

## **Survey on television viewing and use of electronic screen products among pre-school children (2017)**

### **Background**

The Department of Health (DH) conducted the survey on television viewing and use of electronic screen products among pre-school children attending Maternal and Child Health Centres in 2014. The results revealed that the median age of preschool children starting to use electronic screen products was 8 months old and television (78.4%) was the most popular electronic screen product used with an average daily viewing time of 44.2 minutes. Subsequently, the Advisory Group on Health Effects of Use of Internet and Electronic Screen Products has issued a report with recommendations and practical tips for parents and teachers on healthy use of screen media.<sup>1</sup> An information leaflet was also published for parents of preschool children to raise their awareness on the effects of electronic screen products on children's health and the importance of promoting children's all-round development.<sup>2</sup> Upon more updated findings on screen media use for preschool children, the American Academy of Pediatrics (AAP) has revised their recommendations on use of screen media for children 2 to 5 years of age<sup>3</sup>.

### **Objectives**

The present survey replicated the 2014 survey with the following aims:

- To understand the current situation of television viewing and use of other screen-media devices in pre-school children
- To understand parents' views about their pre-school children's use of media and the way to monitor or limit such use
- To identify factors associated with television viewing and use of other screen-media devices in pre-school children

### **Methodology**

It was a cross-sectional survey using a parent-filled questionnaire. Eligible parents were those with their children (12-month, 18-month and 48-month old) attended 27 Maternal and Child Health Centres on 19 and 20 July 2017.

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<sup>1</sup> Report of Advisory Group on Health Effects of Use of Internet and Electronic Screen Products (July 2014) [www.shs.gov.hk/english/internet/health\\_effects.html](http://www.shs.gov.hk/english/internet/health_effects.html)

<sup>2</sup> Does your 0 to 5-year-old child need electronic screen products? (March 2016) [http://www.fhs.gov.hk/english/health\\_info/child/30047.html](http://www.fhs.gov.hk/english/health_info/child/30047.html)

<sup>3</sup> AAP COUNCIL ON COMMUNICATIONS AND MEDIA. Media and Young Minds. *Pediatrics*. 2016;138(5):e20162591

## Results

Overall, 890 questionnaires (86% response) were collected. Television (73.5%) remained the most popular electronic screen product used among children with an average daily viewing time of 38.4 minutes. In terms of median age, children started watching television, smartphone and DVD at 12 months, tablet personal computers at 18 months and computers at 24 months. Comparing to the median age of 8 months in 2014, children started watching television slightly later (Table 1).

Table 1: Usage pattern of electronic screen products among preschool children

Type of electronic screen products	Prevalence of use (%)		Median age of starting (months)		Average daily viewing time (minutes)	
	2017	2014	2017	2014	2017	2014
Television	73.5	78.4	12	8	38.4	44.2
Smartphone	43.7	N/A*	12	N/A*	25.6	N/A*
Tablet PC	24.9	38.4	18	16	34.2	31.6
DVD	14.2	44.4	12	10	33.0	38.8
Computer (including desktop and laptop computers)	10.7	33.6	24	24	27.8	31.8

\* Not specifically ask information about smartphone in 2014

In 2017, only 20% and 11% of the parents would always accompany their preschool children in using smartphone and tablet personal computers respectively, although 51% of parents said they would always accompany their children in reading (Table 2). For children younger than 2 years old, 65.7% reported to have television viewing. For children above 2 years old, 54.8% had total screen time more than 1 hour per day. The main reasons for use of screen media devices in preschool children were for soothing, entertainment or learning.

Table 2: Parents who would always accompany their children in using different electronic screen products and reading books

	2017	2014
Tablet	11.1%	14.1%
Computer	6.2%	12.0%
Smartphone	19.6%	N/A
Reading books	51.0%	49.4%

Over 68% of parents agreed that overuse of screen media devices would affect vision, attention, language development as well as the time spent on physical activity and parent-child interaction. Sixteen per cent of parents never set any limits for their children in using screen media devices. For those who restricted their children on screen media use, the most common ways were distraction (44.3%), reasoning (34.5%), setting rules (42.3%), taking actions to forbid (20.5%) and verbal accusation (14.5%).

For children under two, five factors were associated with television viewing: parental television viewing >3 hours per day, having a television set in children’s room, television left switched on, parents not always accompany their children in reading books and parental education below tertiary level. The odds of having the children watched television were 9 times for those having television set in children’s room, 3 times among those leaving television switched on and 2.1 times for those parental education was below tertiary level, after adjusting for the other four factors (Table 3).

Table 3: Factors associated with television viewing in children <2 years old

Factors	Not watched TV (%)	Children watched TV (%)	Adjusted ORs (95% C.I.)
Parental TV time >3 hours per day	7.1	17.0	1.92 (0.75 - 4.91)
Have TV set in children’s room	2.9	14.9	8.95 (2.04 - 39.29)
TV left switched on	39.0	72.4	3.04 (1.89 - 4.89)
Not always accompany their children in reading books	42.6	54.1	1.24 (0.76 - 2.00)
Parental education below tertiary level	52.9	75.2	2.09 (1.28 - 3.40)

Note: Statistically significant if 95% C.I. not overlap OR=1

For children above two years old, four factors were associated with children’s total screen time >1 hour per day: parental screen media time other than television >3 hours, having a television set in children’s room, television left switched on and parents not always accompany their children in reading books. The odds for children having a total screen time of >1 hour per day were 2.6 times among those leaving television switched on, 1.9 times for parents not always reading books with children, after adjusting for other three factors (Table 4).

Table 4: Factors associated with increased total screen time (>1 hour per day) in children >2 years old

Factors	≤1 hr (%)	>1 hr (%)	Adjusted ORs (95% C.I.)
Parental screen media time other than TV >3 hours per day	7.7	20.8	2.36 (0.95 - 5.84)
Have TV set in children's room	3.9	12.7	3.16 (0.96 - 10.41)
TV left switched on	48.1	73.0	2.61 (1.45 - 4.70)
Not always accompany their children in reading books	38.3	54.2	1.89 (1.06 - 3.38)

Note: Statistically significant if 95% C.I. not overlap OR=1

### Conclusion

Present survey results showed that children started using electronic screen products at an early age although apparently slightly later when compared to findings in 2014. It is not common for parents accompanying their children using these products. Factors were identified to increase the odds of preschool children using screen media devices.

### Recommendations and Actions

- Children before two years old need a large amount of parent-child interaction. Avoid letting them in contact with any electronic screen products unless to do interactive video-chat under parental guidance. If parents consider certain screen activity may benefit his learning and development, always accompany and guide them and set limits for them.
- For two to five years old, the daily accumulated time for watching TV or using 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 guidance.
- Parents to act as a role model for children by cutting down screen time.
- Do not often leave the screen products on to affect children engaging in other activities. Turn off any electronic screen during mealtime to facilitate communication among family members.
- Establish a soothing routine about an hour before bedtime doing relaxing activities instead of screen activities. Do not place any electronic screen products in the bedroom as they will affect sleep.
- Choose suitable content of the screen activities carefully according to the child's age. Accompany him to talk about the content and give guidance to bring out the educational function of the product.