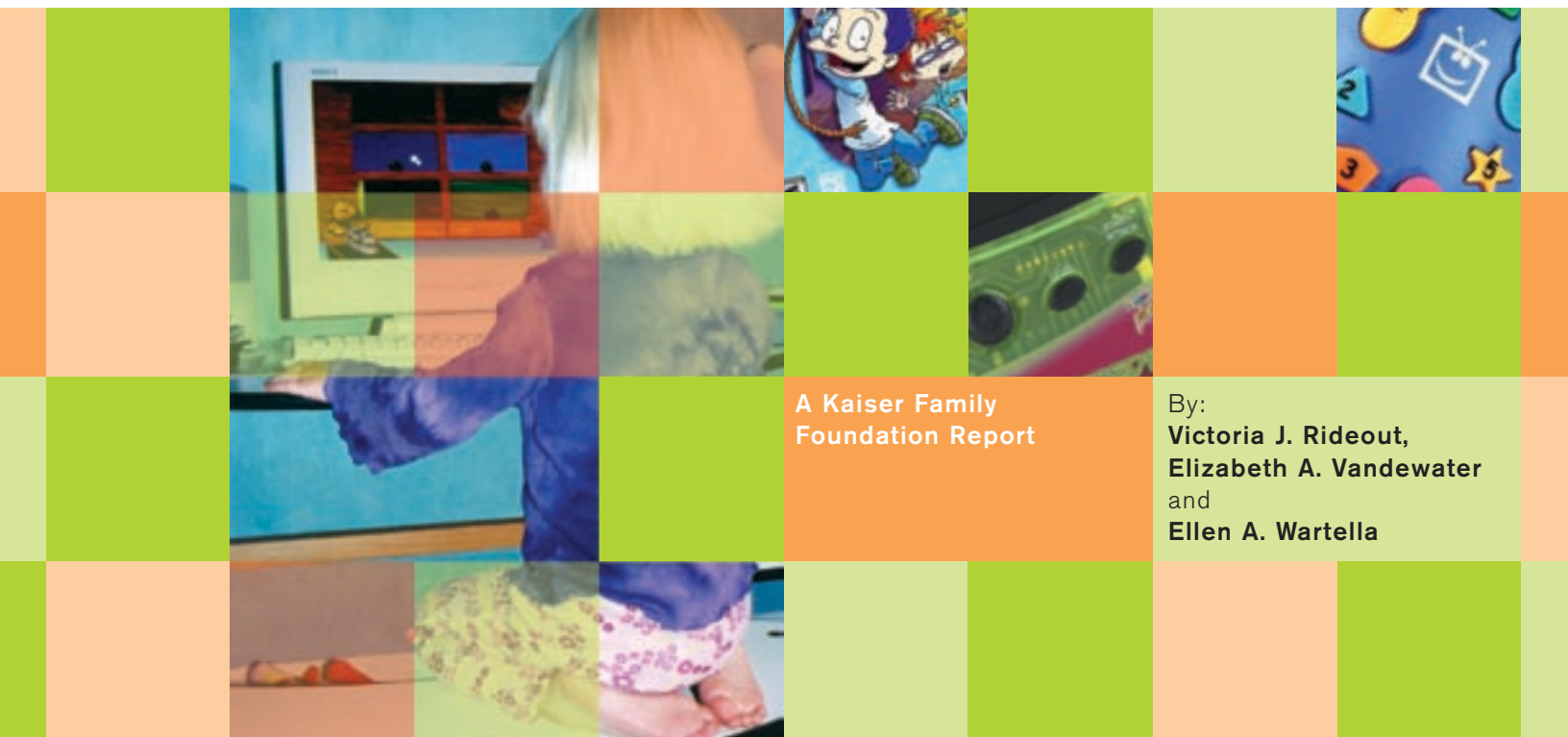


Zero to Six

**ELECTRONIC MEDIA IN
THE LIVES OF INFANTS,
TODDLERS AND
PRESCHOOLERS**

Fall 2003



**A Kaiser Family
Foundation Report**

By:
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and
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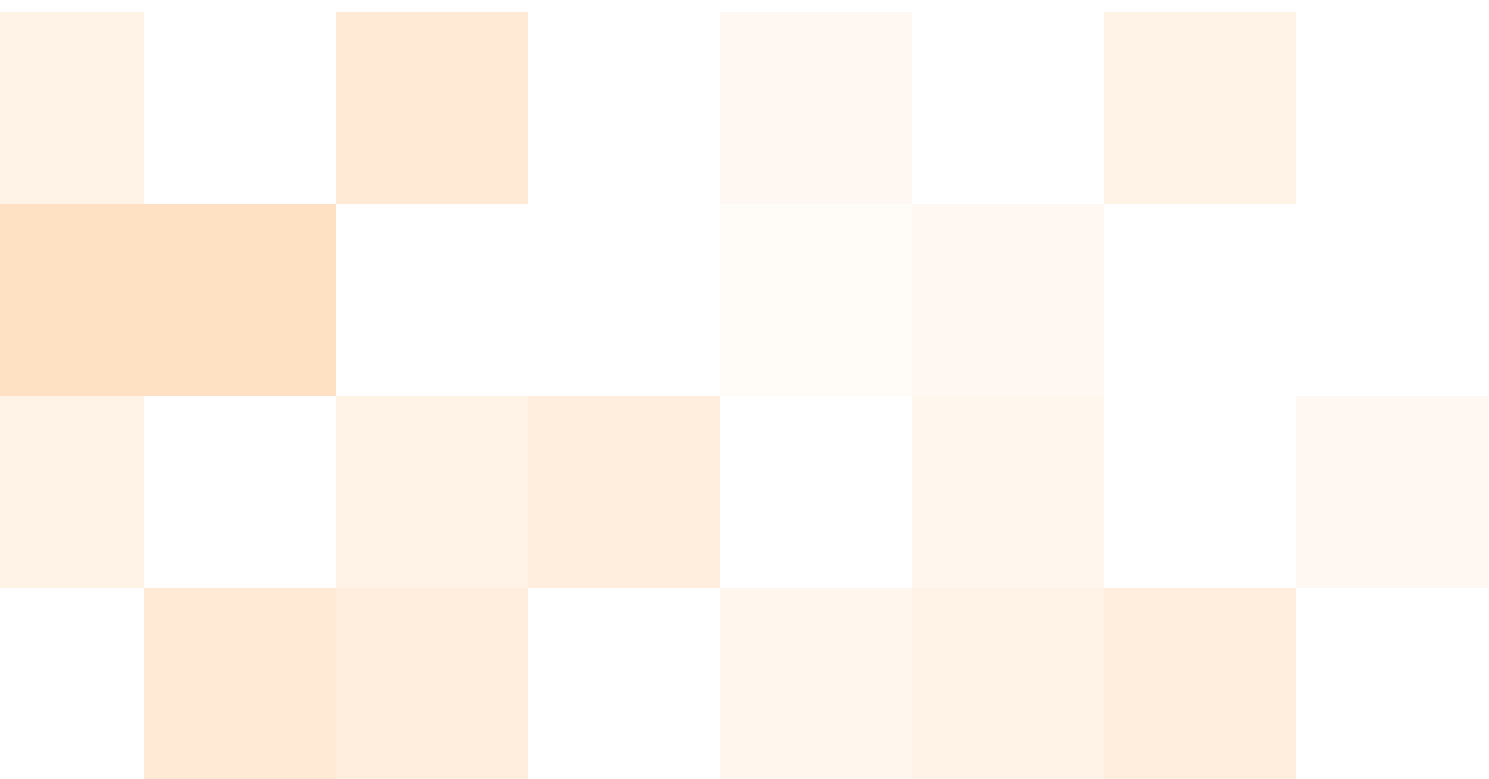
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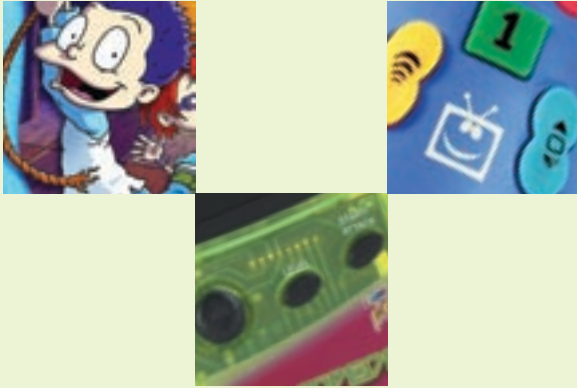
Introduction

Recent years have seen an explosion in electronic media marketed directly at the very youngest children in our society: A booming market of videotapes and DVDs aimed at infants one to 18 months, the launching of the first TV show specifically targeting children as young as 12 months, and a multi-million dollar industry selling computer games and even special keyboard toppers for children as young as nine months old.

Despite this plethora of new media aimed at very young children, next to nothing is known about how these changes have played out in young people's lives. *This study is one of the only large-scale national studies on the role of media in the lives of infants, toddlers and preschoolers in America.*¹ As Dan Anderson, a leading media researcher from the University of Massachusetts, has commented, "When it comes to electronic media, we have been able to find no reliable information about very young children's exposure, attention or interaction... At this point there is no systematic published research about the amount or nature of very young children's use of computers, the Internet, or interactive toys."² Not even the commercial media ratings services include children under the age of two. Amy Jordan, professor at the Annenberg School for Communication at the University of Pennsylvania, has written that "we currently know very little about which media are available to very young children and whether or how [they] engage with them."³

A critical starting point is to document very young children's access to and use of electronic and print media in the home. This study reports on a nationally representative random-digit-dial telephone survey of more than 1,000 parents of children ages six months through six years, conducted in the spring of 2003.





Specific questions addressed in this study include: Which media do very young children use, and how much time do they spend using them? How old were they when they first started using each medium? What is the social context of their media use? If they spend a great deal of time with one kind of media, do they spend less time in other activities? Is there a relationship between the media environment in the home and how children spend their time? How do parental rules shape children's media use? Are newer, interactive media playing a key role in children's lives, or do more passive screen activities predominate? How is the amount of time children spend reading related to the amount and types of media they use? What are parents' attitudes about the educational value of television, computers or books?

The rapid changes in our media environment have not been accompanied by a similar growth in our knowledge of how new media may impact children's cognitive, social, emotional or physical development. These issues are of deep concern not only to parents, but also to educators, health providers, policymakers and advocates. Many experts have argued that it is especially critical to understand media use by the youngest children, noting that because social and intellectual development are more malleable in these early years, media use at this age could have an especially significant impact.

This study provides baseline data that can be used to inform the direction of future studies on the impact of interactive and non-interactive media on children, including research on the beneficial or harmful effects of media use, the amount of media that is appropriate for children, and how best to create media that will enhance children's development. Considering the extent of the rapidly changing hardware and software available to children, objective and publicly available information on what media technology and content children are using is critical.

This report provides highlights of the basic data from the study on the role of media in the lives of children ages six months to six years old. Future papers will offer detailed analysis on topics of special interest, such as the role of family structure, socio-economic status or ethnicity in young children's media use; pathways to media use; and generational changes in media use patterns.

¹The only other nationally representative dataset of which we are aware that includes media use by children under two is the PSID Child Development Supplement Data (<http://www.isr.umich.edu/src/child-development/home.html>). Analyses of these data can be found in: Wright, John C., Aletha Huston, Elizabeth Vandewater, David Bickham, Ronda Scantlin, Jennifer Kotler, Allison Caplovitz, June Lee, Sandra Hofferth and Jonathan Finkelstein, "American Children's Use of Electronic Media in 1997: A National Survey," *Journal of Applied Developmental Psychology*, Vol. 22, 2001, pp 31–47, and Bickham, David S, Elizabeth Vandewater, Aletha Huston, June Lee, Allison Caplovitz and John Wright, "Predictors of Children's Electronic Media Use: An Examination of Three Ethnic Groups," *Media Psychology*, Vol. 5, No. 2, 2003, pp 107–138. An analysis of television viewing habits among infants can be found in Certain, Laura K. and Robert S. Kahn, "Prevalence, Correlates, and Trajectory of Television Viewing Among Infants and Toddlers," *Pediatrics*, Vol. 109, No. 4, April 2002, pp 634–642. A handful of other studies have examined media use among young children, but not those under two. For example, the Kaiser Family Foundation's 1999 media use study included extensive data on media use by children ages two to four and five to seven (Roberts, Donald F., Ulla G. Foehr, Victoria J. Rideout and Mollyann Brodie, *Children & Media @ the New Millennium*, Kaiser Family Foundation, 1999). The Annenberg Public Policy Center's annual "Media in the Home" surveys include parents of children two and older; an analysis of data from 145 parents of two- and three-year-olds can be found in Jordan, Amy B. and Emory Woodard, "Electronic Childhood: The Availability and Use of Household Media by 2- to 3-Year-Olds," *Zero to Three*, October/November 2001.

²Anderson, Daniel and Marie Evans, "Peril and Potential of Media for Infants and Toddlers," *Zero to Three*, October/November 2001, pp 11, 14.

³Jordan and Woodard, p. 4.



Key Findings

1. Children today are growing up immersed in media.

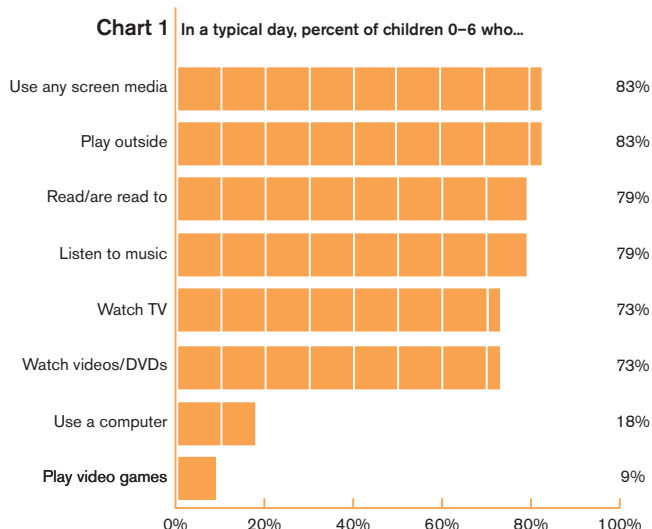
Children's homes are packed with media options, including TVs, computers, DVD players and video game consoles. Nearly all children (99%) live in a home with a TV set, half (50%) have three or more TVs, and one-third (36%) have a TV in their bedroom. Nearly three out of four (73%) have a computer at home, and about half (49%) have a video game player. In some ways, new media is trumping old: nearly twice as many children in this age group live in a home with Internet access (63%) as with a newspaper subscription (34%). Nearly all of them (97%) have products—clothes, toys, and the like—based on characters from TV shows or movies.

It is probably not surprising that nearly all children in the zero to six age range have listened to music (97%) and have read or been read to (95%), or that nine out of ten have watched TV (91%) and videos or DVDs (89%). But perhaps more unexpectedly, nearly half (48%) of all children six and under have used a computer, and more than one in four (30%) have played video games.

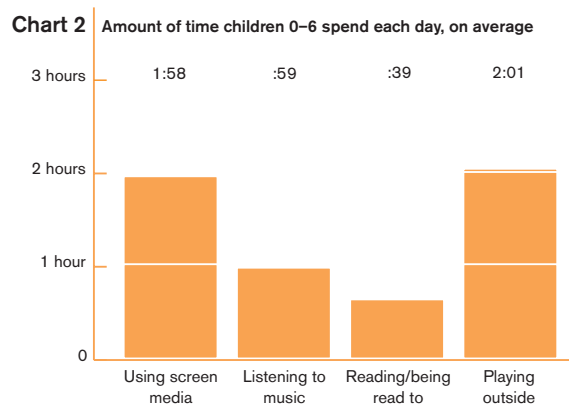
According to their parents, children six and under spend an average of about two hours a day with screen media (1:58), about the same amount of time that they spend playing outside (2:01), and three times as much time as they spend reading or being read to (39 minutes). These figures are the averages among all children, factoring in the days they skip doing a particular activity, and includes those children who, because of their age or parental regulations, do not use some types of media at all.

The vast majority of children are growing up in homes where television is a near-constant presence. Two-thirds of zero- to six-year-olds (65%) live in a home where the TV is on at least half the time or more, even if no one is watching, and one-third (36%) live in "heavy" TV households, where the television is left on "always" or "most of the time." Just under half (45%) of all parents say that if they have something important to do, it is very or somewhat likely that they will use TV to occupy their child while they finish their task.

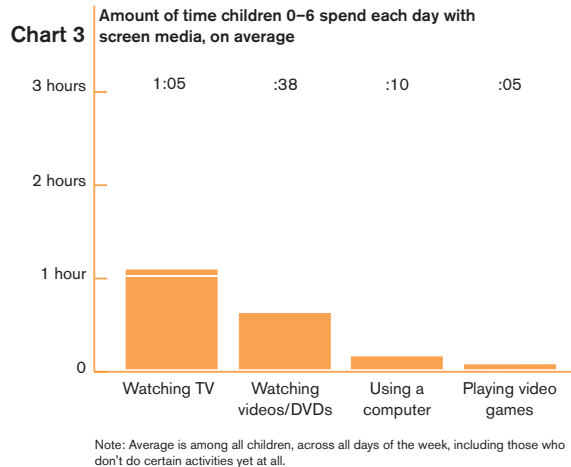
Given the omnipresence of media in these children's lives, it is not surprising that in a typical day, about eight in ten use screen media (83%)—about the same proportion who read (79%) or listen to music (79%).



But many of these toddlers and preschoolers are not just passively consuming media chosen by other members of their homes—they are actively asking for and helping themselves to what they want. They are turning on the TV by themselves (77%), asking for particular shows (67%), using the remote to change channels (62%), asking for their favorite videos or DVDs (71%), putting in their own music tapes or CDs (36%), hopping up to the computer by themselves (33%), loading their own CD-ROMs (23%), and for some, even asking for specific websites while surfing the Net (12%).



Note: Average is among all children, across all days of the week, including those who don't do certain activities yet at all.



3. Even the very youngest children are highly exposed to TV and other screen media.

The American Academy of Pediatrics recommends that children under two not watch any television, and that all children over two be limited to one to two hours of educational screen media a day. Despite these recommendations, in a typical day, 68% of all children under two use screen media (59% watch TV, 42% watch a video or DVD, 5% use a computer and 3% play video games), and these youngsters will spend an average of two hours and five minutes in front of a screen.

Indeed, according to their parents, 43% of all children under two watch TV every day, and one-quarter (26%) have a TV in their bedroom. Seventy-four percent of all infants and toddlers have watched TV before age two.

2. Many children six and under are active computer users.

About half (48%) of all children six and under have used a computer; by the time they are in the four- to six-year-old range, seven out of ten (70%) have used a computer.

Indeed, every day, more than one in four (27%) four- to six-year-olds uses a computer. Those who use a computer spend an average of just over an hour at the keyboard (1:04). More than half of all children in this age group (56%) have used a computer by themselves (without sitting in their parent's lap); 64% know how to use a mouse to point and click; 40% can load a CD-ROM by themselves; 37% have turned the computer on by themselves; and 17% have sent email with help from a parent. In fact, many children are starting even younger: one in four zero- to three-year-olds have used a computer without sitting on their parent's lap (27%).

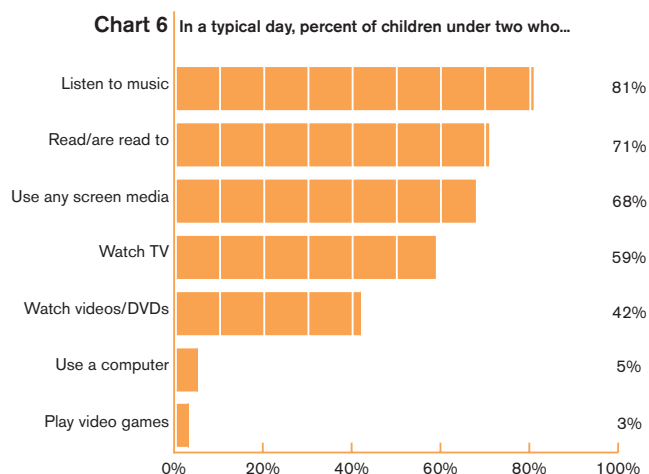
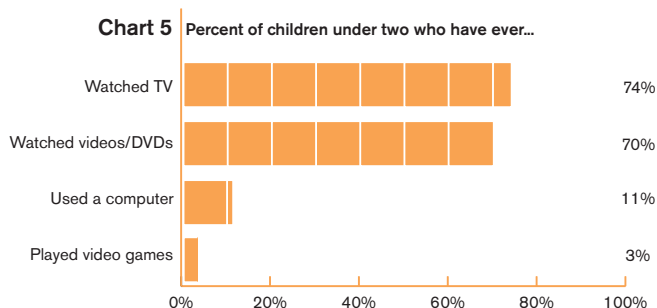
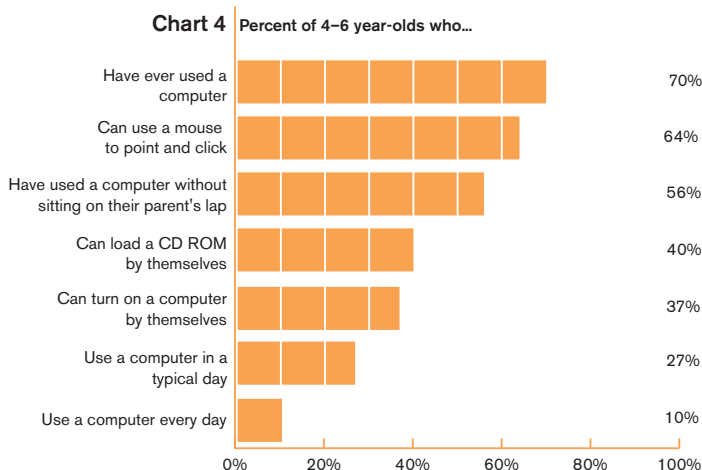
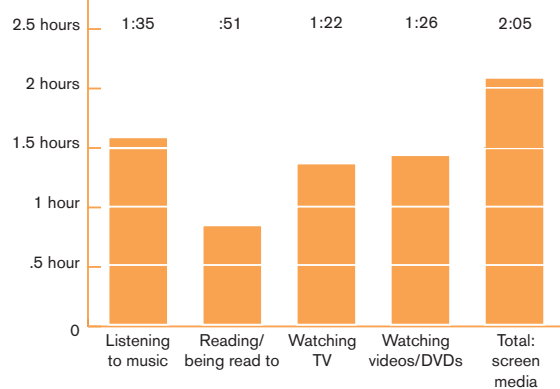


Chart 7 Among children under two who do each activity in a typical day, average amount of time spent...



Note: The sample of children under 2 who use a computer or play video games in a typical day is too small for reliable data on time spent with those media.

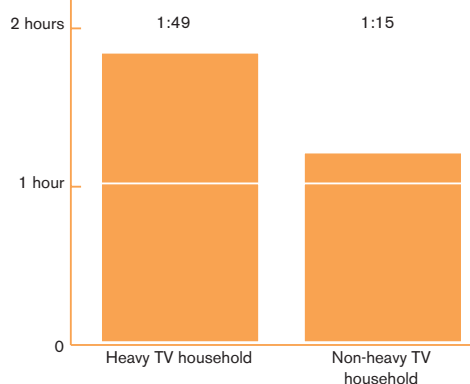
according to their parents, 24% of children over the age of two in heavy TV households can read, compared to 36% of children in other homes. This difference is even more pronounced among the four- to six-year-old group, where 34% of those in heavy TV homes can read, compared to 56% of those in non-heavy TV homes, according to their parents. While these data document a negative relationship between children's reading and the amount of time the TV is left on in the home, they do not prove a causal relationship between the two. It may be that there are other factors that are influencing the results. For example, although there do not appear to be any differences in income levels between heavy and non-heavy TV households, the study does indicate that parents in the heavy TV homes are less likely to have a college degree than other parents, and this factor may be influencing their children's reading. At the very least, the data on reading provide a compelling case for further examination of the impact of background media on children's development.

4. How much the TV is left on in the home has a significant relationship to the amount of time children spend watching it, and to the time they spend reading.

Not surprisingly, children in "heavy TV households"—those where the TV is left on "always" or "most of the time," even if no one is watching (36%)—are more likely to start watching TV before they are one (42% vs. 28%), to watch every day (77% vs. 56%) and to watch for longer than other children (when they do watch TV, they watch for an average of 34 more minutes in a typical day).

Children in heavy TV households are also less likely to read every day (59% vs. 68%), and when they do read or are read to, it is for a shorter amount of time than for children in non-heavy TV households. In fact, these children are less likely to be able to read at all:

Chart 9 Average amount of TV watched in a typical day, among those who watched



Note: Differences are significant at $p < .05$.

Chart 8 Percent of children 0–6 who...

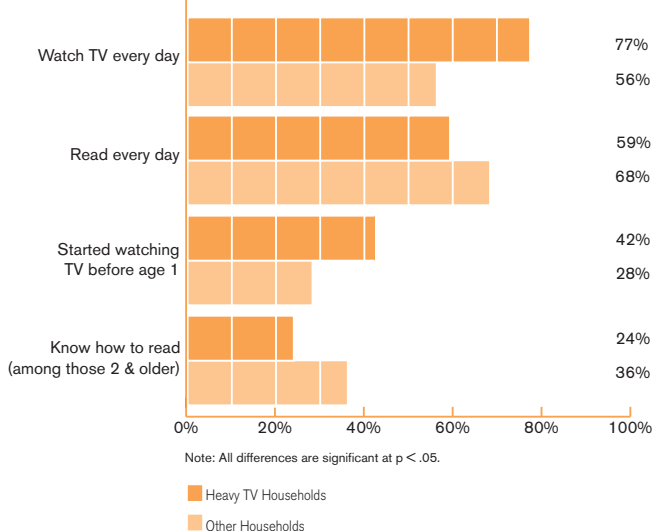
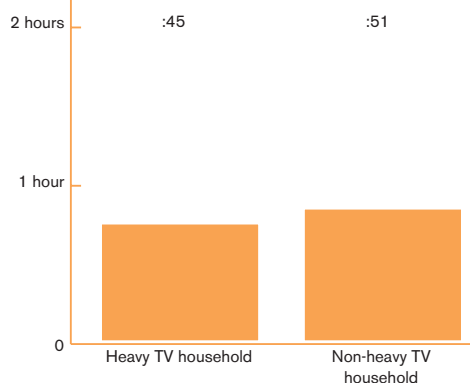


Chart 10 Average amount of time spent reading/being read to in a typical day, among those who read



Note: Differences are significant at $p < .05$.

5. Many very young children have a TV, VCR or video game player in their bedroom, and these children spend substantially more time with those media.

Fully one-third (36%) of all children six and under has their own TV in their bedroom (30% of zero- to three-year-olds and 43% of four- to six-year-olds); one in four (27%) has their own VCR or DVD player, and one in ten (10%) has their own video game console in their room.

Children who do have such “bedroom” media spend more time using them. For example, on average, children who have a TV in their room spend 14 minutes more in a typical day watching TV and videos/DVDs than children who do not have a TV in their bedroom, and those with a video game player spend an average of 15 minutes more playing video games.

While these data indicate there is a relationship between having a TV or game player in the bedroom and the amount of time children spend watching or using it, it is not possible to determine if it is a causal relationship or not.

Chart 11 Percent of children with a TV in their bedroom

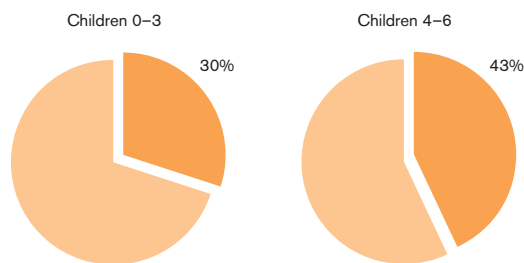
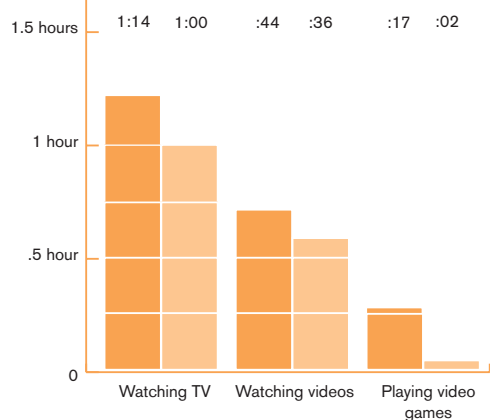


Chart 12 Average amount of time children 0-6 spend per day...



Note: All differences are significant at $p < .05$.

Have TV/VCR/game player in bedroom
Don't have TV/VCR/game player in bedroom

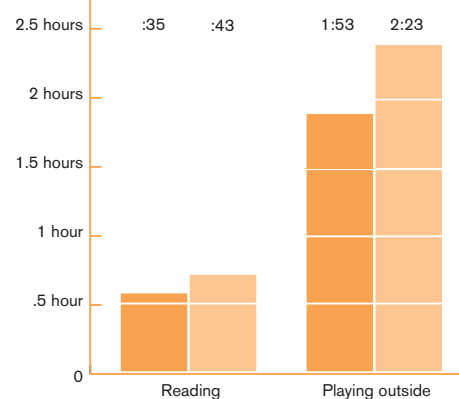
6. Four- to six-year-olds who are “heavy” TV users spend less time reading or playing outside than other children their age.

As a whole, zero- to six-year-olds average about an hour a day of TV watching (1:05), plus another 38 minutes a day watching videos. One-quarter of all children in this age group (25%) are “heavy” TV watchers, spending two hours or more a day watching television. Boys and girls were equally likely to be heavy TV users.

One issue that has been raised about TV watching is whether it “displaces” other activities—that is, if the time children spend watching TV replaces time they might spend in other pursuits, such as reading or playing outside. Among the younger children in this study—those from six months to three years old—no such effects were found. Among the more independent and mobile four- to six-year-olds, however, the heavy TV watchers spent an average of 30 minutes less per day playing outside and eight minutes less per day reading than did children who were not heavy TV watchers.

While there appears to be a relationship between the amount of time spent watching TV and the amount of time spent reading or playing outside, it is not possible to tell from this study whether it is a causal relationship and, if so, which direction the relationship is in. For example, it could be that children who cannot play outside—perhaps because they live in an unsafe neighborhood or a particularly cold climate—decide instead to spend more time watching TV. On the other hand, it could be that children who spend more time watching TV have less interest in or time available for playing outside or reading.

Chart 13 Average amount of time children 4-6 spend per day...



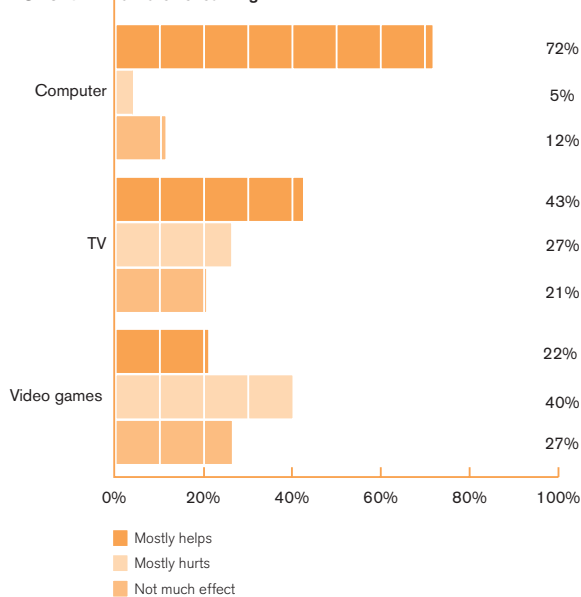
Note: All differences are significant at $p < .05$.

Heavy TV users
Non-heavy TV users

7. Many parents have faith in the educational value of electronic media.

Of all the types of electronic media included in the survey, parents are most enthusiastic about the educational potential of computers, with 72% saying they think using a computer “mostly helps” children’s learning, and just 5% saying it “mostly hurts.” Despite the many criticisms parents often make of TV, far more parents of young children (zero to six years old) think TV “mostly helps” children learn (43%) than think it “mostly hurts” learning (27%), or that it doesn’t affect learning one way or the other (21%). Indeed, a significant proportion of parents believe that various types of educational media are “very important” to children’s intellectual development, including educational television (58%), educational videos (49%) and educational computer games (43%). However, books were chosen as “very important” by far more parents (96%) than any of the electronic media.

Chart 14 Percent of parents who say each medium mostly helps/hurts children’s learning

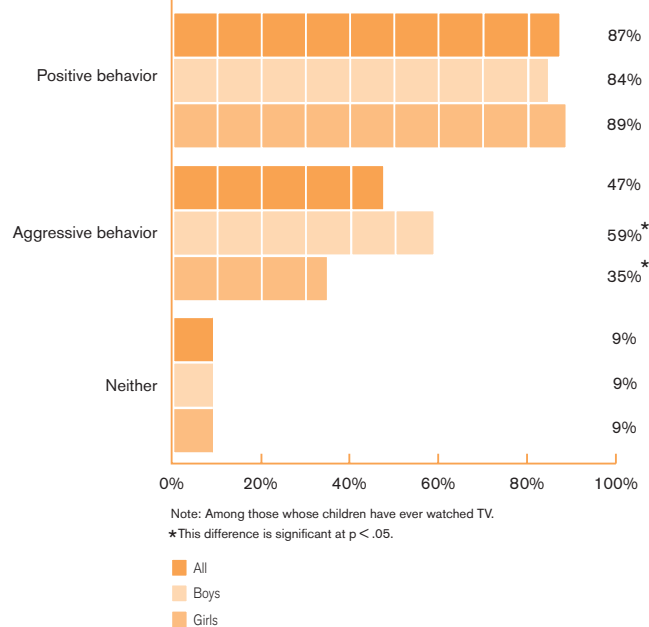


Children whose parents have positive views about the educational value of media are more likely to spend time using those media. For example, in a typical day, 82% of children whose parents think TV mostly helps learning will watch TV, compared to 58% of those whose parents think TV mostly hurts learning. Whether there is a causal relationship or not is impossible to tell from this study, and if so, which direction it runs. For example, it is possible that parents who believe a particular medium is educational allow their children to spend more time using it. On the other hand, it could be that parents whose children spend a lot of time with a particular medium come to perceive it as educational, either as a result of being exposed to more of its content or out of self-justification.

8. The vast majority of parents have seen their children imitate behavior from TV, and they are far more likely to see them copy pro-social rather than aggressive behaviors.

Among all parents whose zero- to six-year-olds have watched TV, 81% say they have seen their children imitate either positive (e.g., sharing, helping) or aggressive (e.g., hitting, kicking) behaviors from TV (78% positive v. 36% aggressive). By the time children are a little older—in the four to six age range—more than eight in ten (87%) parents whose children watch TV have seen them imitate positive behaviors and nearly half (47%) say they’ve seen their children imitate aggressive behaviors from TV. Imitating aggressive behaviors appears to be more common among boys in this age group than among girls (59% vs. 35%).

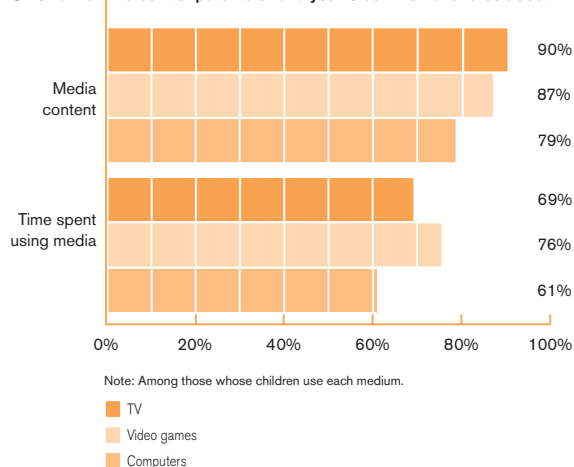
Chart 15 Percent of parents who have seen their 4–6 year-olds imitate behavior from TV



9. Most parents have media-related rules, and the children of parents who report strongly enforcing their rules spend less time watching TV and more time reading.

Almost all parents say they have some type of rules about their children's use of media. Parents seem to be more concerned about the specifics of what their children watch or play than they are about the amount of time they spend doing it.

Chart 16 Percent of parents of 0–6 year-olds who have rules about...



Children whose parents have rules about how much time they can spend watching TV average almost a half-hour less with the television per day (1:00 vs. 1:29) than other children do.

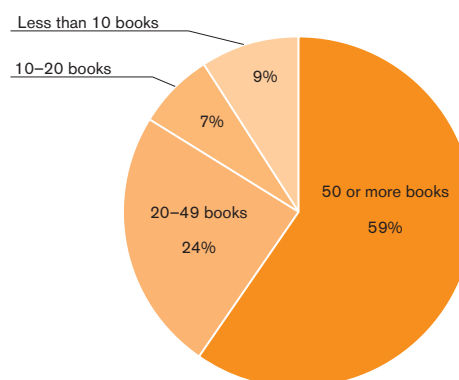
Nearly all (88%) parents who have some type of media rules say they enforce them at least “most of the time”, with about half (54%) saying they “always” enforce their rules. Children of parents who say they always enforce their media rules are more likely to read in a typical day (84% vs. 76% of children in homes with no rules or rules that aren’t always enforced), to read “every day” (74% vs. 57%), to spend more time reading (about eight minutes a day longer), and also to spend more time playing outdoors (2:16 vs. 1:53).

10. Reading or being read to remains a constant in most children’s lives.

According to their parents, two out of three (65%) children ages zero to six read or are read to every day (another 26% are read to a few times a week). In a typical day, 79% of all children in this age group spend time with books, and those who do read or are read to spend about 50 minutes (:49) with print material (an average of :39 minutes a day among all children). Almost all parents (96%) consider books “very important” to children’s intellectual development, and two-thirds (66%) say they consider books the most important when compared to other media or toys, while one in three (32%) choose

other items such as educational TV, computer games, puzzles or videos. A majority (59%) of all children six or under has 50 or more children’s books at home, although about one in ten (9%) have fewer than ten books. Talking books are also very popular: three out of four parents (76%) say their children have talking book toys like LeapPad.

Chart 17 Percent of children 0–6 who have...books at home



Children in households where the TV is left on in the background a great deal of the time tend to read less than other children. For example, the percent of youngsters who read daily is lower in those households where the TV is left on more than half the time even if no one is watching (59% vs. 68% in other households), and when children in those “heavy” TV households do read, they spend an average of six minutes less a day reading (45 minutes vs. 51 among those who read in a typical day; 33 vs. 42 among all children).

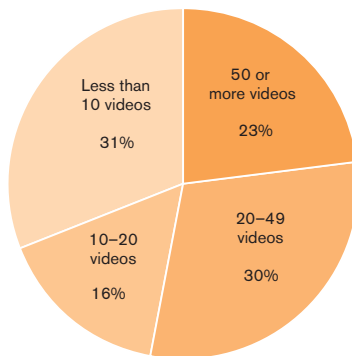
11. Listening to music is one of the most popular media activities among young children.

Anyone who has spent countless hours singing “The Itsy Bitsy Spider” or “Old MacDonald” with a two-year-old will not be surprised to learn how popular listening to music is among the youngest children. In a typical day, eight out of ten children will listen to music (79%); indeed, two-thirds (66%) listen to music daily, about the same proportion who read (65%) or watch TV (63%) on a daily basis. Children under six spend an average of about an hour a day listening to music (:59). The typical child six or under lives in a home with an average of four to five radios and CD/tape players, and four in ten (42%) even have their own CD or cassette player in their bedroom. One-third of all youngsters this age (36%) know how to use CD or cassette players themselves.

12. Videos and DVDs have become a staple of children's lives.

Almost all homes (95%) with children ages zero to six have at least one VCR or DVD player, and more than one in four children (27%) have one in their bedroom. In a typical day, about half of all children this age (46%) will watch a video or DVD, and according to their parents, one in four (25%) watch videos every day. On average, youngsters in this age group spend just under 40 minutes a day watching videos or DVDs (:38). Children quickly develop their favorites, with 70% having requested a particular video or DVD, and about half (49%) able to put one in the player by themselves. More than half of all children (53%) six and under own at least 20 videos. Parents appear to have a great deal of faith in educational videos, with about half (49%) saying they consider them “very important” to children's intellectual development. Indeed, more than one in four (27%) children have had one of the “Baby Einstein” videos designed for children from one to 18 months old.

Chart 18 Percent of children 0–6 who have...videos at home



13. Playing video games is a less common activity among the six and under set, but is more popular among boys than girls.

Video game playing is less common among children six and under than most other types of media, accounting for an average of just five minutes a day among all children in this age group. Thirty percent of children ages zero to six have played video games, either on a console or on a hand-held player.

By the time they are preschoolers, children are a bit more likely to play video games. In a typical day, about one in every six (16%) four- to six-year-olds plays a video game, and those who play average a little over an hour at the controls (1:04). The gender gap in video games starts young: in a typical day, one in four boys ages four to six plays video games (24%) compared to 8% of girls, and nearly one in ten (9%) boys this age plays every day (compared to 2% of four- to six-year-old girls).

Chart 19 Percent of 4–6 year-olds who...

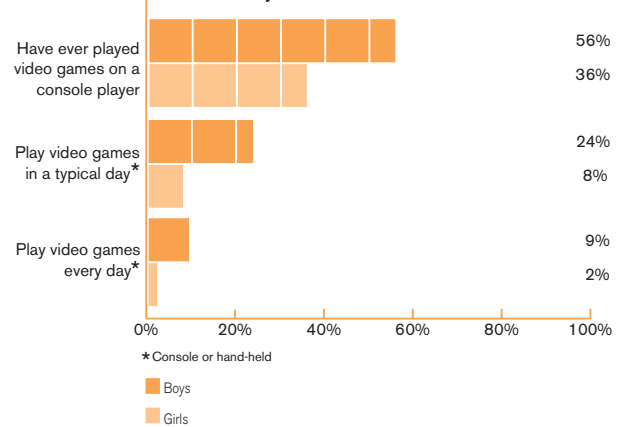
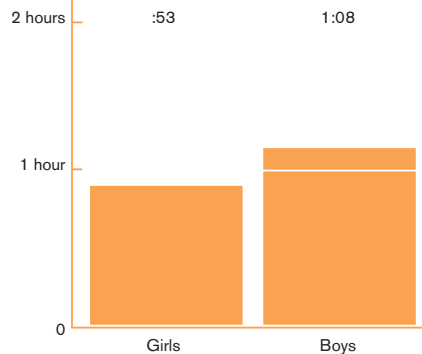


Chart 20 Among those 4–6 year-olds who play video games in a typical day, amount of time spent playing



Note: Means significantly differ at $p < .05$.

Parents are less enthusiastic about the educational value of video games than any other medium addressed in this survey. Four in ten (40%) think video games mostly hurt children's learning (22% think they mostly help children's learning, while 27% say they don't have much effect one way or the other).

14. There do not appear to be many differences in how boys and girls use media at the youngest ages.

When they are first beginning to use media, boys and girls spend the same amount of time watching TV, reading, listening to music and using computers. They develop the same basic media-use skills, and do so at roughly the same age. By the time they are in the four- to six-year-old range, however, there is a difference between boys and girls when it comes to video games, with boys being more likely to play and to play for longer periods of time. This contributes to a difference between boys and girls in the average amount of time they spend in front of screen media each day: among all girls ages four to six, the average is 2:01, and among all boys, the average is 2:19, a difference of 18 minutes each day.

Another gender issue that stands out in the data is the difference in the percent of boys vs. girls who have imitated aggressive behaviors they saw on TV (45% of boys compared to 28% of girls). This difference is especially pronounced among the four- to six-year-olds (59% of boys vs. 35% of girls). What the data do not reveal, however, is whether boys are watching shows with more violent content, or whether they are simply more likely to copy that type of behavior.

Popular gender stereotypes about differences between men and women in their use of the TV remote do not appear to have their roots in this early developmental period; four- to six-year-old boys and girls are equally likely to have used the remote to change channels (75%), although it should be pointed out that the study didn't examine how *often* children use the remote, or their emotional attachment to it (😊).

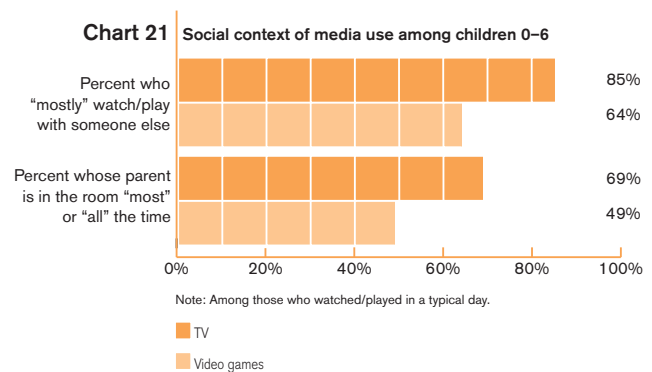
15. Most very young children are using media with someone else, usually with a parent in the room.

One major and continuing concern regarding children's media use is the notion that parents use television as a "babysitter." This notion conjures up an image of children spending countless hours watching television or playing video games with no adult presence or guidance.

This study indicates that 45% of all parents report that they would be very or somewhat likely to sit their child down with a video or a television program if they had something important they needed to get done. These parents' children do indeed spend an average of 30 minutes more per day watching TV than other children (an average of one hour 21 minutes vs. 51 minutes on a typical day).

Among children who watch TV on a typical day, however, the vast majority of parents (85%) reported that most of the time, the child was watching with someone else. Moreover, 69% of parents reported that they were in the room either all or most of the time their child was watching. While it is not possible to know whether parents were actually watching the television show with their child, it appears from these reports that the portrayal of television watching among young children as a highly solitary activity is not accurate.

Video game use appears to be a somewhat more solitary activity than television watching. According to their parents, among children who play video games in a typical day, 64% spend most of their time playing with someone else, and half (49%) have a parent in the room with them most or all of the time they are playing.





Conclusion

This study has documented a potentially revolutionary phenomenon in American society: the immersion of our very youngest children, from a few months to a few years old, in the world of electronic and interactive media. The impact that this level of media exposure has on children's development is unknown, but one thing is certain: it is an issue that demands immediate attention from parents, educators, researchers and health professionals.



We know from many decades of research that media do have a variety of important effects on children. What we don't know is what effect media have on the very youngest children, who are at such a critical developmental stage.

Much of the data this study has revealed regarding the media habits of infants, toddlers and preschoolers is brand-new information, and it will take some time for the academic, educational and medical communities to absorb it and determine what steps should be taken next. In our view, the most significant findings of this study include the following:

- Children six and under spend an average of two hours a day with screen media, mostly TV and videos;
- TV watching begins at very early ages, well before the medical community recommends;
- A high proportion of very young children are using new digital media, including 50% of four- to six-year-olds who have played video games and 70% who have used computers;
- Two out of three zero- to six-year-olds live in homes where the TV is usually left on at least half the time, even if no one is watching, and one-third live in homes where the TV is on "almost all" or "most" of the time; and children in the latter group of homes appear to read less than other children and to be slower to learn to read;
- Many parents see media as an important educational tool, beneficial to their children's intellectual development, and parents' attitudes on this issue appear to be related to the amount of time their children spend using each medium; and
- Parents clearly perceive that their children's TV watching has a direct effect on their behavior, and are more likely to see positive rather than negative behaviors being copied.

Some of the media being used by today's toddlers, such as computers, the Internet, or the newest generation of highly produced video games, are brand new and have been subject to only a limited amount of study. Others, like television, have been around for a quarter of a century, but have not traditionally been targeted at such young viewers. In all cases, the news that these media are being

so widely consumed by such young children raises a host of important questions.

Topics for further study include the impact of each medium itself as well as the content being consumed; and in each case there are questions about the impact on children's physical, cognitive, social and emotional development. For example:

- Does the presence of background media interrupt the concentration of infants and toddlers as they attempt to master such tasks as language development or physical coordination?
- Does time spent with electronic media take away from time spent playing outdoors, reading or interacting with parents, and, if so, what impact does that time shift have on children's development?
- Does today's media environment develop children's ability to "multi-task," and what effect, if any, does multi-tasking have on their understanding of what they are watching, reading and listening to?
- Does the time spent with media contribute to a more sedentary lifestyle for young people, contributing to the growing problem of childhood obesity?
- Do activities such as video-game playing help the visual and spatial skills of young children, and if so, how can games be designed to enhance the positive effects? Are there risks of eyestrain associated with screen media use, or significant ergonomic implications of children's use of computers or video games?
- Does the fast-paced content of today's television and other media affect children's attention span?
- How much advertising and marketing are young children exposed to through their media consumption, and what impact does such marketing have on them?
- Does the interactive nature of digital media such as video and computer games stimulate children's cognitive development? Are passive screen media like television and videos in any way inherently detrimental to children's cognitive development?
- What role does music play in children's cognitive and social development, and how can any positive impact be maximized?
- Does the educational programming available to children on TV and in computer games help their intellectual development in the way many parents believe? What should media producers know about this very young age group in order to maximize the positive effects of their work?
- Is early computer use related in any way to higher academic achievement later in life? If so, what, if anything, should be done to address discrepancies in home Internet access for low-income children?
- How much non-educational content are children being exposed to in television programming, video games and computers, and what are the effects of that exposure?

To answer these questions effectively, it would be beneficial to track the media habits of young children over time, using longitudinal studies as well as random samples.

It is our hope that the medical and educational communities will review these data and offer their input on children's media to parents and the media industry. As mentioned elsewhere in this report, the American Academy of Pediatrics has recommended that children two and under not watch television at all, and that those over two be limited to one to two hours a day of educational screen media. Given the number of children who are consuming significantly more than the recommended amount of media, pediatricians may need to clarify their reasoning, elaborate on their recommendations (particularly with regard to computers) and step up efforts to communicate those recommendations to parents.

For parents who are concerned that their children spend too much time with electronic media, there is good news: there appear to be concrete steps parents can take that will impact the amount of time their children spend with media. Turning off the TV in their home when no one is watching, getting televisions out of children's bedrooms, and setting rules about how much time their children can spend with media all appear to make a significant difference in the amount of time children spend in front of a screen.

■ ■ ■ ■ ■ Tables

■ Overall media use:

Percent of children who have ever:

	0-6	0-3	4-6
Listened to music:	97%	96%	99%
Read/been read to:	95%	92%	99%
Watched TV:	92%	87%	98%
Watched videos/DVDs:	88%	82%	96%
Used a computer:	48%	31%	70%
For games:	44%	26%	65%
For other activities:	22%	12%	35%
Played video games:	30%	14%	50%
On a console:	28%	14%	47%
On a hand-held player:	17%	8%	28%

In a typical day, percent of children who:

	0-6	0-3	4-6
Read/are read to:	79%	76%	83%
Listen to music:	79%	81%	75%
Watch TV:	73%	69%	78%
Watch videos/DVDs:	46%	48%	44%
Use a computer:	18%	10%	27%
Play video games:	9%	4%	16%
Use any screen media:	83%	78%	88%

Note: Unless specified otherwise, all references to "computer" include both computer games and other uses of the computer, all references to video games include both console and hand-held games.

Amount of time children spend a day, on average, with media and other activities:

	0-6	0-3	4-6
Screen media:	1:58	1:47	2:10
TV:	1:05	1:01	1:10
Videos/DVDs:	:38	:41	:36
Computers:	:10	:05	:16
Video games:	:05	:01	:10
Listening to music:	:59	1:08	:49
Reading/being read to:	:39	:37	:41
Playing outside:	2:01	1:51	2:14

Note: All times in hours: minutes. Average is among all children, across all days of the week, factoring in the percent of children who don't do certain activities yet at all.

Percent of children who use each medium daily:

	0-6	0-3	4-6
TV:	63%	58%	70%
Videos:	25%	29%	20%
Music:	66%	69%	62%
Video games:	4%	2%	6%
Computer:	7%	4%	10%
Reading:	65%	63%	66%
Any screen media:	69%	64%	75%

In a typical day, the percent of children who spend more than an hour:

	0-6	0-3	4-6
Watching TV:	53%	49%	60%
Listening to music:	41%	46%	34%
Watching videos/DVDs:	34%	33%	35%
Reading/being read to:	30%	30%	31%
Using a computer:	7%	3%	11%
Playing video games:	4%	1%	7%
Using any screen media:	71%	65%	78%
Playing outside:	72%	68%	78%

Media in the home – percent of children 0-6 who live in homes with:

Television:	99%
Radio:	98%
VCR/DVD:	95%
CD/tape player:	93%
Cable or satellite TV:	78%
Computer:	73%
Internet access:	63%
Three or more TVs:	50%
Console video game player:	49%
Newspaper subscription:	34%
Hand-held video game player:	32%

Media in the bedroom – percent of children 0-6 who have:

Radio:	46%
CD/tape player:	42%
TV:	36%
VCR/DVD player:	27%
Video game console:	10%
Computer:	7%
Internet access:	3%

Educational value of media – parents' views on whether media mostly helps/mostly hurts children's learning:

	Mostly helps	Mostly hurts	Not much effect
Using a computer:	72%	5%	12%
Watching TV:	43%	27%	21%
Playing video games:	22%	40%	27%

Percent of parents who consider each item to be “very important” to children’s intellectual development:

Books:	96%
Building blocks:	77%
Puzzles:	74%
Educational toys like talking books:	62%
Educational TV:	58%
Educational videos:	49%
Educational computer games:	43%
Educational websites:	31%

Note: Two-thirds of parents (66%) say books are the *most* important to children’s learning; 32% name something else as most important.

Parental rules about media – percent of parents with rules about:

	TV	Computer	Video Games
Content:	90%	79%	87%
Time spent:	69%	61%	76%

Note: Among parents whose children have done each activity.

Enforcement of parental media rules:

Percent of parents who say they “always” enforce their rules:	54%
Percent who say they enforce rules at least “most of the time”:	88%

Impact of parental media rules:

	Among those whose parents have media rules and say they “always” enforce them	Among those with no rules or with rules that aren’t always enforced
In a typical day, percent of children who read/are read to:	84%	76%
Percent of children who read daily:	74%	57%
Average amount of time children spend reading per day:	:44	:35
Average amount of time children spend playing outside per day:	2:16	1:53

Note: All percentages and means in this table significantly differ at $p < .05$.

Percent of children who own products based on characters from TV, movies or video games:

All children 0–6:	97%
One-year-olds:	93%

■ Video games:

Percent who have ever played video games:

0–6:	31%
0–3:	14%
4–6:	50%

Note: Includes both console and hand-held throughout, unless otherwise noted.

In a *typical day*, percent of children who play video games:

0–6:	9%
0–3:	4%
4–6:	16%
4–6 boys:	24%
4–6 girls:	8%

Percent of children who play video games several times a week or more:

0–6:	15%
0–3:	7%
4–6:	25%

Amount of time spent playing video games per day:

	Average among all	Average among those who play in a typical day
0–6:	:05	1:01
0–3:	:01	:48
4–6:	:10	1:04

Gender differences among children ages 4–6:

	Girls	Boys
Have ever played video games:	36%	56%
In a typical day, percent who play:	8%	24%
Percent who play video games daily:	2%	9%
Among those who play, average amount of time spent:	:53	1:08

Note: All percentages and means in this table significantly differ at $p < .05$.

Educational value of video games:

Percent of parents who say that, in general, video games mostly help/mostly hurt children’s learning:

Mostly helps:	22%
Mostly hurts:	40%
Not much effect:	27%

In a typical day, percent of children 0–6 who play video games, by parent attitude:

Parent thinks video games mostly help children’s learning:	14%
Parent thinks video games mostly hurt children’s learning:	4%

Note: Difference is statistically significant at $p < .05$.

■ Television:

In a *typical day*, percent of children who watch TV:

0–6:	73%
0–3:	69%
4–6:	78%

Percent of children who watch TV *every day*:

0–6:	63%
0–3:	58%
4–6:	70%

Amount of time spent watching TV:

	Average among all	Average among those who watched
0–6:	1:05	1:30
0–3:	1:01	1:30
4–6:	1:10	1:30

Percent of children whose parents see them imitate behavior from TV:

	0–6	boys	girls
Positive behavior (e.g., sharing or helping):	78%	76% ^d	80% ^d
Aggressive behavior (e.g., hitting or kicking):	36%	45% ^e	28% ^e
Neither:	18%	20% ^f	16% ^f

	0–3	boys	girls
Positive behavior (e.g., sharing or helping):	70% ^a	68%	72%
Aggressive behavior (e.g., hitting or kicking):	27%	32% ^b	21% ^b
Neither:	26% ^g	29%	23%

	4–6	boys	girls
Positive behavior (e.g., sharing or helping):	87% ^a	84%	89%
Aggressive behavior (e.g., hitting or kicking):	47%	59% ^c	35% ^c
Neither:	9% ^g	9%	9%

Note: Among those who have ever watched TV. Within rows and columns, common subscripts indicate percentages which significantly differ at $p < .05$.

Using the TV by themselves – percent of children who have ever:

	0–6	0–3	4–6
Turned on the TV by themselves:	77%	66%	91%
Changed channels with the remote:	62%	52%	75%
Put in a video or DVD by themselves:	50%	30%	74%
Asked for a particular TV show or channel:	67%	51%	87%

Relationship between time spent watching TV and time in other activities – amount of time children 0–6 spend per day, on average:

	Reading	Outdoors
0–6		
Heavy TV users:	:38	1:50 ^a
Non-heavy TV users:	:40	2:07 ^a
0–3		
Heavy TV users:	:40	1:48
Non-heavy TV users:	:37	1:52
4–6		
Heavy TV users:	:35 ^b	1:52 ^c
Non-heavy TV users:	:43 ^b	2:24 ^c

Note: Among children who have ever watched television. Heavy TV users are those who watch 2 hours or more a day. Within column, the same subscripts indicate means which significantly differ at $p < .05$.

Heavy TV households – percent of children 0–6 who live in homes where the TV is on “always” or “most of the time,” even if no one is watching:

0–6:	36%
0–3:	40%
4–6:	33%

How children in “heavy” TV households compare to other children:

	Heavy TV Households	Others
In a typical day, percent who:		
Watch TV:	81%	69%
Play outside:	79%	85%
Read:	74%	83%

Percent of children who do each activity “daily”:

Watch TV:	77%	56%
Read:	59%	68%

Amount of time children spend watching TV, on average:

Among those who watched:	1:49	1:15
Among all:	1:29	:51

Percent of children who started watching TV before age one:

42%	28%
-----	-----

Percent of children over age two who can read:

24%	36%
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Amount of time children spend reading, on average:

Among those who read:	:45	:51
Among all:	:33	:42

Note: All percentages and means in this table significantly differ at $p < .05$.

Educational value of TV – percent of parents who say that, in general, TV mostly helps/mostly hurts children's learning:

Mostly helps:	43%
Mostly hurts:	27%
Not much effect:	21%

Educational value of TV – in a typical day, percent of children 0–6 who watch TV, by parent attitude:

Parent thinks TV mostly helps learning:	82%
Parent thinks TV mostly hurts learning:	58%

Note: These percentages significantly differ at $p < .05$.

Percent of children with a TV in their bedroom:

0–6:	36%
0–3:	30%
4–6:	43%

TV in the bedroom – amount of time spent watching:

	<u>TV</u>	<u>Video/DVD</u>
All Children 0–6		
TV in bedroom:	1:14a	:44b
No TV in bedroom:	1:00a	:36b
Children 0–3		
TV in bedroom:	1:13c	:47
No TV in bedroom:	:56c	:38
Children 4–6		
TV in bedroom:	1:14	:40
No TV in bedroom:	1:05	:32

Note: Within column, the same subscripts indicate means significantly differ at $p < .05$.

Impact of parental rules on time spent watching TV:

	<u>Parents have rules about time spent watching TV</u>	<u>Parents have no rules about time with TV</u>
Percent of children who watch TV in typical day:	75%	84%
Average amount of time children spend watching TV per day:	1:00	1:29
In a typical day, amount of time those who watched TV spent watching:	1:20	1:47

Note: Among children who have ever watched television. All percentages and means in this table significantly differ at $p < .05$.

Penetration of cable and satellite TV, by income:

\$75,000 or more:	90%
\$20,000–49,000:	78%
<\$20,000:	63%

■ Music:

In a *typical day*, percent of children who listen to music:

0–6:	79%
0–3:	81%
4–6:	75%

Percent of children who listen to music *daily*:

0–6:	66%
0–3:	69%
4–6:	62%

Amount of time children spend listening to music each day, on average:

	<u>Among all</u>	<u>Among those who listen</u>
0–6:	:59	1:16
0–3:	1:08	1:24
4–6:	:49	1:05

■ Computers:

Computers in the home – percent of all children who live in a home with:

	0–6	0–3	4–6
Computer:	73%	71%	77%
Internet access:	63%	60%	66%

Computers in the bedroom:

Percent with a computer in bedroom:	7%
Percent with Internet access in bedroom:	3%

Percent of children who *have ever* used a computer:

0–6:	48%
0–3:	31%
4–6:	70%

In a *typical day*, percent of children who:

	0–6	0–3	4–6
Play computer games:	14%	9%	21%
Use computer for any purpose:	18%	10%	27%

Percent of children who use a computer several times a week or more:

0–6:	26%
0–3:	16%
4–6:	39%

Amount of time spent using a computer:

	Average among all	Average among those who used in a typical day
0–6:	:10	:59
0–3:	:05	:49
4–6:	:16	1:04

Using the computer by themselves – percent of children who have:

	0–6	0–3	4–6
Used a mouse to point and click:	40%	21%	64%
Played computer games:	41%	24%	62%
Used a computer by themselves*:	33%	14%	56%
Turned the computer on by themselves:	23%	11%	37%
Loaded a CD-ROM by themselves:	23%	10%	40%
Gone to a children's website:	20%	12%	30%
Requested a specific website:	12%	5%	20%
Sent email, with help from a parent or other adult:	10%	4%	17%

*Not on parent's lap.

Trends in initiation of computer use among young children:

Percent of children who had done the following at age two or younger:

	Among all six-year-olds (N=129)	Among all two-year-olds (N=166)
Used a computer on a parent's lap:	11%a	28%a
Used a mouse to point and click:	5%b	17%b
Visited websites for children:	0	10%

Note: Items with a common subscript significantly differ at $p < .05$.

Educational value of computers:

Percent of parents who say that, in general, computers mostly help/mostly hurt children's learning:

Mostly helps:	72%
Mostly hurts:	5%
Not much effect:	12%

In a typical day, percent of children 0–6 who use a computer, by parent attitude:

Parent thinks computers mostly help learning:	22%
Parent thinks computers mostly hurt/no effect:	9%

Computer use by gender – percent of boys and girls 0–6 who:

	Boys	Girls
Use a computer in a typical day:	18%	17%
Average time spent with computer, among those who used one:	:56	1:02
Use a computer at least a few times a week:	56%	53%
Have ever		
Used a computer without sitting on parent's lap:	33%	33%
Turned on a computer by themselves:	24%	21%
Used a mouse to point and click:	39%	41%
Loaded a CD-ROM by themselves:	25%	22%

Note: No differences in this table are statistically significant.

Relationship of computer use and time spent in other activities – amount of time children spend:

	Heavy computer users (1+ hour)	Non-heavy computer users
Watching TV:	1:37a	1:02a
Listening to music:	:59	:59
Watching videos:	:52b	38b
Playing video games:	:23c	:04c
Reading:	:45	:38
Playing outside:	2:29d	1:59d

Note: Within rows, items with a common subscript differ significantly at $p < .05$.

■ Reading:

In a *typical day*, percent of children who read/are read to:

0–6:	79%
0–3:	76%
4–6:	83%

How *often* children read/are read to:

	0–6	0–3	4–6
Daily:	65%	63%	66%
Several times a week:	26%	24%	28%
Several times a month:	3%	3%	3%
Less than several times a month, or never:	6%	9%	2%

Amount of time spent reading or being read to, in a typical day:

	Average among all	Average amount those who read/were read to
0–6:	:39	:49

Number of books in children's homes:

50 or more:	59%
20–49:	24%
Ten–20:	7%
Less than ten:	9%

Relationship of TV and reading:

	Heavy TV Households	Non-heavy TV Households
In a typical day, percent of children who read:	74%	83%
Percent of children who read daily:	59%	68%
Amount of time spent reading among all, on average:	:33	:42
Amount of time spent reading, among those who read:	:45	:51

Note: All percentages and means in this table significantly differ at $p < .05$.

■ Videos/DVDs:

Average number of VCRs/DVDs in homes of children 0–6:

2.3

Percent of children with a VCR/DVD player in their bedroom:

27%

In a *typical day*, percent of children who watch videos/DVDs:

0–6:	46%
0–3:	48%
4–6:	44%

Percent of children who watch videos/DVDs every day:

0–6:	25%
0–3:	29% ^a
4–6:	20% ^a

Note: Items with a common subscript significantly differ at $p < .05$.

Amount of time spent watching videos/DVDs per day:

Among all:	:38
Among those who watched in a typical day:	1:26

Percent of children 0–6 who:

Have asked for a particular video or DVD:	70%
Have put a video/DVD in by themselves:	49%
Own 20 or more videos:	53%
Have had a "Baby Einstein" video:	27%



Survey Topline Results

Princeton Survey Research Associates for the Kaiser Family Foundation

N=1,065 parents of children aged 6 months to 6 years

Margin of error: Plus or minus 3 percentage points

Interview Dates: April 11–June 9, 2003

NOTE: Because percentages are rounded, they may not total 100%. An asterisk (*) indicates a value of less than .5%

PARENT INTRODUCTION: Hello, my name is _____ and I'm calling for Princeton Survey Research. We're conducting an important national opinion survey about what life is like for American families today.

Before we start, I need to confirm that you are the parent, stepparent or guardian of one or more children aged six months to six years who live with you. Is this correct? For my next questions, I'd like you to think about your (youngest/oldest) child who is six months to six years of age.

Q.1 Is this child a boy or a girl?

Boy (Son):	51
Girl (Daughter):	49
Refused:	0

Q.2 And what is this child's current age?

Less than one year (six months to 11 months):	6
One (12 months to 23 months):	17
Two:	16
Three:	17
Four:	16
Five:	16
Six:	12
Refused:	*

Q.3 Could you please tell me this child's first name?

Gave name:	97
Did not give name:	3

Q.4 Is (INSERT NAME) now in any kind of child care, day care, school or preschool OUTSIDE the home?

Q.5 In an average week, about how many hours does (he/she) spend outside the home in childcare, day care, school, or preschool?

Total in day care/school:	55
Ten hours or less per week:	14
11 to 20 hours per week:	11
21 hours or more per week:	29
Hours per week not specified:	1
Total not in day care/school:	45
Don't know/Refused:	*

Q.6 How much time did you personally spend with (him/her) YESTERDAY?

Q.7 [If Q6=less than “most of the day”; N=311] Was the amount of time you spent with your child yesterday typical for a (weekday/Saturday/Sunday), or not?

Q.7a [If NO to Q7; N=80] For the next series of questions, I’d like you to think back to the LAST day you and your child followed your typical routine. What day of the week was that?

Q.7b. How much time did you personally spend with your child on that day?

Yesterday/target day	
Total Weekday:	74
Monday:	12
Tuesday:	13
Wednesday:	20
Thursday:	13
Friday:	15
Total Weekend:	25
Saturday:	9
Sunday:	16
Undetermined:	*
Time spent with child yesterday/ target day	
All or almost all of the day:	55
Most of the day:	21
Only part of the day:	23
No time at all:	1
Don't know/Refused:	*

Q.8 We’re interested in what kinds of things (INSERT NAME) did YESTERDAY/on the LAST day you followed your typical routine. As best you can recall, please tell me which, if any, of the following activities your child did (yesterday/on that day). IF CHILD YOUNGER THAN THREE, READ: If it’s something your child is too young to do, just tell me and I’ll move on to the next item.

Did your child spend any time (INSERT; RANDOMIZE) (yesterday/on that day)?

	Yes	No	(VOL) Child too young to do this	DK/Ref
a. Watching TV:	73	25	2	*
b. Watching a video or DVD:	46	52	2	*
c. Listening to music, including while riding in the car:	79	20	1	*
d. Playing outside:	83	16	1	*
e. Reading or being read to:	79	20	1	*
f. Playing video games like X-Box or Playstation:	8	72	20	*
g. Playing hand-held video games like Gameboy:	3	77	20	*
h. Playing inside with toys:	90	9	1	*
i. Playing computer games:	14	70	16	1
j. Using a computer for something other than games:	7	76	17	1
Total played video games:	9			
Total used computer:	18			
Total used screen media:	83			

Q.9 We're interested in how much TIME your child spent doing these activities (yesterday/on that day). About how much time did your child spend (INSERT ITEMS FROM Q.8) (yesterday/on that day)?

NOTE: Response categories were 5 minutes, 15 minutes, 30 minutes, 45 minutes, 1 hour, 1½ hours and up, in half-hour increments.

	More than 2 Hours	1-2 Hours	Less than 1 Hour	DK/Ref	Mean Hours for Children Who Did This	Did Not Do This	Mean Hours for All Children
a. Watching TV:	9	44	17	2	1:29	27	1:05
b. Watching a video or DVD:	4	30	10	2	1:26	54	0:38
c. Listening to music, including while riding in the car:	9	32	36	1	1:16	21	0:59
d. Playing outside:	33	39	9	1	2:27	17	2:01
e. Reading or being read to:	2	28	49	*	0:49	21	0:39
f. Playing video games like X-Box or Playstation:	*	3	4	1	0:55	92	0:04
g. Playing hand-held video games like Gameboy:	*	1	2	*	0:38	97	0:01
h. Playing inside with toys:	37	39	10	3	2:39	10	2:23
i. Playing computer games:	*	5	8	1	0:55	86	0:07
j. Using a computer for something other than games:	*	1	4	1	0:41	93	0:02
Total video games:	1	3	4	1	1:01	91	0:05
Total computer:	1	6	9	1	0:59	82	0:10
Total screen use:	32	39	11	1	2:22	17	1:58

Q.10 Now, thinking about the time your child spent watching TV or videos (yesterday/on that day), did your child do any of that in their bedroom, or not?

Yes: 20
No: 61
Child didn't watch TV/videos/DVDs: 19
Don't know/Refused: *

Q.11 Did your child watch TV or videos MOSTLY in their bedroom, or MOSTLY in another room?

Watched TV mostly in bedroom: 10
Watched TV mostly in
another room: 70
(VOL) Half and half: 1
Child didn't watch TV/videos/DVDs: 19
Don't know where child
watched TV/Refused: *

Q.12 For MOST of the time (INSERT NAME) was watching TV, was someone else also watching TV, or was (he/she) doing this alone?

Mostly with someone else: 69
Mostly alone: 11
Child didn't watch TV/videos/DVDs: 19
Don't know/Refused: 1

Q.13 When your child was watching TV or videos (yesterday/on that day), was a parent in the room:

The whole time: 26
Most of the time: 30
About half the time: 15
Less than half the time: 6
Not at all: 4
Child didn't watch TV/videos/DVDs: 19
Don't know/Refused: *

Q.14 Now, thinking about the time your child spent playing video games (yesterday/on that day), did your child do any of that in their bedroom, or not?

Yes:	3
No:	6
Child didn't play video games:	91
Don't know/Refused:	0

Q.15 Did your child play video games MOSTLY in their bedroom, or MOSTLY in another room?

Played video games mostly in bedroom:	2
Played video games mostly in another room:	6
(VOL) Half and half:	*
Child didn't play video games:	91
Don't know where child played video games/Refused:	*

Q.16 For MOST of the time (INSERT NAME) was playing video games, was someone else playing with (him/her), or was (he/she) doing this alone?

Mostly with someone else:	6
Mostly alone:	3
Child didn't play video games:	91
Don't know/Refused:	*

Q.17 When your child was playing video games (yesterday/on that day), was a parent in the room:

The whole time:	2
Most of the time:	2
About half the time:	1
Less than half the time:	2
Not at all:	1
Child didn't play video games:	91
Don't know/Refused:	*

Q.18 Now, thinking about the time your child spent using a computer (yesterday/on that day), did your child do any of that in their bedroom, or not?

Yes:	3
No:	15
Child didn't use computer:	82
Don't know/Refused:	*

Q.19 Did your child use a computer MOSTLY in their bedroom, or MOSTLY in another room?

Used computer mostly in bedroom:	2
Used computer mostly in another room:	15
(VOL) Half and half:	*
Child didn't use computer:	82
Don't know where child used computer/Refused:	*

Q.20 For MOST of the time (INSERT NAME) was using a computer, was someone else using the computer with (him/her), or was (he/she) doing this alone?

Mostly with someone else:	9
Mostly alone:	7
Child didn't use computer:	82
Don't know/Refused:	1

Q.21 When your child was using a computer (yesterday/on that day), was a parent in the room:

The whole time:	7
Most of the time:	4
About half the time:	2
Less than half the time:	2
Not at all:	2
Child didn't use computer:	82
Don't know/Refused:	1

Q.22 Now I have a few questions about the electronic items in your household, including any that are in your bedroom or a child's bedroom. In answering, please don't count anything that is not hooked up or is put away in storage. How many televisions, if any, do you have in your household?

None:	1
One:	14
Two:	36
Three:	29
Four:	13
Five:	5
Six or more:	3
Don't know/Refused:	0
Mean TVs in household:	2.65

Q.22a Do you have cable or satellite TV?

Total households with television:	99
Have cable/satellite:	78
Do not have cable/satellite:	21
Don't know/Refused:	0
No TV in household:	1

Q.23 Do you have any (INSERT IN ORDER) in your household?

Q.24 How many?

	0	1	2	3	4	5	6+	DK/ Ref	Mean
a. VCRs or DVD players:	5	23	34	22	11	3	2	0	2.33
b. Video-game players like X-box or Playstation:	50	34	10	3	1	*	*	*	.75
c. Hand-held video game players like Gameboy:	68	19	10	2	1	*	*	*	.51

Q.25 How many (INSERT IN ORDER) do you have in your household?

	0	1	2	3	4	5	6+	DK/ Ref	Mean
a. Radios:	2	26	29	20	13	6	5	0	2.55
b. Music CD or audiocassette players:	6	30	29	16	7	4	6	1	2.24

Q.26 Does your household subscribe to any (INSERT IN ORDER)?

	Yes	No	DK/ Ref
a. Newspapers:	34	66	*
b. News magazines like Time or Newsweek:	15	85	*
c. Parenting magazines:	35	64	*
d. Children's magazines:	39	60	*

Q.27 When someone is at home in your household, how often is the TV on, even if no one is actually watching it:

Always:	14
Most of the time:	23
About half of the time:	29
Less than half of the time:	17
Hardly ever:	13
Never:	4
No TV in household:	1
Don't know/Refused:	0

Q.28 How often is the TV on when your family is eating meals?

Always:	18
Most of the time:	17
About half of the time:	15
Less than half of the time:	9
Hardly ever:	15
Never:	26
No TV in household:	1
Don't know/Refused:	*

Q.29 Do you have any computers in your household? This would include laptops as well as desktop computers.

Q.30 How many?

None:	27
One:	48
Two:	17
Three:	5
Four:	2
Five:	1
Six or more:	1
Don't know/Refused:	0
Mean computers in household:	1.12

Q.31 Do you have Internet access on your home computer/any of your home computers?

Q.32 Do you have high-speed Internet access such as a cable or DSL hook-up, or is your Internet access through a dial-up telephone modem?

Total have Internet access:	63
Have high-speed Internet access:	20
Have dial-up Internet access:	42
Don't know what kind of Internet access/Ref:	1
Have computer but no Internet access:	11
No computer in household:	27

READ: For my next questions, I'd like you to think again about (INSERT NAME)/the child we talked about earlier.

Q.33 When you're at home with (INSERT NAME) and you have something important to do, how likely are you to sit (him/her) down with a video or TV show while you get it done?

Very likely:	16
Somewhat likely:	29
Not too likely:	26
Not at all likely:	27
No TV in household:	1
Don't know/Refused:	1

Q.34 When your child is playing and the TV is on in the background, how frequently does it distract (his/her) attention from what (he/she) is doing? Does this happen:

Often:	14
Sometimes:	39
Hardly ever:	31
Never:	13
(VOL) TV is never on in background:	2
No TV in household:	1
Don't know/Refused:	1

Q.35 We'd like to know how often, if ever, your child does each of the following things. Again, if it's something your child is too young to do, just tell me and I'll move on to the next item. How often does your child (INSERT IN ORDER)? Every day, several times a week, several times a month, less often, or has your child NEVER done this?

	Every day	Several times a week	Several times a month	Less often	Never	(VOL) Child too young	(VOL) Child not allowed	DK/Ref	Total done/ never done
a. Watch television:	63	20	3	5	5	3	0	*	92/8
b. Listen to music:	66	23	2	6	2	1	0	*	97/3
c. Play video games like X-Box or Playstation:	3	10	5	9	51	21	*	*	28/72
d. Play hand-held video games like Gameboy:	2	5	4	6	63	20	*	0	17/83
e. Read a book alone or with someone else:	65	26	3	1	2	3	0	*	95/5
f. Watch videos or DVDs	25	37	18	9	9	3	0	*	88/12
g. Play computer games:	5	18	11	10	41	16	*	*	44/56
h. Use a computer for something other than games:	3	7	5	7	60	17	*	1	22/78
Total play video games:	4	11	6	9	49	20	1	*	30/70
Total use a computer:	7	20	12	10	33	17	1	1	48/52

Q.36 Please tell me if you have any rules for (INSERT NAME) about each of the following. (First,) do you have any rules about (INSERT; ROTATE):

	Yes	No	DK/Ref
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Items a-b based on parents of children who ever watch TV [N=978]

a. What your child can or can't watch on TV:	90	9	1
b. How much time your child can spend watching TV:	69	30	1

Items c-d based on parents of children who ever use computer [N=526]

c. What your child can or can't do on the computer:	79	19	3
d. How much time your child can spend on the computer:	61	36	3

Items e-f based on parents of children who ever play video games [N=316]

e. What video games your child can play:	87	12	*
f. How much time your child can spend playing video games:	76	23	1

Q.37 In general, how often are these kinds of rules enforced in your household? Are they enforced:

Based on children who use screen media [N=991]

All of the time:	54
Most of the time:	34
Only sometimes:	4
Hardly ever:	2
Parents have no rules for screen use:	7
Don't know/Refused:	1

Q.38 Is there a TV in (INSERT NAME)'s bedroom, even it doesn't get any channels and is used only for videos or video games?

Yes: 36
 No: 63
 No TV in household: 1
 Don't know/Refused: 0

Q.39 Does the TV in your child's room:

Get some cable or satellite channels: 15
 Get only regular channels: 9
 Is it just used for watching videos or playing games: 11
 (VOL) TV not currently used/not currently working: 1
 No TV in child's room: 63
 No TV in household: 1
 Don't know/Refused: 0

Q.40 Please tell me if your child has any of the following items in their bedroom. (First,) what about... (INSERT IN ORDER):

	Yes	No	DK/ Ref
a. A VCR or DVD player:	27	73	0
b. A video game player like X-box or Playstation:	10	90	0
c. A music CD or audiocassette player:	42	57	*
d. A radio:	46	55	*
e. A telephone:	10	90	0
f. A computer:	7	94	0

Q.41 Does the computer in your child's bedroom have Internet access?

Yes: 3
 No: 2
 No computer in child's room: 67
 No computer in household: 27
 No Internet access in household: 2
 Don't know/Refused: 0

Q.42 Please tell me if (INSERT NAME) has any of the following things; it doesn't matter whether they are kept in their bedroom or not. (First,) does your child have (INSERT IN ORDER):

	Yes	No	DK/ Ref
a. Building toys such as blocks or Legos:	90	10	0
b. Any talking book toys like LeapPad:	76	23	1
c. A TOY cell phone:	63	37	*
d. A TOY computer:	40	60	*
e. A TV remote designed especially for children:	9	90	*

Q.43 We're interested in whether your child has any products based on characters from TV, movies or video games. Does your child have any (INSERT; RANDOMIZE) based on characters (from TV, movies or video games)?

	Yes	No	DK/Ref
a. Clothes:	79	20	*
b. Dolls, stuffed animals or action figures:	87	13	*
c. Books:	89	11	*
d. Bedding or beach towels:	60	40	*
e. Other products I haven't already mentioned:	36	62	2
Total who have any of these items:	97		

Q.44 Please tell me if (INSERT NAME) has EVER done each of the following things. (First/Next),... (INSERT IN ORDER). Has your child ever done this?

	Yes	No	DK/Ref	Child Doesn't Watch TV	
a. Turn on the TV by themselves:	77	15	*	8	
b. Change the channels with a TV remote:	62	29	*	8	
c. Ask to watch a particular TV show or channel:	67	24	*	8	
	Yes	No	DK/Ref	Child Doesn't Watch Video/DVDs	
d. Ask to watch a particular video or DVD:	71	18	0	12	
e. Put in a video or DVD by themselves:	50	39	0	12	
	Yes	No	DK/Ref	Child Doesn't Listen to Music	
f. Put a CD or audiocassette into a player by themselves:	36	61	*	3	
	Yes	No	DK/Ref	Child Doesn't Use a Computer	
g. Use a computer WITHOUT sitting on a parent's lap:	33	14	1	52	
h. Turn on a computer by themselves:	23	24	2	52	
i. Use a mouse to point and click:	40	7	1	52	
j. Put a CD-ROM into the computer:	23	23	1	52	
k. Look at websites for children:	20	26	2	52	
	Yes	No	DK/Ref	Child Doesn't Use a Computer	Child Doesn't Visit Websites
l. Ask to go to a particular website:	12	8	0	52	28
m. Go to a particular website on their own:	4	16	*	52	28
	Yes	No	DK/Ref	Child Doesn't Use a Computer	
n. Send email with help from a parent or someone else:	10	37	1	52	
o. Send email by themselves:	1	47	1	52	

Q.45 Please tell me AT WHAT AGE (INSERT NAME) FIRST did each of the following things?

	LT 6 mos	6-11 mos	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	DK/Ref	Child Does Not Do This	Child Does Not Watch TV	Mean Age Started	
a. Watch television:	12	21	29	18	6	1	*	0	4	N/A	8	1 yr 2 mos	
b. Turn on the TV by themselves:	1	6	21	20	16	8	3	*	2	15	8	2 yrs 1 mo	
c. Change the channels with a TV remote:	1	4	14	12	11	11	6	1	2	29	8	2 yrs 5 mos	
d. Ask to watch a particular TV show or channel:	0	1	10	21	18	10	4	*	2	25	8	2 yrs 7 mos	
	LT 6 mos	6-11 mos	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	DK/Ref	Child Does Not Do This	Child Does Not Watch Video/ DVDs	Mean Age Started	
e. Watch a video or DVD:	6	9	19	26	16	7	2	*	3	N/A	12	1 yr 11 mos	
f. Ask to watch a particular video or DVD:	0	1	12	24	21	10	3	*	1	18	12	2 yrs 6 mos	
g. Put in a vide or DVD by themselves:	0	1	6	8	13	12	7	1	1	39	12	3 yrs 1 mo	
	LT 6 mos	6-11 mos	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	DK/Ref	Child Does Not Do This	Child Does Not Listen to Music	Mean Age Started	
h. Put a CD or audiocassette into a player by themselves:	0	1	3	6	7	9	6	1	2	61	3	3 yrs 2 mos	
	LT 6 mos	6-11 mos	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	DK/Ref	Child Does Not Do This	Child Does Not Use a Computer	Mean Age Started	
i. Use a computer while sitting on a parent's lap:	1	1	5	14	12	8	3	*	4	N/A	52	2 yrs 8 mos	
j. Use a computer WITHOUT sitting on a parent's lap:	0	*	1	3	9	10	6	1	1	15	52	3 yrs 6 mos	
k. Turn on a computer by themselves:	*	*	2	3	6	5	6	1	1	25	52	3 yrs 5 mos	
l. Use a mouse to point and click:	0	*	2	6	12	11	7	1	*	8	52	3 yrs 4 mos	
m. Put a CD-ROM into the computer:	0	*	1	2	7	6	6	2	*	25	52	3 yrs 8 mo	
n. Look at websites for children:	0	*	1	3	5	4	5	1	*	28	52	3 yrs 4 mos	
	LT 6 mos	6-11 mos	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	DK/Ref	Child Does Not Do This	Child Does Not Use a Computer	Child Does Not Visit Website	Mean Age Started
o. Ask to go to a particular website:	*	*	*	1	3	4	3	1	*	8	52	28	3 yrs 8 mos
p. Go to a particular website on their own:	0	0	0	*	1	1	1	1	*	16	52	28	4 yrs
	LT 6 mos	6-11 mos	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	DK/Ref	Child Does Not Do This	Child Does Not Use a Computer	Mean Age Started	
q. Send email with someone's help:	0	*	*	1	2	2	3	*	*	38	52	3 yrs 9 mos	
r. Send email by themselves:	0	0	*	0	*	*	*	0	*	47	52	3 yrs 2 mos	
s. Play computer games, even if it was while on your lap:	*	1	3	10	12	10	4	1	2	57	N/A	3 yrs	
	LT 6 mos	6-11 mos	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	DK/Ref	Child Does Not Do This	Mean Age Started		
t. Play video games like X-Box or Playstation:	*	*	*	3	6	9	6	1	2	72	3 yrs 7 mos		
u. Play hand-held video games like Gameboy:	0	*	*	2	3	5	4	1	2	83	3 yrs 8 mos		

Q.46 Does your child know how to read?

Based on children 2 and older [N=823]

Yes:	32
No:	68
Don't know/Refused:	*

Q.47 How old was your child when they learned to read?

Less than one year old (less than 12 months):	*
One year old (12 months to 23 months):	*
Two years old:	1
Three years old:	4
Four years old:	7
Five years old:	9
Six years old:	2
Child doesn't read:	52
Child younger than two:	23
Don't know/Refused:	*

Q.48 In total, about how many computer games does (he/she) have, including any that are shared with brothers or sisters? (READ IF NECESSARY)

None:	4
One or two:	5
Three to five:	10
Six to ten:	9
Ten to 19:	7
20 to 49:	5
50 or more:	1
Child doesn't play computer games:	57
Don't know/Refused:	2

Q.49 Does your child have any of the following at home (INSERT IN ORDER)?

	Yes	No	DK/Ref	Child Doesn't Use Computer
a. A computer mouse designed especially for children:	5	43	*	52
b. A computer keyboard or keyboard topper designed for children:	7	41	*	52

Q.50 In total, about how many videos do you have at home for (INSERT NAME), counting both VHS tapes and DVDs and including any shared with brothers or sisters? (READ IF NECESSARY)

None:	1
One or two:	3
Three to five:	6
Six to ten:	9
Ten to 19:	16
20 to 49:	30
50 or more:	23
Child doesn't watch videos/DVDs:	12
Don't know/Refused:	*

Q.51 Have they ever had any “Baby Einstein” videos like “Baby Bach” or “Baby Mozart”?

Yes:	27
No:	59
Child doesn't have any videos/DVDs:	2
Child doesn't watch videos/DVDs:	12
Don't know/Refused:	1

Q.52 In total, about how many video games does (INSERT NAME) have at home, including any shared with brothers or sisters? (READ IF NECESSARY)

None:	4
One or two:	4
Three to five:	7
Six to ten:	6
Ten to 19:	5
20 to 49:	3
50 or more:	1
Child doesn't play video games:	69
Don't know/Refused:	*

Q.53 In total, about how many children's books does (INSERT NAME) have at home, including any shared with brothers or sisters? (READ IF NECESSARY)

None:	1
One or two:	1
Three to five:	3
Six to ten:	4
Ten to 19:	7
20 to 49:	24
50 or more:	59
Don't know/Refused:	1

Q.54 Have you ever noticed your child (ROTATE)?

	Yes	No	DK/Ref	Child Doesn't Watch TV
a. Imitating aggressive behavior from a TV show like hitting or kicking:	33	57	1	8
b. Imitating positive behavior from a TV show like sharing or helping:	71	19	2	8

Q.55 Which one of these have you seen your child do MORE OFTEN—imitate aggressive behavior or imitate positive behavior?

Child imitates positive behavior more often:	58
Child imitates aggressive behavior more often:	12
(VOL) Both equally:	3
Child doesn't imitate behavior from TV:	18
Child doesn't watch TV:	8
Don't know/Refused:	1

Q.56 In general, do you think (INSERT; ROTATE) mostly helps or mostly hurts children's learning—or doesn't have much effect either way?

	Mostly Helps	Mostly Hurts	Not Much Effect	DK/Ref
a. Watching TV:	43	27	21	9
b. Using a computer:	72	5	12	11
c. Playing video games:	22	40	27	12

Q.57 Now I have a question about children's intellectual development—things like learning words and counting. Please tell me how important, if at all, you think each of the following is in helping the intellectual development of children (INSERT NAME)'s age. (First,) how important is (INSERT; RANDOMIZE WITHIN)? Very important, somewhat important, not too important, or not at all important?

	Very Important	Somewhat Important	Not too Important	Not at all Important	DK/Ref
a. Reading books:	96	3	*	*	*
b. Building toys like blocks or Legos:	77	20	2	1	1
c. Doing puzzles:	74	21	3	1	1
d. Using educational toys like talking books:	62	30	6	2	1
e. Watching educational TV shows like "Sesame Street":	58	34	5	2	1
f. Watching educational videos or DVDs:	49	39	8	3	1
g. Playing educational computer games:	43	36	9	6	5
h. Visiting educational websites:	31	36	16	9	9

Q.58 Which of the following do you think is MOST important to children's intellectual development?

Books:	66
Something else:	32
Educational toys like talking books:	8
Building toys like blocks or Legos:	6
Educational TV shows:	5
Educational videos or DVDs:	4
Educational computer games:	3
Puzzles:	2
Educational websites:	*
(VOL) Something else/None of these:	4
Don't know/Refused:	3

Q.59 Thinking about all the children under age 18 who live with you, is (INSERT NAME) the youngest child, the oldest child or a middle child?

Only child:	30
Youngest child:	51
Middle child:	8
Oldest child:	12
Don't know/Refused:	*

Demographics:

D1. Parent Gender

Male (Father):	19
Female (Mother):	81

D2. Now I have a few questions so that we can describe the parents who took part in our survey.

Are you NOW employed full-time, part-time, are you retired or are you not employed for pay?

Full-time:	43
Part-time:	19
Retired:	1
Not employed:	31
Homemaker:	5
Student:	1
Disabled:	1
Refused:	*

D3. Are you married, LIVING as married, divorced, separated, widowed or have you never been married?

Married:	69
Living as married:	6
Divorced:	6
Separated:	3
Widowed:	1
Never married/Single:	15
Refused:	*

D4. Is your husband/wife or partner NOW employed full-time, part-time, retired or not employed for pay?

Based on those who are married or living as married (N=837)

Full-time:	86
Part-time:	7
Retired:	1
Not employed:	5
Homemaker:	*
Student:	*
Disabled:	*
Refused:	*

D5. What is the LAST grade or class that you COMPLETED in school?

None, or grades 1–8:	4
High school incomplete (grades 9–11):	10
High school graduate (grade 12 or GED certificate):	29
Business, technical or vocational school after high school:	4
Some college, no 4-year degree:	25
College graduate (B.S., B.A. or other 4-year degree):	20
Post-graduate training or professional schooling after college (e.g., toward a master's degree or Ph.D.; law or medical school):	7
Don't know:	*
Refused:	*

D6. What is the LAST grade or class your (husband/wife/partner) COMPLETED in school?

Based on those who are married or living as married (N=837)

None, or grades 1–8:	4
High school incomplete (grades 9–11):	7
High school graduate (grade 12 or GED certificate):	30
Business, technical or vocational school after high school:	4
Some college, no 4-year degree:	20
College graduate (B.S., B.A., or other 4-year degree):	21
Post-graduate training or professional schooling after college (e.g., toward a master's degree or Ph.D.; law or medical school):	11
Don't know:	1
Refused:	*

D7. What is your age?

Under 30:	36
30–39:	46
40–49:	15
50 and older:	3
Refused:	1

D8. Last year, in 2002, what was your TOTAL household income from all sources, BEFORE taxes? Just stop me when I get to the right category. (READ)

Less than \$10,000:	7
\$10,000 to under \$20,000:	11
\$20,000 to under \$30,000:	16
\$30,000 to under \$50,000:	22
\$50,000 to under \$75,000:	16
\$75,000 to under \$100,000:	9
\$100,000 or more:	10
Don't know:	4
Refused:	4

D9. Are you, yourself, of Hispanic or Latino background, such as Mexican, Puerto Rican, Cuban or some other Spanish background?

D10. What is your race? Are you white, black, Asian or some other race?

White, Non-Hispanic:	61
Total Non-White:	38
Black or African American:	14
Hispanic:	18
Asian:	3
Other or mixed race:	3
Undesignated:	1

D11. Is any language other than English spoken in your household?

Yes:	31
Spanish:	23
No:	68
Don't know/Refused:	*

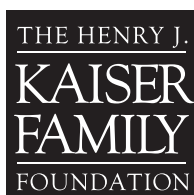
END OF INTERVIEW: That completes the interview. Thank you very much for your time and cooperation.



Methodology

This report is based on the results of a nationally representative, random-digit dial telephone survey of 1,065 parents of children ages six months to six years old, conducted from April 11 to June 9, 2003. The survey was designed and analyzed by staff at the Kaiser Family Foundation, the University of Texas and Princeton Survey Research (PSR). The interviews were conducted in English and Spanish by Princeton Data Source, LLC. The margin of sampling error for the complete set of weighted

data is $\pm 3\%$. The total sample design effect for this survey is 1.06. As many as ten attempts were made to contact every sampled telephone number. Calls were staggered over times of day and days of the week. In each eligible household, interviewers asked to speak with the parent who spends the most time with the target child. In households where neither parent spends more time with the child, one was chosen at random for interviewing. The response rate for this survey was 40 percent.



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