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Touchscreen Generation: Children’s current media use, parental supervision methods and attitudes towards contemporary media.

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Abstract

Aim: To explore media preferences and use among young children, as well as to obtain information about parental supervision methods and beliefs about media. Method: Ninety parents of 3- to 6-year-olds, recruited from a relatively economically advantaged area in the United Kingdom, completed a media opinion survey. Results: Although traditional television remains the favourite type of media platform among young children, touchscreen devices are gaining in popularity, and may promote simultaneous multi-screen use. Moreover, parents believe that the effects of media on developmental outcomes are generally positive. However, they do monitor the content of traditional and new media their children are exposed to. Conclusion: This study shows an emerging evidence of concurrent multi-screen use among very young children. More detailed examination of early media multitasking, and its relationship to cognitive and behavioural outcomes, is necessary.

Keywords: children, media multitasking, media supervision, parents, touchscreens

Key notes
• This study explored young children’s (<6) media preferences and use, parental supervision practices and media attitudes.
• Young children engage in media multitasking by concurrently using more than one screen device and media multitasking is predicted by preference for and use of touchscreen devices.
• Parents strictly monitor foreground and background media content, but are liberal about controlling the amount of media use.
Introduction

There is no doubt that the rapid development of digital technology has changed how we communicate, work and spend our free time. Although many would agree that easy access to multifunction digital devices, such as smartphones or tablets, and high-speed Internet has improved our lives, brought about more freedom, and saved the time needed to complete many daily tasks, very little is known about the impact that modern technology has on adult cognitive and psychosocial functioning. Even less is known about how digital environment will influence developmental outcomes.

In ‘Western’ culture, today’s older children and adolescents are undoubtedly digital natives – children, for whom digital technology is fundamental to daily routine (1). Their environment is saturated with electronic devices (2) and children appear to fully embrace opportunities provided by new technology to reduce boredom and to allow efficient use of their leisure time (3). However, there is a paucity of research that addresses the extent of new media use among younger children (< 6 years) and the effects of the digital environment on how they play, learn and interact with others. Traditionally, research has focused on the effects of television on the developmental outcomes, with a particular interest in how television viewing relates to learning, attention and behaviour. Many researchers and clinicians have expressed concern about the potentially deleterious effects of heavy television exposure or viewing inappropriate content (4, 5, 6). However, over 40 years of research has failed to provide consistent conclusions about the long-lasting impact of viewing on children’s behaviour and cognition.

Considering that today’s youngest digital natives are exposed to a rich multimedia environment on a daily basis, it is questionable whether traditional, single-screen television viewing remains a favourite childhood pastime. Previous literature suggests that adolescents and young adults are extensive media multitaskers, who constantly access single or multiple digital platforms to engage with parallel media activities (7, 3, 8, 9). At the centre of young people’s multitasking activity is a computer, a meta-medium that allows the simultaneous use of several media streams (e.g., film, text, music) and constant switching from one activity to
another (10). Very young children may lack cognitive and motor skills required to use a
computer or operate a keyboard and mouse successfully. However, easy-to-use touchscreen
devices such as tablets and smartphones that afford the same multitasking functions may
provide a suitable alternative platform to engage in media multitasking from a very young age.
Tablets are becoming increasingly prevalent among preschool children. In the UK, 53
per cent of 3- to 4-year-olds use a tablet at home, with one in seven preschoolers owning their
own (11). Moreover, qualitative findings show that, unlike TV viewing that usually occurs at set
times, young children’s touchscreens use is irregular yet frequent (12). However, no quantitative
research investigates whether the availability of these devices affects children’s media use.
Commercial adult media research suggests that touchscreens do not replace but are used in
conjunction with traditional screen viewing. For example, 84 per cent of tablet/smartphone
owners use these devices for other activities (e.g., web surfing, games, messaging) while they
watch TV (13). One way, in which children learn behaviour, is the observation of others (14).
Thus, young children who have access to or own a tablet or a smartphone may model their
behaviour on their parents or older sibling screen use and engage in a similar form of media
multitasking.
However, a decision whether a child can have a tablet, and how she can use it, depends
on a parent. Ultimately, parents shape children’s home environment, and parents’ rules and
supervision practices are strong predictors of how much children engage with digital devices
(9). Nathanson (15) proposed three ways in which parents monitor their children’s media
exposure. “Active” supervision requires parents to discuss media content with children. In
contrast, “restrictive” supervision imposes rules relevant to the amount of content or exposure.
Finally, “coviewing” involves watching a programme with a child. These different forms of
monitoring allow parents to control and shape their children’s digital environment across the key
domains of media exposure (i.e., content, amount and context). However, their implementation
is contingent on parents’ beliefs about media effects (16), as well as family factors that may
either facilitate or hinder the use of these practices (17). Specifically, the literature suggests
that, on the one hand, parents seek information about age appropriateness and content of films
and electronic games, and comply with industry-imposed ratings (18). On the other hand, they are reluctant to observe paediatricians’ recommendations to reduce children’s screen time (19) or may even disagree with such advice (20).

Qualitative research provides some explanation for inconsistencies in parents’ approach to supervising children’s screen use. Typically, parents use screen devices when occupying children with alternative activities is more challenging, such as, for example, when doing housework or in busy public or constrained spaces (e.g., in a doctor’s waiting room, in a car etc.). Moreover, screen devices are used as means of reward and punishment or conflict reduction (12, 17). Parents also believe that digital media may be beneficial to children’s cognitive and social development. For example, educational programmes and games are seen as a good source of learning opportunities (12), whereas video calling applications allow face-to-face communication with extended family (21). Finally, contrary to the concerns about children’s media exposure expressed by childhood experts (4), parents believe that, in general, traditional media, such as, for example, television and computers, have a positive role in children’s development and that early involvement with technology is beneficial for their children’s prospective school achievements and employment (12, 20).

In sum, parental attitudes towards technology and supervision practices appear to play a vital role in determining how children use screen media at home. However, much of the evidence comes from the studies that were either conducted before the rapid expansion in use of touchscreen devices or are qualitative and thus, do not allow exploring the associations between measured variables. Therefore, the overarching goal of this study is to gain more insight into the major domains (i.e., children’s and parents media use, supervision methods and knowledge and beliefs about popular media) that shape the family media environment using quantitative methods. Specifically, the first aim of this study is to document young children’s (<6 years) current media preferences and use. The second aim is to examine whether young children engage in simultaneous multi-screen activities and whether early ‘multitasking’ with media is related to the use of touchscreen devices. The final aim is to investigate parents’ monitoring methods and beliefs about contemporary media.
Method

Participants

The study was approved by the local Ethics Committee. Before the study began, parents had received a letter providing information about the project and contact details of the Principle Investigator. Participants were 90 parents of 3-6-year old children (boys, n=46; girls, n=39; a further 6 participants failed to provide information about gender); 9% of respondents were fathers. Children's mean age was 4.23 years (SD= 0.78). Information about parents' education is provided in Table 1. Although the data regarding participants' ethnicity and income were not collected, the sample was recruited from preschools and schools predominantly attended by children from White middle- to high-income families.

Materials

A self-reported questionnaire adapted from Funk, Brouwer, Curtis and McBroom (22; see Supporting Information) contained questions about parents’ level of education and media habits, child’s age and gender. Furthermore, parents answered questions regarding their children’s media preferences and media use, media supervision methods, and beliefs about the effects of media on developmental outcomes.

1.1. Children’s media preferences and media use

To measure opinion of their children’s media preferences, participants were asked to rate the popularity of six common screen media platforms (TV, DVD, computer, tablet, game console and smartphone). Further, three items measured how much time children spent in an average week on watching TV and films, using a tablet &/or a smartphone and using a computer. In addition, parents rated the frequency of their child using a tablet to watch TV and films, play entertainment games and access educational applications (apps). Finally, to assess multi-screen use, parents were asked to rate how often their child simultaneously used more than one screen device.

1.2. Parents media use

Parents’ entertainment media use was assessed with two items that measured how often participants watched TV/films and played tablet/smartphone games.
1.3. Supervision methods and ratings familiarity

Two questions, each comprising of four items, examined the ways (i.e., different forms of co-viewing and/or restrictive supervision based on, for example, industry ratings), in which parents supervised children's media content. The first question assessed how parents monitor the appropriateness of TV programmes and films and the second assessed monitoring of games and apps. Further, four items were used to assess the strictness of supervision in relation to traditional and new media content. Specifically, two items assessed how strictly parents monitored the content of television/films watched by a child and games/apps played by a child (i.e., foreground exposure to media). Further two items assessed how strictly parents monitored the content of TV/film and games/apps played in the background when a child was present in the room. Finally, one item measured whether parents monitored the overall amount of screen time.

Familiarity with industry ratings for media content was assessed with two items.

1.4. Beliefs about popular media

Two questions investigated parents’ beliefs about the effects of popular media. The first question measured how parents perceived the severity of four media features that were understood to be deleterious (i.e., inappropriate language, inappropriate behaviour, violent content, fast editing pace). The second question measured parents’ perception of the potential positive and negative effects that different features of media might have on children.

Procedure

Two hundred and ten questionnaires were distributed to parents of 3- to 6-year-old children attending two primary schools and four preschools in a semi-rural county of England. Parents completed the questionnaires at home and returned the forms to the school office or a preschool manager. The schools and preschools assisted in the data collection process by sending text message reminders to eligible parents. The final response rate was 43 per cent.

Results

1.1. Children’s media use and media preferences
Adopting the procedure employed by Funk and colleagues (22), children’s average weekly media use was calculated by taking the mid-point of each response option, on a scale ranging from 0 to 15 hours. On average, children spent 13.42 hours per week using different types of media, and most time - 8 hours per week - was spent on watching television and DVDs (see Table 2). Independent-samples t-test was used to test gender differences in media use.

The results showed that boys used tablets/smartphones significantly more than girls, t(82) = -3.448, p=.001, 95% CI: -3.56 to -0.96 and there was a trend (not significant) for boys to use more media overall, t(82) = -1.877, p=.064, 95%CI: -0.19 to 0.15.

(Insert Table 2 here)

Figure 1 shows a detailed breakdown of children’s media preferences (rather than use), estimated by parents. The results of a one-sample t-test (test value = 3, which represents ‘neutral’ on the response scale) show that television, tablet and DVD mean ratings appear on the ‘most favourite’ side of the scale (t(89)=10.515, p<.001, 95%CI: 0.86 to 1.26; t(88)=4.005, p<.001, 95%CI: 0.22 to 0.67 and t(87)=3.964, p<.001, 95%CI: 0.28 to 0.82, respectively).

Moreover, the results of a paired-samples t-test show that, compared with tablets and DVDs, television remains the favourite type of media platform among this age group (t(88) = 2.755, p =.007, 95%CI: 0.14 to 0.85 and t(87) = 4.675, p<.001, 95%CI: 0.34 to 0.86, respectively).

Finally, the results of a paired-samples t-test reveal that tablets are as favoured as more traditional DVDs, t(87)= -.537, p=.568.

Conversely, the three remaining media platforms: computer, game console and smartphone have mean ratings on the ‘least favourite’ side of the scale (t(80)= -4.486, p<.001, 95%CI: -0.93 to -0.36; t(83) = -6.120, p<.001, 95%CI: -1.21 to -0.62 and t(83) = -4.96, p<.001, 95%CI: -0.90 to -0.38, respectively). Therefore, it is reasonable to conclude that they are relatively unimportant/infrequently used by 3- to 6-year-olds. Consequently, preference ratings for these platforms were excluded from any further analyses.

(Insert Figure 1 here)

Finally, children’s use of tablets was explored (Figure 2). Most frequently, children used tablets to access educational games and apps, followed by playing entertainment games.
Conversely, children rarely used tablets to go online. The results of the one-way ANOVA showed that compared with girls, boys used tablets significantly more often to play entertainment games, $F(82) = 8.459, p=.005$ and to access educational apps/games, $F(81) = 4.448, p=.038$.

(Insert Figure 2 here)

1.2. Children’s media ‘multitasking’

Over 40% of children in the sample have concurrently used more than one screen device. This breaks down into 23.0% multitasking rarely, 17.8% multitasking sometimes, and just 3.3% multitasking often. There was no significant difference in the frequency of multitasking between boys and girls, $t(82) = -1.304, p=.196$. Controlling for child characteristics (i.e., age and gender), multi-screen use was positively associated with the amount of time children spent using touchscreen devices ($\beta=.396, p<.001$). However, neither the amount of television nor the amount of computer use predicted multitasking. Similarly, entering preference rating scores for the three most favoured media platforms into a regression model showed that a preference for a tablet was positively associated with media ‘multitasking’ ($\beta=.271, p=.012$), whereas the preference for television and DVDs was unrelated to multi-screen use (both $p>.05$). These results support our prediction that a preference for tablets and the use of tablets is crucial for early years media multitasking.

2.1. Parents media use

To assess parents’ pattern of media use for entertainment purposes, the parents reported how often they played tablet/mobile games and how often they watched television and films. The frequency ratings of tablet/mobile games use fell on the ‘never or hardly ever’ side of scale, whereas the frequency of television and film watching fell on the ‘often’ side of the scale. The results of the paired-samples t-test indicated that, compared to playing tablet/mobile games, parents watched television significantly more frequently, $t(86) = -13.391, p<.001$, 95% CI: -1.11 to -0.82.

2.2. Media supervision methods and familiarity with the industry ratings
Figure 3 shows that parents mostly rely on industry ratings to judge whether television programme/film or a game/app are appropriate for their child; and they do so equally for monitoring traditional television as well as the new media (i.e. digital games and apps).

However, parents’ familiarity with the ratings of conventional and new media is not the same (Table 3). Parents appear to be confident in their understanding of television and film ratings; over 70% are ‘very familiar’ with the ratings. In contrast, only 30.7% of parents are ‘very familiar’ with the ratings of games and apps and 17.0% are ‘not familiar at all’. The results of the paired-samples t-test confirmed that parents are significantly less familiar with the ratings for games and apps than they are with the ratings of television programmes and films, t(87)=8.099, p<.001, 95% CI: 0.72 to 1.20.

In order to determine which parental characteristics are associated with ratings familiarity, two regression models were built. In a model in which TV ratings familiarity was the outcome variable (controlling for maternal and paternal education) the frequency of television watching was not a significant predictor ($\beta = .046$, p=.702). Conversely, games/apps ratings familiarity was positively associated with the frequency with which parents played digital games ($\beta = .283$, p=.017).

Finally, Figure 4 presents how strictly parents supervise children’s media exposure. The results of a one-sample t-test (test-value = 2, which represents ‘moderately’ on the response scale) show that parents’ mean monitoring ratings of foreground content of TV/films and games/apps fall on the ‘strictly’ side of the scale, t(89) = 9.044, p<.001, 95%CI: 0.43 to 0.68 and t(85) = 9.579, p<.001, 95%CI: 0.46 to 0.70, respectively. Similarly, the mean ratings of background TV/films and games/apps content monitoring appear on the ‘strictly’ side of scale, t(88) = 6.157, p<.001, 95%CI: 0.32 to 0.64 and t(84) = 6.501, p<.001, 95%CI: 0.34 to 0.64, respectively. Conversely, the overall amount of screen time is monitored ‘moderately’, as the mean ratings were not significantly different from the test-value of 2, t(88)=-1.833, p =.070. In addition, pairwise comparisons between four content variables (i.e., foreground TV/film,
foreground games/apps, background TV/film, background games/apps) show that parental monitoring of content is equally rigorous for all (all p-values >.05).

(Insert Figure 4 here)

2.3. Parents beliefs about popular media

When asked to rate the severity of various features of television and film that are thought to be detrimental to young children's development, parents seem most concerned about the violent content (Figure 5). The results of the paired-samples t-tests show that, compared to inappropriate language, inappropriate behaviour and fast pace, violent content was rated as the most harmful (t(89) = -6.020, p<.001, 95%CI: -.63 to -.32; t(89) = -4.088, p<.001, 95%CI: -3.5 to -1.2, and t(74) = 10.845, p<.001, 95%CI: 1.11-1.61, respectively). Conversely, compared to inappropriate language and behaviour shown on the screen, parents appear to be least concerned about the effects of fast editing pace (t(74)=7.625, p<.001, 95%CI: 0.65 to 1.11 and t(74) = 9.915, p<.001, 95%CI: 0.88 to 1.33, respectively). Interestingly, 16% of parents did not rate how harmful the editing pace was, some leaving a question mark as a response.

(Insert Figure 5 here)

(Insert Figure 6 here)

Finally, parents expressed their beliefs about the effects of the popular media on children's development (Figure 6). The results of a one-sample t-test (test-value = 2, which represents 'somewhat negative' on the response scale) show that parents believe that: (1) overall, the effects of popular media on children's development are somewhat positive, t(85) = 10.613, p<.001, 95% CI: 0.83 to 1.22; (2) the effects of watching fast-paced programmes are somewhat negative, t(83) = 1.885, p=.063; (3) the effects of watching educational shows are positive, t(88)=39.119, p<.001, 95%CI: 2.24 to 2.48; and (4) the effects of watching violent content are very negative, t(88) = -16.903, p<.001, 95%CI: -1.82 to -1.44.

Discussion

The aim of this study was to explore and document children's current media preferences and media use. Moreover, we set out to establish if young children (<6 years) engaged in
concurrent multi-screen use and whether early years media ‘multitasking’ was related to a preference for new touchscreen media, for example, tablets. Finally, this study examined how parents supervised their children’s media use and their beliefs about the impact of media on developmental outcomes.

Consistent with the previous literature (23) 3-6-year-olds still prefer television to the newer forms of media. The average amount of weekly television viewing reported by parents in this study appears is similar to the amount reported by Funk and colleagues (approximately 8 hours; 16). However, the overall weekly media consumption is higher; 13.42h per week vs. 12.14h reported by Funk et al. (22). Moreover, based on parental estimation, tablets have become equally as preferred as more conventional DVDs. Further evidence that young children’s media preferences and consumption patterns might be changing is supported by the finding that over 40 per cent of children’s reported weekly media time is spent on using digital platforms such as tablets and smartphones and - to a lesser extent - computers. Importantly, this study found an emerging evidence of simultaneous multi-screen use among very young children. Moreover, media ‘multitasking’ was positively related to children’s preference for tablets and the use of tablets/smartphones. It appears that the availability of small touchscreen devices that allow for most of the content to be accessed directly from the home screen with a simple touch or a swipe of a finger (21), facilitates engaging with multiple media streams even at a very young age.

Currently, very little is known about the relationship between media multitasking and cognition. The literature is scarce and presents inconsistent results. For example, some findings point to the detrimental effects of frequent multitasking on the performance in laboratory tests of executive function (8), and a negative relationship between multitasking and self-reported cognitive functioning (24). Conversely, other studies failed to support the findings that heavy media multitasking is related to poor cognitive performance (25), or even provided evidence for a positive relationship between media multitasking and the ability to integrate information from multiple sensory systems (26).
Although there is no convincing evidence for the deleterious effects of multitasking, the changes in children’s media preferences and the simultaneous use of the several media streams pose a challenge for parents’ supervisory practices. The findings from this study show that, mostly, parents rely on industry ratings to judge whether media content is appropriate for their children. However, their self-reported familiarity with the ratings of digital games and apps is poorer compared to their knowledge of television and film ratings. Perhaps this stems from the finding that over 50 per cent of parents in our sample do not play digital games or if they do, it is infrequent. Although it is reasonable to assume that many of the surveyed parents have adopted various aspects of modern technology at work or personal lives, unlike their digital native children, they had spent their formative years before a rapid technology expansion, and as digital immigrants, have yet to adapt to the changed environment (1).

The lack of familiarity with games/apps ratings and the cultural divide between digital natives, for whom the use of digital media comes naturally and digital immigrants, who still need time to get a full grasp of a new digital environment (1), are not the only challenges related to media monitoring. Undoubtedly, it is much easier to supervise the use of a family television set in the living room than it is to control children’s activity on touchscreen devices that are portable and can be easily taken to the bedroom. Anecdotal evidence suggests that despite the availability of parental control settings, four in five parents do not turn it on, which creates the possibility of children accessing inappropriate content. This is of particular importance, as past research into the relations between television viewing and children’s cognition and behaviour suggests that content, rather than the amount of media, is a stronger predictor of developmental outcomes (6, 27). Moreover, parents appear to be the least concerned about the amount of time their children spend in front of various screens than they are about harmful foreground and background content. Yet, the simultaneous use of several media platforms could mean that the overall amount of media exposure is much higher than what parents perceive to be the appropriate amount for their children. For example, older children manage to fill 7.38 hours physically spent in front of screens with over 10 hours of media content (9).
Finally, the findings from this study show that parents’ ratings of harmful media features mostly mirror the concerns of researchers and clinicians. Parents consistently rated violent content and inappropriate language/behaviour presented on the screen as very harmful. However, despite the recently increased interest among media researchers in the effects of fast editing pace on children’s attention and executive function (28, 29), it appears that many parents may be unaware of the suggestions regarding the potentially deleterious effects of fast pace made in the scientific literature. Alternatively, it may be difficult for parents to objectively quantify what constitutes a ‘fast’ editing pace and, in consequence, their responses could be biased. Nevertheless, perhaps parents should be made aware of the experts’ concerns regarding the potentially harmful effects of exposure to rapidly edited material to allow them to make more informed choices about their children’s media diet.

Although the data reported in this article are exploratory in nature, they are important as they point to the evidence of the new type of screen behaviour emerging among 3- to 6-year-olds. It appears that children begin to engage in simultaneous multiple screen use at a very young age, which may influence their cognitive functioning and poses challenges to parental supervisory practices. Yet, the findings from this study are limited by a relatively small number of responses and ethnically non-diverse (White) sample. Moreover, the area from which participants were recruited represents one of the most advantaged locations in the United Kingdom (30). Finally, multi-screen use was assessed with a single question, which only allowed a glimpse into children’s behaviour. Further, more thorough, investigation of young children’s media habits is necessary to make more robust inferences.

In summary, this exploratory study documented current media habits of 3- to 6-year-old children. The findings suggest that traditional television remains the favourite type of media platform among this age group. However, new touchscreen devices, such as tablets, are gaining in popularity and facilitate children engaging in multiple screen use, which may create new challenges for parental media supervision methods. Conversely, parents appear to use the new media platforms infrequently (at least for entertainment purposes) and are less familiar with industry ratings for digital games and apps than they are with film and television programmes.
ratings. Finally, future studies should carry out a more detailed examination of concurrent multi-screen use among pre-schoolers and primary school children to gain a better understanding of its relationship to cognitive and behavioural outcomes.

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Table 1. The highest level of education reported by parents.

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<thead>
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<th>Qualifications level</th>
<th>Highest educational level (%)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mother (n=84)</td>
</tr>
<tr>
<td>GCSEs, BTEC and lower level vocational qualifications</td>
<td>34.4</td>
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<tr>
<td>A-levels and intermediate vocational qualifications</td>
<td>35.6</td>
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<tr>
<td>Diploma in higher education or a university degree</td>
<td>23.3</td>
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<tr>
<td>Missing information</td>
<td>6.7</td>
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Table 2. Children’s weekly media use (hours per week).

<table>
<thead>
<tr>
<th></th>
<th>TV/DVD Mean</th>
<th>Tablet/smartphone Mean</th>
<th>Computer Mean</th>
<th>Total Mean</th>
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<tbody>
<tr>
<td></td>
<td>(SD)</td>
<td>(SD)</td>
<td>(SD)</td>
<td>(SD)</td>
</tr>
<tr>
<td>All children</td>
<td>8.00 (3.75)</td>
<td>3.98 (3.35)</td>
<td>1.44 (2.80)</td>
<td>13.42 (6.19)</td>
</tr>
<tr>
<td>Girls</td>
<td>8.30 (3.54)</td>
<td>2.60 (2.43)</td>
<td>1.00 (2.12)</td>
<td>11.90 (4.74)</td>
</tr>
<tr>
<td>Boys</td>
<td>7.70 (3.98)</td>
<td>4.90 (3.41)</td>
<td>1.80 (3.34)</td>
<td>14.40 (7.13)</td>
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Table 3. The frequencies of parents’ familiarity with industry ratings for traditional and new media.

<table>
<thead>
<tr>
<th>Familiarity rating</th>
<th>Television and film (%)</th>
<th>Games and apps (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not familiar at all</td>
<td>0.00</td>
<td>17.00</td>
</tr>
<tr>
<td>Vaguely familiar</td>
<td>5.60</td>
<td>25.00</td>
</tr>
<tr>
<td>Quite familiar</td>
<td>20.00</td>
<td>27.30</td>
</tr>
<tr>
<td>Very familiar</td>
<td>74.40</td>
<td>30.70</td>
</tr>
</tbody>
</table>
Figure 1. Children's media preferences by platform (error bars represent standard deviations).

Figure 2. Children's frequency of tablet use for various media activities (error bars represent standard deviations).

Figure 3. Parents' media supervision methods (error bars represent standard deviations).

Figure 4. The strictness of media supervision (error bars represent standard deviations).
*Denotes where mean ratings were significantly different from the test-value of 2.

Figure 5. Ratings of severity of harmful programme features (error bars represent standard deviations).

Figure 6. Parents' beliefs about developmental effects of popular media (error bars represent standard deviations). *Denotes where mean ratings were significantly different from the test-value of 2.
TV | DVD | Tablet | Smartphone | Computer | Game console

Least favourite | Most favourite

Girls | Boys | All
Play/watch the first couple of minutes
Play/watch the entire game/film with a child
Play/watch the entire game/film before allow a child to do it
Apply ratings provided

Frequency, 0=never; 4=often

Type of supervision

TV/Films  Games/Apps
Total screen time  | Content of TV/film  | Content of games/apps  | Background TV/film  | Background games/apps
--- | --- | --- | --- | ---
0 = not at all, 3 = strictly

* * * *
Inappropriate language | Inappropriate behaviour | Violent content | Fast editing pace

Programme feature