

Growing Up Digital: Overview of Screen Media Use among Children

Key Messages

- ※ Excessive and inappropriate use of Internet and electronic screen products can negatively affect many aspects of children's physical, psychosocial and mental health development.
- ※ Local surveys observed that many children started to use electronic screen products at a very young age and only very few parents would always accompany their young children using electronic screen products. Among primary and secondary school students, issues associated with the use of Internet or electronic screen products (such as quarrelling with parents on their use of Internet or electronic screen products) were found getting worse.
- ※ Family is an important influence on how children interact with screen media and use their time. Parents should be a role model; moderately monitor children's use of Internet and electronic screen products; give children less screen time and more 'green' time (i.e. playing outdoor).
- ※ For more details about healthy use of Internet and electronic screen products or to watch the health tips videos, please visit the website of Student Health Service at https://www.studenthealth.gov.hk/english/internet/health_effects.html.
- ※ The Department of Health will continue working closely with various stakeholders in promoting healthy use of internet and electronic screen products and physical activity participation among children and adolescents.

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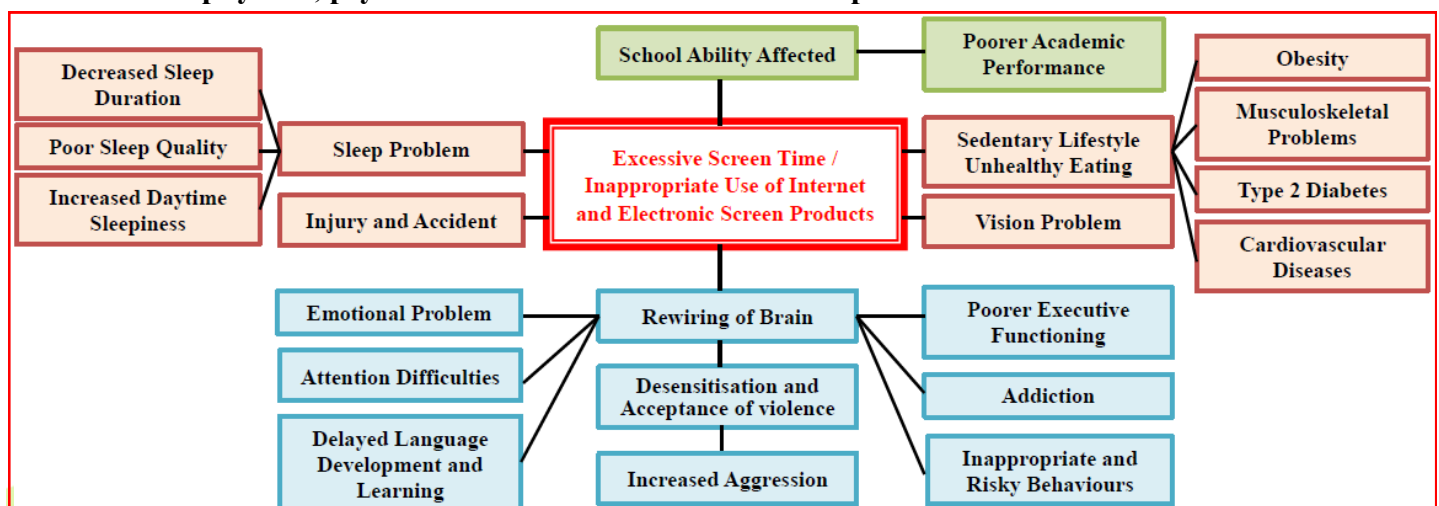
Like globalisation and urbanisation, ‘digitalisation’ has already changed the world. For many children today, various screen media (such as TV, electronic game consoles, computers, tablets and smartphones) have become part of everyday life. According to a report from the United Nations Children Fund, it is estimated that one-third of Internet users around the globe are children and adolescents under 18 years old; children are accessing the Internet at increasingly younger ages; smartphones are fuelling a ‘bedroom culture’ that children can go online in the privacy of their bedrooms without parental supervision or restriction.¹ Studies of children’s media use in America observed that the proportion of children aged 8 and under ever used a mobile device for media activity (such as playing games, watching videos or reading books) almost doubled from 38% in 2011 to 72% in 2013. Use of mobile media devices and applications (apps) also started younger. Among children under 2 years old, the proportion of ever used a mobile device for media activity increased from 10% in 2011 to 38% in 2013. The proportion of 2- to 4-year-old and 5- to 8-year-old also increased from 39% and 52% to 80% and 83% over the same period respectively.² Similar surveys from individual European countries also observed a substantial increase in Internet uptake

and usage of touchscreen tablets or smartphones by young children.³

The Impact of Excessive Screen Media Use

Apart from enjoyment by playing games, watching video clips and socialising online, electronic screen products can also serve as tools for teaching and learning. Children may benefit from appropriate kind of screen time and high-quality programmes. However, the potential benefits of interacting with electronic screen media would largely depend on a child’s age and developmental stage, the type and quality of the media, as well as the patterns of use (e.g. amount of use, with or without a parent).⁴ For children younger than 2 years of age, evidence shows limited educational benefits of electronic screen media because of their perceptual thinking, symbolic understanding, memory and attention controls are still developing and yet to mature. Compared to electronic screen media, unstructured playtime, hands-on exploration or social interaction with trusted caregivers are more valuable for a young child’s developing brain.⁵ More importantly, there are various potential health and developmental risks when children start to use electronic screen products at an earlier age or spend too much time in front of screens (Figure 1).^{4,6}

Figure 1: Potential impacts of excessive or inappropriate use of Internet and electronic screen products on children’s physical, psychosocial and mental health development



(Modified from Burg 2017)

Screen Media Use among Local Children

The Department of Health (DH) conducted periodic surveys on the use of Internet and electronic screen products among preschoolers, primary and secondary school students. Among preschoolers, the 2017 survey showed that the most popular electronic screen media used were TV (73.5%) and smartphone (43.7%), with an average daily viewing time of 38.4 minutes and 25.6 minutes respectively.⁷ Compared with a similar study in 2014, some improvements were observed in the use of electronic screen media among preschoolers (Table 1). However, the 2017 survey found that only very few parents would always accompany their young children using computer (6.2%), tablet (11.1%) or smartphone (19.6%).⁷

Among primary and secondary school students, issues associated with the use of Internet or electronic screen products were found getting worse. As shown in Figure 2, over half (53.1%) of primary school students in 2017 admitted that they had quarrelled with parents on their use on Internet or electronic screen products and close to two-fifths (39.0%) admitted that their use of Internet or electronic screen products had affected their academic performance.⁸ Due to the use of Internet or electronic screen

products, about one-third of primary school students claimed that they slept less (35.7%) or had given up outdoor activities (32.6%).⁸ More importantly, compared with a similar study in 2014, there was a four-fold increase in primary school students spending more than 3 hours a day surfing the Internet (from 3.2% in 2014 to 13.1%).⁸ Among 12.4% of primary school children who suspected themselves being addicted to the Internet in 2017, only 10% had sought help.⁸

The proportion of secondary school students admitted that their academic performance being affected by the use of Internet or electronic screen products had reduced in 2017 as compared to that in 2014 (from 51.6% to 43.3%).⁸ However, both the proportions of secondary school students admitted that they had quarrelled with parents over their use on Internet or electronic screen products (from 62.7% to 69.3%) and deprived sleep time due to the use of Internet or electronic screen products (from 62.7% to 67.0%) increased over the same period (Figure 3).⁸ In 2017, 19.0% of secondary school children suspected themselves being addicted to the Internet. Among them, just 7.7% had sought help.⁸

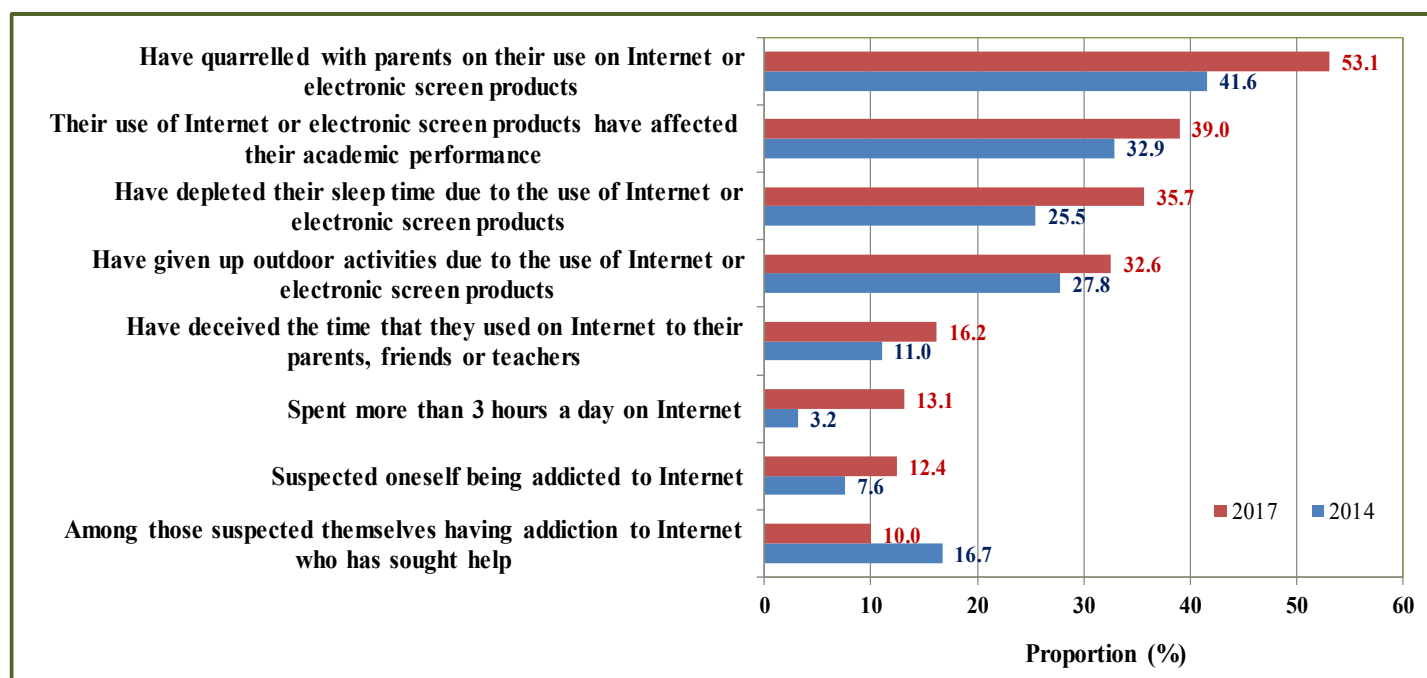
Table 1: Usage pattern of different electronic screen media among preschool children, 2017 and 2014

Type of electronic screen media	Prevalence of use (%)		Median age of starting to use (months)		Average viewing time per day (minutes)	
	2017	2014	2017	2014	2017	2014
TV	73.5	78.4	12	8	38.4	44.2
Smartphone*	43.7	*	12	*	25.6	*
Tablet	24.9	38.4	18	16	34.2	31.6
DVD	14.2	44.4	12	10	33.0	38.8
Computer	10.7	33.6	24	24	27.8	31.8

Note: * Not specifically asked in 2014.

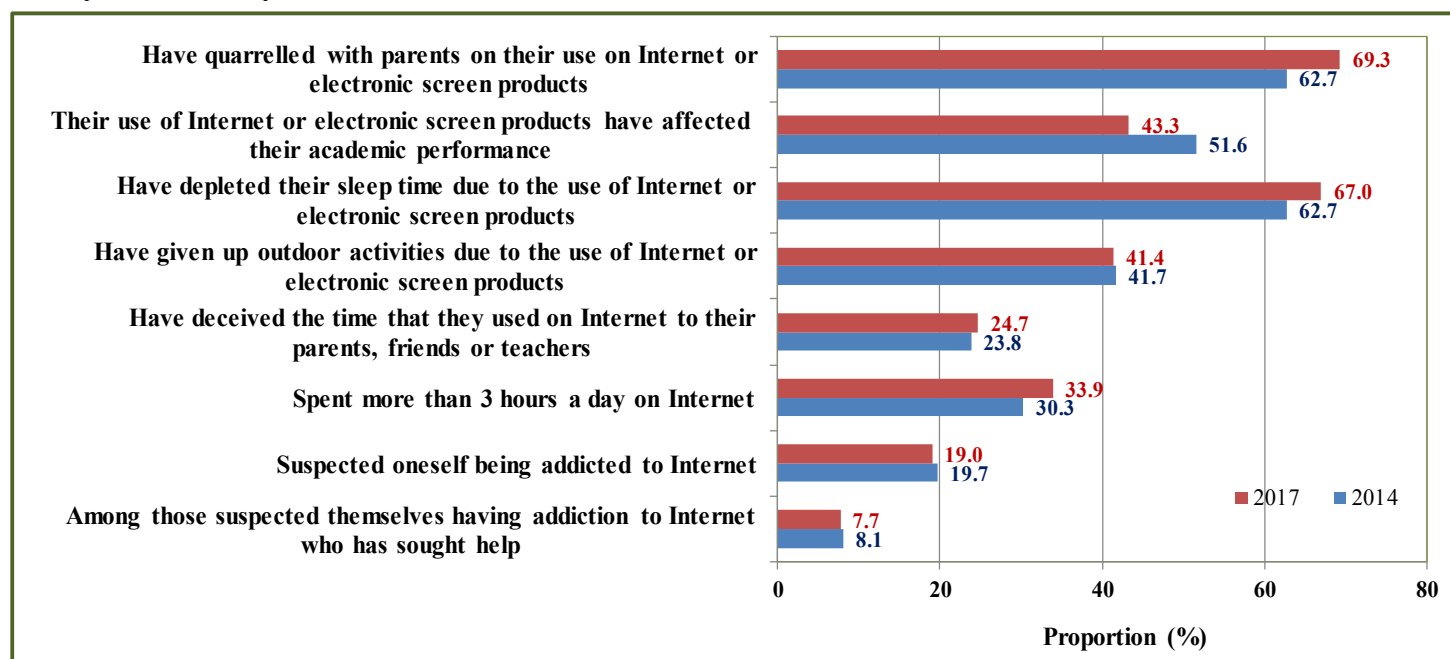
Source: Family Health Service, Department of Health.

Figure 2: Issues associated with the use of Internet or electronic screen products as claimed by the surveyed primary school students, 2017 and 2014



Source: Student Health Service, Department of Health.

Figure 3: Issues associated with the use of Internet or electronic screen products as claimed by the surveyed secondary school students, 2017 and 2014



Source: Student Health Service, Department of Health.

Responsibly Supervising Children's Screen Media Use

As screen media multiplies, it is increasingly challenging for parents (and carers) to supervise children's screen time. Moreover, children's brains are not fully matured until their mid-20s, impulse control is particularly difficult for them. Children hooked on screens would have their health compromised and miss out various whole-some pursuits, such as the opportunities of learning through active play, outdoor adventures or socialising via actual human interaction. Thus, it is crucial for children to develop healthy screen habits early and have a balance of activities in their life.

Family is an important influence on how children interact with screen media and use their time. By observing and imitating their parents, children may learn to use screen media responsibly or copy the bad screen time habits. Thus, parents should be a role model and avoid inappropriate behaviours, such as keep ignoring other's call while using screen media; posting wicked or inappropriate content; checking smartphones at meal times, while walking on the streets or driving.⁹ Parents should also moderately monitor children's use of Internet and electronic screen products. Optimal parental monitoring approaches include 'co-using or co-viewing', 'active mediation' (e.g. educating children about the purposes of various media; talking with children about media content; providing guidance, explanations and opinions), and 'restrictive monitoring' (e.g. setting rules on screen time, location of use or content).^{10, 11} Studies show that children get more sleep, do better in school, increased pro-social behaviours and have lower aggressive behaviours when parents limit content and the amount of time their children spend on the computer or in front of the TV.^{10, 12} The type of monitoring strategies used should

depend on the children's age, parenting style and relevant parental expertise. Generally, there should be heavier parental involvement and engagement during early childhood. As children mature, the extent of parental monitoring could gradually be subsided.^{4, 10}

It is noteworthy that outdoor play is essential for healthy child development. Being active outdoors and spending time in nature can help evoke children's curiosity, enhance their creative thinking, develop gross motor skills, build confidence and resiliency, as well as improve academic performance and social skills. Thus, parents should give children less screen time and more 'green' time (i.e. playing outdoor).^{13, 14} The DH convened the Advisory Group on Health Effects of Use of Internet and Electronic Screen Products to make recommendations on the use of Internet and electronic screen products. There are four sets of recommendations for parents, teachers, primary school students and secondary school students in the format of frequently asked questions to address various common day to day scenarios through applying the general principles and health tips. The followings are some recommendations on screen time for children and adolescents¹⁵—

Children under 2 years old: Children need a large amount of parent-child interaction before 2 years old. Avoid letting him in contact with any electronic screen products unless to do interactive video-chat with family members under parents' guidance. If parents think the use of certain screen activity may benefit his learning and development, always accompany and guide him and set limits for him.

Children 2-5 years old: The daily accumulated time to watch TV or use computer, tablet computer or smartphone should be restricted to within one hour. The screen activities should be interactive and educative, and to be carried out under parental or carers' guidance.

Primary school students / Children 6-12 years old: Limit recreational screen time to no more than two hours a day.

Secondary school students / Adolescents 12-18 years old: They should be trained to develop good time management skill and self-discipline to work independently and prepare themselves to be responsible adults. Regular breaks should be adopted if prolonged screen time, e.g. for academic purpose, is unavoidable.

For more information about healthy use of Internet and electronic screen products or to watch the health tips videos, please visit the website of Student Health Service at https://www.studenthealth.gov.hk/english/internet/health_effects.html. DH will continue working closely with various stakeholders in promoting healthy use of Internet and electronic screen products among children and adolescents, as well as review and update the recommendations regularly drawing reference from international practices and local situations.



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Nurturing Healthy Active Kids

During the growth of the children, their behaviours, habits and values are all directly influenced by their parents. To ensure a healthy development of their children, parents should set up a good model for their children. A good way to go is by active participation in different kinds of physical activity.

Notes to Parents

- For optimal health, the World Health Organization recommends children and adolescents aged 5-17 years to do at least 60 minutes of moderate- to vigorous-intensity physical activity daily.
- In order to have a good modelling effect on children, parents should actively participate in physical activity and encourage children to try various kinds of sports, e.g. cycling, ball games, swimming, etc.
- Exercise with children for fun and support
- Arrange outdoor activities for weekends or holidays, e.g. hiking, picnicking, swimming
- Join extra-curricular activities with children
- Share children's feelings and give appropriate advice

For more exercise tips for children and adolescents, please refer to '**Exercise and Keep Fit**' edited by the Department of Sports Science and Physical Education of the Chinese University of Hong Kong and Student Health Service of the Department of Health. To download a copy, please visit the website of Student Health Service at

https://www.studenthealth.gov.hk/english/resources/resources_bl/files/tc_exercise_and_keep_fit.pdf.



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