To watch or not to watch – that is the (research) question

Effect of early TV viewing, and an analysis of favourite preschool programmes

Despite the recommendation of the American Academy of Pediatrics that under-2-year-olds should not view TV research has found out: even babies watch, more so do preschoolers. An analysis of 10 favourite preschool programmes shows which learning elements there are “from a toddler’s perspective”.

“Children possess the capacity for experiencing emotions with great feeling and intensity. When they hurt, they hurt all over. When they are happy, they are completely happy. Children are not able, however, to use a verbal language to adequately express the depth or range of these feelings. Their natural language of communication is play and it is through this medium that they express their emotional reactions.”

Landreth/Homeyer/Morrison (2006, p. 47)

Play characterises childhood, with the power of imagery beginning quite early in a child’s life. Actually, as 1- to 2-year-olds become more mobile and begin to use some language, by 18 months we see the manifestations of the capacity for symbolic thinking through pretend play. Young children touch, smell, taste, look, and listen. They interact with people and explore objects around them; through this curiosity and exploration they form schemas about the world. We wonder whether the electronic media are contributing to a child’s capacity for imaginative thinking, or whether television and DVD exposure detracts from the child’s own capacity to form images and eventually to be more creative.

Early TV viewing, and some effects

Despite the recommendation of the American Academy of Pediatrics (AAP) (2001) that children under the age of 2 should not watch television, recent studies have found evidence that very young children as early as age 3 months are exposed to television and DVDs (Nishimura, 2007; Vandewater et al., 2007; Zimmermann/Christakis/Meltzoff, 2007). Mothers believe that viewing of educational television or particular DVDs will enhance their child’s cognitive development and will be entertaining (Zimmerman/Christakis/Meltzoff, 2007). In a recent study involving 1500 mothers in 10 countries, the United States, Argentina, Brazil, United Kingdom, France, Turkey, Thailand, India, and South Africa, it was found that 65% of mothers reported that their children from ages 1 to 6 watched television as their most common activity, especially in South America and in Asia (StrategyOne/Singer/Singer, 2007). Nevertheless, these same parents believed that their children were happiest when playing outside or in a park or playground.

Evidence for the positive influence on child development

We do not have solid evidence to ascertain whether or not a child’s cognitive development is positively enhanced by media exposure. In a report of research on the effects of television exposure on young children by Thakkar, Garrison and Christakis (2006), the authors suggest that the majority of television research focuses on adolescents and school-aged children. This is unfortunate given that an increasing number of programmes are targeting very young children. The Thakkar et al. review...
focussed on television research across multiple areas of behaviour with a focus on the first 5 years of life, a critical period of childhood development. The authors could not find any studies with children under the age of 3 years that met their inclusion criteria. The authors state that “experimental studies of the effects of specific amounts and types of programming on young children are needed. Such studies must use pragmatic strategies, have long-term follow-up, and use meaningful end points” (p. 2030).

There is an enormous amount of programming on television and DVDs available for young children with many of them advertised as helping children to develop social, emotional, and cognitive skills. The majority of companies producing such media claim that viewing these videos and programmes can provide young children with stimulating play and learning experiences, but these companies tend to define learning as narrowly as alphabet letters, numbers, shapes, and colours. Yet as Thakkar et al. (2006) report, it is difficult to find research that demonstrates that such skills are truly being developed as a result of media viewing.

Evidence for the negative influence on child development

Indeed, researchers have found a significant association between the amount of television watched between ages 1 and 3, and subsequent attention problems in US-American children (Christakis/Zimmerman/DiGiuseppe/McCarty, 2004; Miller et al., 2007). Results in the Christakis et al. study held up even when controlling for other factors that explained this association, such as the amount of cognitive stimulation in the home. 1-year-olds watched an average of 2.2 hours of television per day and 3.6 hours per day at age 3. 10% of those children had attention problems at age 7. The authors state, however, that the Child Behavior Checklist, the measure that they used to detect attentional problems, was not necessarily indicative of clinically diagnosed attention-deficit/hyperactivity disorder (ADHD).

In a study by Miller et al. (2007), 170 children were recruited from preschools as part of a longitudinal study of young children at risk for attention disorders and hyperactivity. The mean number of hours spent watching television was 2.35 hours per day. Results were similar to the Christakis et al. (2004) finding that an elevated level of TV viewing was associated with higher levels of ADHD. The results of both these studies do suggest that there is a relationship between early TV viewing and attentional problems. There is a caution, however, that children who have ADHD may be attracted to TV viewing because of the minimal effort involved in such an activity, and that the correlation does not necessarily suggest TV viewing as a direct cause of ADHD.

A recent report concerning older children from 678 families in upstate New York who were followed from adolescence to adulthood, found that youths who watched television 1 or more hours per day at mean age of 14 were at risk for academic failure. Youths who watched 3 hours or more per day were the most likely to experience subsequent attention problems, and least likely to receive post-secondary education (Johnson et al., 2007). This suggests that if children begin to watch television at even younger ages and develop this TV viewing habit, it may put children at risk for academic problems. Earlier work found that heavy TV viewing among preschoolers was related to attention difficulties, and when they were again assessed after a 6-year-period, the children were reading significantly less well based on scores from a standardized test than were children who were lighter television viewers (Singer/Singer/Rapaczynski, 1984).

Younger children and TV viewing in Japan and the United States

In the Nishimura study cited above (2007), 1200 Japanese children were tracked through the use of parents assessments at three junctures, when their children were under 1, at age 1, and at age 2. Parents kept a weekly Viewing Diary for amount of time, content, and mode of viewing for exposure to TV, video, and electronic games. They filled out questionnaires about family life, the reactions of children to television, and how much the parents were involved in TV viewing with their child. Results indicate that under 1-year-old children were watching 1 hour and 15 minutes; at 1 year, about 1 hour and 44 minutes; and at age 2, 1 hour and 31 minutes. Mothers stated that children under 1 year showed some interest in the images; by year 1, some interest in content; and by 2 years, the child had particular programmes he or she wanted to watch. The most commonly viewed programmes were on the education channel, but as the children got older, they began to watch animation and cartoons broadcast on commercial television, especially if they had older siblings who...
controlled the set. An interesting finding is that mothers who are heavy TV viewers have children who tend to watch more television. When the children were aged 2, 34 % of the mothers believed that television had a good influence on their child and 73 % believed that television increased a child’s knowledge.

In the Vandewater et al. study (2007) of 1051 parents of children up to 6 in the United States, 63 % of children under the age of 2 watched TV on a typical day and 1 in 5 was reported to have a TV set in the child’s bedroom. Parents say they allow a set in the bedroom in order to free up the TVs for the rest of the family. On the average, children in this study watched TV for 1 hour and 18 minutes per day. Very few played video games, and if they did so, the average was 55 minutes per day. Only 4 % of children aged 0 to 2 used a computer. When we consider the AAP media guidelines only 131 of 0- to 2-year-old children in this study had no TV viewing experience whereas 281 or 68 % fell outside the AAP guidelines. Obviously parents are not seriously using the AAP recommendations that suggest no television exposure for children less than 2 years of age.

Zimmerman, Christakis and Meltzoff (2007) found similar results to the Vandewater et al. research. In a telephone survey of 1009 parents of children aged 2 to 24 months in the states of Minnesota and Washington, the authors found that by 3 months of age, 40 % of children regularly watched television, DVDs, or videos. In this research, Weber and Singer carried out a content analysis of the shows that parents reported were the most frequently viewed and were listed as favourites of their children. The authors did not test the children to determine the effects of TV or video use, but were interested to see if these programmes contained material that parents could possibly use with their children as potential skill enhancers.

Weber and Singer’s (2004) results were similar to the Zimmerman, Christakis and Meltzoff survey in Minnesota and Washington (2007). Children in a different region, upstate New York, as reported by mothers, were watching videos at 6.1 months of age regularly and by 9.8 months were watching television.

In previous research summarised by Singer and Singer (1998), viewing of *Barney & Friends*, by toddlers in an experimental group for example, led to significant gains in children’s imagination, social skills, and their active involvement with the programme by singing and dancing along with the characters compared to a control group that had not been exposed to the programme.

The variables that were chosen to be rated (cf. table 1) in the Weber and Singer (2004) content analyses reflected the types of cognitive, social, physical, and emotional/attitudinal features that, if provided to the child by a caregiver, would make a child more likely to:

1) demonstrate cognitive preparation for learning reading, writing, and arithmetic skills; and

### Table 1: Six content variables rated in children’s TV and video programmes

<table>
<thead>
<tr>
<th>Cognitive</th>
<th>Emotional</th>
<th>Social</th>
<th>Physical</th>
<th>Multicultural</th>
<th>Music</th>
</tr>
</thead>
<tbody>
<tr>
<td>new vocabulary</td>
<td>joy/surprise/excitement</td>
<td>sharing</td>
<td>fine motor skills</td>
<td>language</td>
<td>song related to theme</td>
</tr>
<tr>
<td>alphabet</td>
<td>approval/affectation</td>
<td>turn taking</td>
<td>large motor skills</td>
<td>eastern</td>
<td>musical instruments</td>
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<tr>
<td>numbers</td>
<td>interest/curiosity</td>
<td>cooperation</td>
<td>senses</td>
<td>food</td>
<td>musical games</td>
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<tr>
<td>imagination</td>
<td>empathy/sympathy</td>
<td>self-restraint</td>
<td>nutrition/health</td>
<td>song</td>
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<tr>
<td>colours</td>
<td>anger</td>
<td>interpersonal skills</td>
<td>handicaps</td>
<td>dancing</td>
<td></td>
</tr>
<tr>
<td>shapes</td>
<td>shame</td>
<td>helping/teaching</td>
<td>injury</td>
<td>name of country</td>
<td></td>
</tr>
<tr>
<td>concepts</td>
<td>disgust</td>
<td>disciplining</td>
<td>grooming</td>
<td>discussion of country</td>
<td></td>
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<tr>
<td>sorting</td>
<td>jealousy</td>
<td></td>
<td></td>
<td>ethnic group</td>
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<tr>
<td>sequencing</td>
<td>disappointment</td>
<td></td>
<td></td>
<td>ethnic guest</td>
<td></td>
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<tr>
<td>science/nature</td>
<td>fear/tension/distress</td>
<td></td>
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<tr>
<td>achievement</td>
<td>crying</td>
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<tr>
<td>riddles, metaphors</td>
<td>sadness</td>
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<td></td>
<td>pain</td>
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An analysis of preschool programmes

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The variables that were chosen to be rated (cf. table 1) in the Weber and Singer (2004) content analyses reflected the types of cognitive, social, physical, and emotional/attitudinal features that, if provided to the child by a caregiver, would make a child more likely to:

1) demonstrate cognitive preparation for learning reading, writing, and arithmetic skills; and
manifest the emotional enthusiasm, curiosity, emotional awareness, and cooperative social attitudes that are part of school readiness.

Using methods adapted from Singer and Singer (1998), 3 trained research assistants evaluated the content of the television and video programmes that parents said their infants and toddlers liked most. The raters trained on sample tapes; then they watched tapes of 10 television programmes and 10 videotapes. The raters analysed two randomly selected episodes from each of 5 television programmes: *Sesame Street*, *Blue’s Clues*, *Rolie Polie Olie*, *Bear in the Big Blue House*, and *Dora the Explorer*, as well as 2 titles from each of 5 randomly selected video series: *Baby Einstein*, *Elmo*, *Barney & Friends*, *Teletubbies*, and *The Wiggles*.

The reviewers were trained to think like a baby or toddler who was trying to understand the content presented by a television programme or video. The raters awarded a score to a programme segment if it labelled, explained, or demonstrated the relevant material, much as a mediating parent would.

The overall combined mean for the 20 programmes was 183.63 (cf. Table 2). This suggests that there are more than 100 potential teaching elements in these combined shows. Certain programmes, such as *Best of Elmo*, *Blue’s Clues – Blue’s Safari*, *Barney – 5 Kinds of Fun*, and *Dora the Explorer – To the Rescue*, show strong cognitive (e. g. numbers, letters, vocabulary); social (e. g. taking turns, sharing, co-operation); physical (e. g. small and large motor skills); and emotional (dealing with anger, disappointment, feeling sad/happy) teaching fundamentals.

Other shows demonstrate strength in teaching music – for example, *Blue’s Clues – Blue’s Rhythm & Blue*, *Barney in the Big Blue House – Dance Party*, *Elmo’s World*, and *The Wiggles – Wiggly*.

If parents were to mediate and explain the content as they watched programmes with very young children,
perhaps television could augment cognitive and social development.

Suggestions for parents and programme makers

The American Academy of Pediatrics provides a list of parental guidelines and recommendations for children’s TV viewing such as watching television programmes along with children and discussing the content, and encouraging more interactive activities that will promote proper brain development – talking, playing, singing, and reading together. In sum, Kenneth Ginsburg, a pediatrician, makes some suggestions for pediatricians that can be passed on to parents of young children:

“Pediatricians can promote free play as a healthy, essential part of childhood. They should recommend that all children are afforded ample, unscheduled, independent, nonscreen time to be creative, to reflect, and to decompress. They should emphasize that although parents can certainly monitor play for safety, a large proportion of play should be child driven rather than adult directed. Pediatricians should emphasize the advantages of active play and discourage parents from the overutilization of passive entertainment (e.g., television and computer games). Pediatricians should emphasize that active child-centered play is a time-tested way of producing healthy, fit young bodies.” (2006, p. 15)

TV should not be of paramount importance in a child’s life. We do know that it can be useful and understandable to young children if producers and writers follow simple ideas. Producers of programmes for preschoolers should be aware that a live host or a main character in the show who comments on actions in the programme would help the child process that perceptions of the real world can be carried out through fantasy. Because preschoolers have difficulty in sequential thought, it is important that cause and effect acts follow closely without too long a delay especially if there are consequences of an act.

Most important, the programme must contain a good story and be entertaining.

NOTES


REFERENCES


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