

Preschool

Literacy

- Exposure to child-directed speech – as opposed to overheard speech – sharpens infants' language processing skills, with cascading benefits for vocabulary learning.
Source: Fernald, A. (2014). Retrieved from: <http://news.stanford.edu/news/2014/february/fernald-AAAS-children-021414.html>
- Research has shown critical need to improve the language and pre-literacy experiences that preschool programs provide to children of low-income families. Studies have found that many critical skills, such as vocabulary development, phonological sensitivity, and print knowledge, develop during the preschool years. Many children in poverty have limited access to high-quality preschool experiences and as a result, begin formal schooling with fewer language and pre-literacy skills. We need to train teachers to implement high-quality practices.
Source: Wasik, B.A. & Hindman, A.H. (2011). Improving vocabulary and pre-literacy skills of at-risk preschoolers through teacher professional development. *Journal of Educational Psychology*, 103(2), 455-469.

Media

- Among families with children age 8 and under, there has been a five-fold increase in ownership of tablet devices such as iPads. The percent of children with access to some type of “smart” mobile device at home has jumped from half (52%) to three-quarters (75%) of all children in just two years.
Source: Common Sense Media. (2013). Zero to eight: Children’s media use in America 2013. Retrieved from http://cdn2-d7.ec.common sense media.org/sites/default/files/uploads/about_us/zero-to-eight-20131.pdf
- 38% of children *under 2* have used a mobile device for media (compared to 10% two years ago).
Source: Common Sense Media. (2013). Zero to eight: Children’s media use in America 2013. Retrieved from http://cdn2-d7.ec.common sense media.org/sites/default/files/uploads/about_us/zero-to-eight-20131.pdf
- 58% of children watch TV at least once a day; 17% use mobile devices on a daily basis; 14% are daily computer users; and 6% play video games every day.
Source: Common Sense Media. (2013). Zero to eight: Children’s media use in America 2013. Retrieved from http://cdn2-d7.ec.common sense media.org/sites/default/files/uploads/about_us/zero-to-eight-20131.pdf

- Of the roughly two hours (1:55) average screen media use each day, half (50%) is spent watching on a TV set.
Source: Common Sense Media. (2013). Zero to eight: Children’s media use in America 2013. Retrieved from http://cdn2-d7.ec.common sense media.org/sites/default/files/uploads/about_us/zero-to-eight-20131.pdf
- One-third (36%) of children have TVs in their bedrooms, ranging from 16% of children under 2, to 37% of 2- to 4-year-olds and 45% of 5- to 8-year-olds.
Source: Common Sense Media. (2013). Zero to eight: Children’s media use in America 2013. Retrieved from http://cdn2-d7.ec.common sense media.org/sites/default/files/uploads/about_us/zero-to-eight-20131.pdf
- 38% of all children under 2 have used a smartphone, tablet, or similar device for playing games, watching videos, or engaging in related activities; two years ago, it was only 10%.
Source: Common Sense Media. (2013). Zero to eight: Children’s media use in America 2013. Retrieved from http://cdn2-d7.ec.common sense media.org/sites/default/files/uploads/about_us/zero-to-eight-20131.pdf
- Most parents (58%) say media hasn’t increased or decreased family time. But a quarter (28%) say media contributes to them spending *less* time together and 12% say they spend *more* time together as a family because of the media they use.
Source: Common Sense Media. (2013). Zero to eight: Children’s media use in America 2013. Retrieved from http://cdn2-d7.ec.common sense media.org/sites/default/files/uploads/about_us/zero-to-eight-20131.pdf
- Reading is the least-common activity on multipurpose tablets among all options children have. Children in this survey ages 0-8 read or are read to for just under half an hour a day (:28).
Source: Common Sense Media. (2013). Zero to eight: Children’s media use in America 2013. Retrieved from http://cdn2-d7.ec.common sense media.org/sites/default/files/uploads/about_us/zero-to-eight-20131.pdf
- Evidence is clear that media consumption can contribute substantially to many different risks and health problems, and that children and teens learn from, and may be negatively influenced by, the media. However, media literacy and prosocial uses of media may enhance knowledge, connectedness, and health.
Source: American Academy of Pediatrics. (2013). Children, adolescents, and the media. Retrieved from <http://pediatrics.aappublications.org/content/132/5/958.full.pdf>
- Two-thirds of children and teenagers say their parents have no rules for media use including watching inappropriate content on tv, computer, or other devices, or cell phone use, after hours or otherwise.
Source: American Academy of Pediatrics. (2013). Children, adolescents, and the media. Retrieved from <http://pediatrics.aappublications.org/content/132/5/958.full.pdf>

- Parents should limit entertainment screen time use to >1-2 hours/day; discourage media use for children under 2; keep tvs and internet devices out of children's bedrooms; monitor and co-view tv and other media viewing; establish a family media use plan including a curfew on media at mealtimes and bedtime, and rules surrounding cell and internet usage.

Source: American Academy of Pediatrics. (2013). Children, adolescents, and the media. Retrieved from <http://pediatrics.aappublications.org/content/132/5/958.full.pdf>
- Just 9 minutes of viewing a fast-paced television cartoon has immediate negative effects on 4-year-olds' executive function (attention, working memory, problem solving, self-regulation, and delay of gratification). Executive function is key to positive social and cognitive functioning and is strongly associated with success in school.

Source: Lillard, A. S. & Peterson, J. (2011). The immediate impact of different types of television on young children's executive function. *Pediatrics*, 128(4). Retrieved from: <http://pediatrics.aappublications.org/content/early/2011/09/08/peds.2010-1919>
- Sleep problems amongst children ages 3-5 increased with each additional hour of daily media use, including nightmares, daytime fatigue, and difficulty waking up. Evening media use increased sleep problems even more (likely because television programs contain more violent/scary and adult content), as did consumption of violent media during the daytime. Children with televisions in their bedrooms were also more apt to have sleep problems, likely because screen time increases significantly for these children (and often in the evening).

Source: Garrison, M.N., Liekweg, K., Christakis, D.A. (2011). Media Use and Child Sleep: The Impact of Content, Timing, and Environment. *Pediatrics*, 128(1), 29-35.
- In spite of the fact that three-quarters of the top-selling infant videos make explicit or implicit educational claims, the educational merit of media for children younger than 2 years remains unproven.

Source: Garrison M.M. & Christakis, D.A. (2005). A Teacher in the living room? Educational media for babies, toddlers, and preschoolers. Menlo Park, CA: Kaiser Family Foundation. Retrieved from: www.kff.org/entmedia/upload/7427.pdf
- There is a relationship between early onset and high frequency of TV and video viewing and expressive language delays in children under two years of age.

Source: Zimmerman, F.J., Christakis, D.A., & Meltzoff, A.N. (2007). Associations between media viewing and language development in children under age two years. *The Journal of Pediatrics*. 151(4), 364-368.
- In children younger than 3 years, television viewing is associated with irregular sleep schedules.

Source: Thompson, D.A. & Christakis, D.A. (2005). The association between television viewing and irregular sleep schedules among children less than three years of age. *Pediatrics*, 116(4), 851-856.

- Children younger than 5 years who watch television spend less time in creative play and less time interacting with parents or siblings. For every hour of television that a child younger than 2 years watches alone, he or she spends an additional 52 minutes less time per day interacting with a parent or sibling. For every hour of television, there is 9% less time on weekdays and 11% less time on weekends spent in creative play for a child younger than 2 years.
Source: 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), 181-191.
- The AAP recommends unstructured playtime over any electronic media exposure for brain development. The AAP further recommends that if a parent is not able to actively play with a child, that child should have solo playtime with an adult nearby.
Source: American Academy of Pediatrics (2011). Media use by children younger than 2 Years. *Pediatrics*, 128(5), 1040-1045.
- Children who spend less time watching television in early years tend to do better in school, have a healthier diet, be more physically active, and are better able to engage in schoolwork in later elementary school.
Source: 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 & Adolescent Medicine*, 164(5), 425-431.

Playtime, Downtime, Family Time

- How families manage household responsibilities and chores can impact their happiness. Caretakers report more satisfaction and less stress when family members do chores together; *social bonding* has a powerful impact on psychological well being.
Source: Galovan, A.M., Holmes, E.K., Schramm, D.G., Lee, T.R. (in press). Father involvement, father-child relationship quality, and satisfaction with family work: Actor and partner influences on marital quality. *Journal of Family Issues*. Cited in Rende, R. (2014). *The Misperceptions of Chores: What's Really at Stake?* White paper.
- Research demonstrates that shifting perceptions and motivations away from a “have-to” (which predicts a decline in effort over time) to a “want-to” leads to sustained efforts. In other words, it’s the meaning attached to the actions, not the actions themselves, that matter most.
Source: Inzlicht, M., Schmeichel, B.J., Macrae, C.N. (2014). Why self-control seems (but may not be) limited. *Trends in Cognitive Science*, 18, 127-133.
- Children are *less likely* to help an adult (e.g., by picking up an object that the adult dropped) if they have been given a *material reward* for doing so in the past. A material reward diminishes the intrinsic motivation to help.
Source: Hepach, R., Vaish, A., Tomasello, M. (2013). A new look at children’s prosocial motivation. *Infancy*, 18, 67-90.
- While parental involvement might be the extra boost that students need to build their own confidence and abilities, over-parenting (helicopter parenting) appears to do the converse in creating a sense that one cannot accomplish things socially or in general on one's own.

Source: Bradley-Geist, J.C. & Olson-Buchanan, J.B. (2014). "Helicopter parents: an examination of the correlates of over-parenting of college students". *Education & Training*, 56(4), 314-328.

- Children who spent more time in less-structured activities displayed better self-directed control, even after controlling for age, verbal ability, and household income. By contrast, children who spent more time in structured activities exhibited poorer self-directed EF (executive functioning), controlling for the same factors.
Source: Barker, J.E., Semenov, A.D., Michaelson, L., Provan, L.S., Snyder, H.R., & Munakata, Y. (2014). Less-structured time in children's daily lives predicts self-directed executive functioning. *Frontiers in Psychology*, pub. online. doi: 10.3389/fpsyg.2014.00593
- Children in higher playful learning classrooms are likely getting more modeling of talk and more exposure to sophisticated vocabulary. Children in higher playful learning classrooms are also being engaged in more discussions and being directed less often than children in lower playful learning classrooms.
Source: Hicks, J. (2014). Not "just play": Playful learning, teacher language, and free choice time in head start preschools. Unpublished dissertation, Graduate School of Education, Stanford University.
- Preschoolers who sing, tell stories and eat dinner with their families tend to be emotionally healthier and better adjusted socially than kids who don't have such routines.
Source: Muniz, E.I., Silver, E.J. & Stein, R.E.K. (2014). Family routines and social-emotional school readiness among preschool-age children. *Journal of Developmental and Behavioral Pediatrics*, 35(2), 93-99. doi: 10.1097/DBP.000000000000021. Retrieved from: http://journals.lww.com/jrnldb/Abstract/2014/02000/Family_Routines_and_Social_Emotional_School.2.aspx
- There is a vital role of pretend play in young children's cognitive development, especially preschoolers. Children at play are scientists testing theories against reality with patterns of data; this is what makes humans smart.
Source: Hadani, H. (2013). *Shared discoveries: Positive parent-child relationships and child development*. Center for Childhood Creativity.
- Children who engage in more pretend play tend to be more advanced in language, memory, and reasoning and also tend to have a more sophisticated understanding of other people's thoughts and beliefs.
Source: Hadani, H. (2013). *Shared discoveries: Positive parent-child relationships and child development*. Center for Childhood Creativity.
- A high-quality co-parenting relationship has been found to be important for supportive father-adolescent relationships and children's positive adjustment.
Source: cited in Jia, R., Kotila, L.E., & Schoppe-Sullivan, S.J., (2012). Transactional relations between father involvement and preschoolers socioemotional adjustment. *Journal of Family Psychology*, 26(6), 848-857.
- Children ages 3-12 who spend more time at family meals have better achievement scores and fewer behavioral problems.
Source: Hofferth, S.L., Sandberg, J.F. (2001). How American children spend their time. *Journal of Marriage and Family*, 63, 295-308.

- According to a study of children at more than 60 schools, by the end of 4th grade, those kids who had attended academically-oriented preschools earned significantly lower grades than did those who had attended more progressive, “child-initiated” preschool classes, where the emphasis was on play.

Source: Marcon, R.A. (2002). Moving up the grades: Relationship between preschool model and later school success. *Early Childhood Research and Practice*, 4(1). Retrieved from: <http://www.pearlyyears.com/pdf/Relationship%20between%20Preschool%20Model%20and%20Later%20School%20Success.pdf>
- Play includes thinking and social interaction that lead directly to academic learning. The frequency and complexity of block play in preschool is associated with mathematical performance in high school, including higher scores on math subtests of the SATs. Early play with blocks, which includes concrete experience with Euclidean space, directly enhances later mathematical thinking.

Source: Trawick-Smith, J. (2009). Science in Support of Play: The Case for Play-Based Preschool Programs. The Center for Early Childhood Education. Retrieved from: <http://www.easternct.edu/cece/documents/TheCaseforPlayinPreschool.pdf>
- Nearly half of preschoolers do not have at least one parent-supervised outdoor play opportunity per day. The American Academy of Pediatrics recommends encouraging children to play outside as much as possible, ideally 60 minutes of moderate to vigorous physical activity a day. Being outdoors correlates strongly with physical activity for children, which is important for life-long prevention of obesity.

Source: Tandon, P., Zhou, C., Christakis, D. (2011). Frequency of Parent-Supervised Outdoor Play of US Preschool-Aged Children. *Pediatrics and Adolescent Medicine*. Retrieved from: <http://www.seattlechildrens.org/Press-Releases/2012/Nearly-Half-of-Preschool-Children-Not-Taken-Outside-to-Play-by-Parents-on-a-Daily-Basis--Study/>
- In 2010, 48% of children ages 0-4 with employed mothers were primarily cared for by a relative. 24% were placed in center-based care. 14% were primary cared for in a home-based environment by nonrelatives.

Source: Federal Interagency Forum on Child and Family Statistics (2011). ChildStats.gov. America’s Children: Key National Indicators of Well-Being, 2011.
- 80% of mothers work in the first year of their child’s life. Of these, 75% work full-time. The overall effect of first-year maternal employment has been found to be neutral.

Source: Brooks-Gunn, J., Han, W., Waldfogel, J. (2010). First year maternal employment and child development in the first 7 years. *Monographs of the Society for Research in Child Development*, 75(2), 1-19.
- Pre-school-aged children exposed to three household routines of regularly eating dinner as a family, obtaining adequate nighttime sleep, and having limited screen-viewing time had a 40% lower prevalence of obesity than children exposed to none of these routines.

Source: Anderson, S.E., Whitaker, R.C. (2010). Household routines and obesity in US preschool-aged children. *Pediatrics*, 125(3), 420-428.

Sleep

- What is sleep's role in achievement and learning? Too little sleep impairs acquisition of material and leads to irritability, distractibility, and inattention; ability to process input is diminished; it impairs retrieval or ability to access learned information. Sleep allows for consolidation, stabilization, strengthening, and filtering of information.
Source: Carskadon, M. (2013). Biology of Teen Sleep Patterns. Presentation at National Sleep Foundation Conference. Retrieved from: <http://www.cehd.umn.edu/carei/sleepresources.html>
- Research suggests that naps in early childhood are critical in early learning. The benefit is greatest for children who nap regularly, regardless of age. It appears that naps may support learning by enhancing memories acquired earlier in the day; performance losses when a child is nap-deprived were not recovered during subsequent overnight sleep.
Source: Kurdziel, L., Duclos, K., & Spencer, R.M.C. (2013). Sleep spindles in midday naps enhance learning in preschool children. *Proceedings of the National Academy of Sciences of the United States of America*. Retrieved from: <http://www.pnas.org/content/early/2013/09/18/1306418110.abstract>
doi: 10.1073/pnas.1306418110
- Toddlers 1-3 years old need 11-14 hours of sleep in a 24-hour period. At 18 mos. many toddlers go to one nap lasting 1-3 hours. Preschoolers 3-5 years old need 10-13 hours of sleep and most do not nap after 5 years of age. Children should never have TVs in their bedrooms.
Source: National Sleep Foundation. (2015). Children and Sleep. Retrieved from <http://sleepfoundation.org/sleep-topics/children-and-sleep/page/0%2C2/>
- The quality of mother-infant and father-infant interactions is positively related to children's percentage of night-time sleep at preschool age. Previous literature also suggests that early caregiving behavior by both mothers and fathers is related to subsequent child sleep.
Source: Bordeleau, S., Bernier, A., & Carrier, J. (2012). Longitudinal associations between the quality of parent-child interactions and children's sleep at preschool age. *Journal of Family Psychology, 26*(2), 254-262.
- For the best sleep, maintain a consistent sleep schedule for bedtimes, wake up times, and nap times (if applicable) as well as consistent pre-sleep activities. Children should fall asleep independently, without a parent present.
Source: Mindell, J.A., Meltzer, L.J., Carskadon, M.A., Chervin, R.D. (2009). Developmental aspects of sleep hygiene: Findings from the 2004 National Sleep Foundation Sleep in America Poll. *Sleep Medicine, 10*, 771-779.

Sports and Extracurriculars

- It is important that children have a schedule that is appropriate. Too many extracurriculars may overly pressure the student or make the student more competitive. Extracurriculars may not prepare a child for success as much as a firm grounding in parental love, role modeling, and guidance.

Source: Ginsburg, K.R. (2007). The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds. *Pediatrics*, 119(1). Retrieved from: <http://www.pediatricsdigest.mobi/content/119/1/182.full.pdf>

- Toddlers need 30 minutes of structured and 60 minutes of unstructured exercise activity every day and should not be sedentary for more than 60 minutes at a time except for sleep. Preschoolers need 60 minutes of structured and 60 minutes of unstructured activity and should be sedentary for no more than an hour.

Source: National Association for Sport and Physical Education. (2009). "Active Start: A Statement of Physical Activity Guidelines for Children From Birth to Age 5, 2nd Edition." *Standards and Position Statements*. National Association for Sport and Physical Education. <<http://www.aahperd.org/naspe/standards/nationalguidelines/activestart.cfm>>