



RESEARCH CITATIONS AND NOTES

HIGHLIGHTS FOR FAMILIES WITH INFANTS AND YOUNG CHILDREN

In order to thrive, young children need healthy food, shelter, and plenty of positive interactions with the people who love them. They benefit from being talked to, read to, and played with. Children learn best from hands-on, creative play. They also need time outside and with nature. These early experiences build important life skills like creativity, compassion, curiosity, and constructive problem solving.

- See Schonkoff, J. & Phillips, D. (Eds.) (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: The National Academies Press; and Healy, J. (2004). *Brain development and learning from birth to adolescence* (3rd ed.). New York, NY: Three Rivers Press. For the benefits of time in nature, see Louv, R. (2008). *Last child in the woods: Saving our children from nature deficit disorder* (expanded and revised ed.). New York, NY: Algonquin Press. For more information about how time in nature benefits children, the Children and Nature Network has a series of monographs summarizing research on the declining time children spend in nature, and the benefits of being connected to nature. Retrieved September 21, 2012, from: <http://www.childrenandnature.org/documents/C118/>

There's no evidence that screen time helps children under 2.

- American Academy of Pediatrics Council on Communications (2011). Media use by children younger than 2 years. *Pediatrics*, 128(5), pp. 1040-1045.

Some studies show that it can even delay learning new words and upset babies' sleep.

- Chonchaiya, W. & Pruksananonda, C. (2008). Television viewing associates with delayed language development. *Acta Paediatrica*, 97(7), pp. 977-982.
- Thompson, D. A. & Christakis, D. (2005). The association between television viewing and irregular sleep schedules among children less than 3 years of age. *Pediatrics*, 116(10), pp. 851-856.

For children over 3, limited use of thoughtfully produced screen media can contribute to learning, especially when a caring adult is involved.

- Kirkorian, H. L., Wartella, E. A., & Anderson, D. R. (2008). Media and young children's learning. *Future of Children*, 18(1), pp. 39-61.
- Bittman, M., Rutherford, L., Brown, J., & Unsworth, L. (2011). Digital natives? New and old media and children's outcomes. *Australian Journal Of Education*, 55(2), pp. 161-175; American Academy of Pediatrics Council on Communications (2009). Media violence. *Pediatrics*, 124, pp. 1495-1503.

The American Academy of Pediatrics recommends avoiding screen time for children under 2 and suggests limiting screen time for children 2 and older to no more than 1-2 hours per day.

- American Academy of Pediatrics Council on Communications and Media (2010). Media education. *Pediatrics*, 126(5), pp. 1012-1017

The more time our youngest children spend with screens, the less time they spend interacting with caring adults and in hands-on, creative play, two activities proven to be important for learning.

- Vandewater, E. A., Bickham, D. S., & Lee, J. H. (2006). Time well spent? Relating television use to children's free-time activities. *Pediatrics*, 117(2), pp. 181-191.

- Mendelsohn, A. L., Berkule, S. B., Tomopoulos, S., Tamis-LeMonda, C. S., Huberman, H. S., Alvir, J., & Dreyer, B. P. (2008). Infant television and video exposure associated with limited parent-child verbal interactions in low socioeconomic status households. *Archives of Pediatric and Adolescent Medicine*, 162(5), pp. 411-417.
- Kirkorian, H. L., Pempek, T. A., Murphy, L. A., Schmidt, M. E., & Anderson, D. R. (2009). The impact of background television on parent-child interaction. *Child Development*, 80(5), pp. 1350-1359.
- See Vibbert, M. M. & Meringof, F. L. K. (1981). *Children's production and application of story imagery: A cross-medium investigation* (Tech.Rep. No. 23). Cambridge, MA: Harvard University, Project Zero. See also Valkenberg, P. M. (2001). Television and the child's developing imagination. In D. G. Singer & J. L. Singer (Eds.), *Handbook of children and the media*, pp. 121-134. Thousand Oaks, CA: Sage Publications.

Too much screen time is linked to learning, attention, and social problems, childhood obesity and sleep disturbances. It also exposes kids to lots of harmful advertising.

- Pagani, L., Fitzpatrick, C., Barnett, T. A., & Dubow, E. (2010). Prospective associations between early childhood television exposure and academic, psychosocial, and physical well-being by middle childhood. *Archives of Pediatric and Adolescent Medicine*, 164(5), pp. 425-431. Retrieved February 7, 2012, from: <http://archpedi.ama-assn.org/cgi/reprint/164/5/425.pdf>
- Swing, E. S., Gentile, D. A., Anderson, C. A., & Walsh, D.A. (2010). Television and video game exposure and the development of attention problems. *Pediatrics*, 126(8), pp. 214-221.
- Wijga, A. H., Scholtens, S., Bemelmans, W. J., Kerkhof, M., Koppelman, G. H., Brunekreef, B., & Smit, H. A. (2010). Diet, screen time, physical activity, and childhood overweight in the general population and in high risk subgroups: Prospective analyses in the PIAMA birth cohort. *Journal of Obesity*, 2010. Retrieved March 2, 2012, from: <http://www.hindawi.com/journals/jobes/2010/423296/>
- Thompson, D. A. & Christakis, D. (2005). The association between television viewing and irregular sleep schedules among children less than 3 years of age. *Pediatrics*, 116(10), pp. 851-856.
- Barlett, N. D., Gentile, D. A., Barlett, C. P., Eisenmann, J. C., & Walsh, D. (2012). Sleep as a mediator of screen time effects on children's health outcomes. *Journal of Children and Media*, 6(1), pp. 37-50.
- Institute of Medicine of the National Academies (2006). *Food marketing to children and youth: Threat or opportunity?*, p. 2. Washington, DC: The National Academies Press.
- Hargreaves, D. & Tiggemann, M. (2002). The effect of television commercials on mood and body dissatisfaction: The role of appearance-schema activation. *Journal of Social and Clinical Psychology*, 21(3), pp. 287-308.
- Becker, A. E., Burwell, R. A., Herzog, P. H., & Gilman, S. E. (2002). Eating behaviors and attitudes following prolonged exposure to television among ethnic Fijian adolescent girls. *British Journal of Psychiatry*, 180, pp. 509-514.
- American Psychological Association, Task Force on the Sexualization of Girls (2007). *Report of the APA Task Force on the Sexualization of Girls*, p. 3. Washington, DC: American Psychological Association. Retrieved March 25, 2008, from: www.apa.org/pi/wpo/sexualization.html
- American Academy of Pediatrics (2000, July 26). Joint statement on the impact of entertainment violence on children. Congressional Public Health Summit. Retrieved February 9, 2008, from: <http://www.aap.org/advocacy/releases/jstmtevc.htm>
- Buijzen, M. & Valkenburg, P. M. (2003). The effects of television advertising on materialism, parent-child conflict, and unhappiness: A review of research. *Applied Developmental Psychology*, 24(4), pp. 437-456.
- Federal Trade Commission (1999). *Self-regulation in the alcohol industry: A review of industry efforts to avoid promoting alcohol to underage consumers*, p. 4. Washington, DC: Federal Trade Commission.
- National Cancer Institute (2001, November). Changing adolescent smoking prevalence. *Smoking and Tobacco Control Monograph*, No.14, NIH Pub. # 02-5086.

- Greenfield, P. M., Yut, M., Chung, M., Land, D., Kreider, H., Pantoja, M., & Horsely, K. (1993). The program-length commercial. In G. Berry & J. Keiko (Eds.), *Children and television: Images in a changing sociocultural world*, pp. 53-72. Newbury Park, CA: Sage.

Screen media can be habit-forming. Young children who spend more time with screens have a harder time turning them off when they get older.

- See Carr, N. (2010). *The shallows: What the Internet is doing to our brains*, p. 34. New York, NY: Norton.
- Christakis, D. & Zimmerman, F. (2006). Early television viewing is associated with protesting turning off the television at age 6. *Medscape General Medicine*, 8(2), p. 63.

Even a little exposure to violent, sexualized, stereotyped, or commercialized content can be harmful to children.

- American Academy of Pediatrics Council on Communications (2009). Media violence. *Pediatrics* 124, pp. 1495-1503.
- Mössle, T., Kleimann, M., Rehbein, F., & Pfeiffer, C. (2010). Media use and school achievement--boys at risk? *British Journal of Developmental Psychology*, 28(3), pp. 699-725.

For preschoolers, watching just 20 minutes of a fast-moving cartoon show can have a negative impact on attention, the ability to delay gratification, self-control, and problem solving.

- Lillard, A. S. & Peterson, J. (2011). The immediate impact of different types of television on young children's executive function. *Pediatrics*, 128(4), pp. 644-649.

Hands-on exploration and play, however, are important for later problem-solving skills in engineering and other fields.

- Brown, S. & Vaughan, C. (2009). *Play: How it shapes the brain, opens the imagination, and invigorates the soul*, pp. 9-11. New York, NY: Avery-Penguin.

Electronic books in which screen images respond to touch are less likely literacy than traditional books to bring about the kind of adult-child interactions that promote.

- Parish-Morris, J., Hirsh-Pasek, K., Golinkoff, R. M., & Maller, B. (2008). Electronic console books: Independent effects on dialogic language in parents and children. *Boston University Conference on Language Development*, p. 10.

A recent study found that only 2% of the 10 best-selling apps for young children in Australia, the United States, and the United Kingdom, could be considered open-ended, creative programs.

- Goodwin, K. & Highfield, K. (2012). *iTeach and iLearn—An examination of 'educational' apps*. (Conference report of study of top 10 selling apps in each of three countries—the United States, the United Kingdom, and Australia). Early Education and Technology for Children Conference, 2012. Retrieved September 23, 2012, from: http://www.eetconference.org/wp-content/uploads/Examination_of_educational_apps.pdf