated risk of obesity among U.S. preschool aged children: An analysis of NHANES 2009-2012. *Obesity research & clinical practice*. 2015;9(6):636-8.
4. Zhang G, Wu L, Zhou L, Lu W, Mao C. Television watching and risk of childhood obesity: a meta-analysis. *European journal of public health*. 2016;26(1):13-8.
5. Marinelli M, Sunyer J, Alvarez-Pedrerol M, Iniguez C, Torrent M, Vioque J, et al. Hours

of television viewing and sleep duration in children: a multicenter birth cohort study. *JAMA pediatrics*. 2014;168(5):458-64.

6. Falbe J, Davison KK, Franckle RL, Ganter C, Gortmaker SL, Smith L, et al. Sleep duration, restfulness, and screens in the sleep environment. *Pediatrics*. 2015;135(2):e367-75.
7. Chaput JP, Leduc G, Boyer C, Belanger P, LeBlanc AG, Borghese MM, et al. Electronic screens in children's bedrooms and adiposity, physical activity and sleep: do the number and type of electronic devices matter? *Canadian journal of public health = Revue canadienne de sante publique*. 2014;105(4):e273-9.
8. Thompson DA, Polk S, Cheah CS, Vandewater EA, Johnson SL, Chrismer MC, et al. Maternal Beliefs and Parenting Practices Regarding Their Preschool Child's Television Viewing: An Exploration in a Sample of Low-Income Mexican-Origin Mothers. *Clinical pediatrics*. 2015;54(9):862-70.
9. Zimmerman FJ, Christakis DA, Meltzoff AN. Television and DVD/video viewing in children younger than 2 years. *Archives of pediatrics & adolescent medicine*. 2007;161(5):473-9.
10. Radesky J, Kistin C, Zuckerman B, Nitzberg K, Gross J, Kaplan-Sanoff M, et al. Patterns of Mobile Device Use by Caregivers and Children During Meals in Fast Food Restaurants2014.
11. Byeon H, Hong S. Relationship between television viewing and language delay in toddlers: evidence from a Korea national cross-sectional survey. *PLoS one*. 2015;10(3):e0120663.
12. Takeuchi H, Taki Y, Hashizume H, Asano K, Asano M, Sassa Y, et al. The impact of television viewing on brain structures: cross-sectional and longitudinal analyses. *Cerebral cortex (New York, NY : 1991)*. 2015;25(5):1188-97.
13. Chonchaiya W, Sirachairat C, Vijakkhana N, Wilaisakditipakorn T, Pruksananonda C. Elevated background TV exposure over time increases behavioural scores of 18-month-old toddlers. *Acta paediatrica (Oslo, Norway : 1992)*. 2015;104(10):1039-46.
14. Saxena R, Vashist P, Tandon R, Pandey RM, Bhardawaj A, Gupta V, et al. Incidence and progression of myopia and associated factors in urban school children in Delhi: The North India Myopia Study (NIM Study). *PLoS one*. 2017;12(12):e0189774.
15. Sherwin JC, Reacher MH, Keogh RH, Khawaja AP, Mackey DA, Foster PJ. The association between time spent outdoors and myopia in children and adolescents: a systematic review and meta-analysis. *Ophthalmology*. 2012;119(10):2141-51.

استبيان لدراسة ظاهرة استخدام الاجهزه الالكترونية بكثرة لدى طلاب المدارس في الاردن

ديما مصطفى العتوم¹, داليا الريماوي²

¹ استاذ مساعد، كلية الطب، جامعة اليرموك.

² مركز الحسين للسرطان.

الملخص

مع التطور الحاصل وتنوع الاجهزه الالكترونية و وجودها في متناول ايدي الاطفال ظهرت مشكلة بقاء الاطفال لساعات طويلا اما باللعب على هذه الاجهزه او مشاهدة البرامج الامتنوعة عليها و هذا له العديد من الاثار السلبية على صحة الاطفال و تطورهم، نهدف من هذه الدراسة الى تحليل المشكلة و محاولة ايجاد حلول لها.

الكلمات الدالة: الأكاديمية الأمريكية لطب الأطفال، الأجهزة الالكترونية، طلاب المدارس