

## Elementary School

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### Academic Stress and Mental Health

- SEL programs yield significant positive effects and enhance students' prosocial behaviors, reduce conduct and internalizing problems, and improve academic performance.

**Source:** Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D. & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1): 405–432.

- School-age children, (5 to 18 year-olds) were shown to have an increase in ER visits for headaches in the fall. The increase in fall headaches may be attributed to a number of factors, including academic stressors, schedule changes and an increase in extracurricular activity. Other common headache triggers include lack of adequate sleep, skipping meals, poor hydration, too much caffeine, lack of exercise and prolonged electronic screen time.

**Source:** Palaknis, A. & Heyer, G. (2015). Comprehensive Headache Clinic at Nationwide Children's Hospital. Retrieved from: <http://www.nationwidechildrens.org/news-room-articles/more-evidence-supports-that-kids-headaches-increase-at-back-to-school-time?contentid=145757>

- Over 17 million children in the U.S. under 18 have or have had a diagnosable psychiatric disorder, 32% of which are anxiety disorders. The median age at which a child is diagnosed with an anxiety disorder is 6 years old.

**Source:** Child Mind Institute. Children's Mental Health Report. (2015). Retrieved from: [http://www.speakupforkids.org/ChildrensMentalHealthReport\\_052015.pdf](http://www.speakupforkids.org/ChildrensMentalHealthReport_052015.pdf)

- Resilience results from the interaction of an intrinsic resistance to adversity AND a strong relationship with important adults in family and community; it is the interaction of biology and environment that helps build the capacity to cope with adversity.

**Source:** National Scientific Council on the Developing Child. (2015). *Supportive Relationships and Active Skill-Building Strengthen the Foundations of Resilience: Working Paper 13*. <http://www.developingchild.harvard.edu>

- Multiple factors are shown to predispose children to positive outcomes in the face of adversity: one stable, caring, and supportive relationship with an adult; a sense of mastery over life circumstances; strong executive functioning and self-regulation skills; and the supportive context of affirming faith or cultural traditions.

**Source:** National Scientific Council on the Developing Child. (2015). *Supportive Relationships and Active Skill-Building Strengthen the Foundations of Resilience: Working Paper 13*. <http://www.developingchild.harvard.edu>

- Learning to cope with manageable threats (like failing a test or forgetting one's line's in a play) to our physical and social well-being is critical for the development of resilience.  
**Source:** National Scientific Council on the Developing Child. (2015). *Supportive Relationships and Active Skill-Building Strengthen the Foundations of Resilience: Working Paper 13*.  
<http://www.developingchild.harvard.edu>
- A high-quality recess program in elementary schools can help students feel more engaged, safer, and positive about the school day.  
**Source:** London, R. A., Westrich, L., Stokes-Guinan, K. and McLaughlin, M. (2015), Playing Fair: The Contribution of High-Functioning Recess to Overall School Climate in Low-Income Elementary Schools. *Journal of School Health*, 85: 53–60. doi: 10.1111/josh.12216
- Of 1200 children ages 8-17 surveyed, 44% reported that doing well in school was a source of worry.  
**Source:** American Psychological Association (APA). (2009). *Stress in America*. Retrieved from <http://www.apa.org/news/press/releases/stress/2009/stress-exec-summary.pdf>
- Children are more likely to report that they worry about things related to school than parents perceive. 44% of all children ages 8 – 17 reported that doing well in school is a source of worry compared to only 34% of parents who report this as a source of stress for their child.  
**Source:** American Psychological Association. (2009). *Stress in America 2009*. Retrieved from: <http://www.apa.org/news/press/releases/2009/11/stress.aspx>
- A meta-analysis of studies reveals that students from kindergarten through high school who participate in social and emotional learning (SEL) programs not only demonstrate increased social and emotional skills and attitudes but also demonstrate improved academic performance, reflected in an 11-percentile-point gain in achievement.  
**Source:** Durlak, J. A., Weissberg, R. P., Dymnicki, A. B. Taylor, R. D., and Schellinger, K. B. (2011). The impact of enhancing student's social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405-432.
- It is estimated about 10-15% of children and teens are depressed at any given time. Research indicates that 1 of every 4 adolescents will have an episode of major depression during high school with the average onset being 14.  
**Source:** Heller, K. (2013). *Depression in teens and children*. Retrieved from: [www.psychocentral.com/lib/depression-in-teens-and-children/00010763](http://www.psychocentral.com/lib/depression-in-teens-and-children/00010763)

## Homework

- First- and second-grade students have about 3 times the recommended homework load, and kindergarten students have, on average, about 25 minutes of homework per night. Excessive homework not only shows no benefit, but may be detrimental.

**Source:** Pressman, R.A., Sugarman, D.B., Nemon, M.L., Desjarlais, J., Owens, J.A., & Schettini-Evans, A. (2015). Homework and family stress: With consideration of parents' self confidence, educational level, and cultural background. *The American Journal of Family Therapy*, 43, (4), 297-313.

- A review of research on homework showed almost no correlation between homework and achievement for elementary school students.  
**Source:** Cooper, H., Robinson, J. C., & Patall, E. A. (2006). Does homework improve academic achievement? A synthesis of research 1987-2003. *Review of Educational Research*, 76(1), 1-62
- 26% of all students in grades 3-12, say homework is just busywork and unrelated to what they are learning in school.  
**Source:** MetLife survey of the American teacher: The homework experience. A survey of students, teachers and parents. (2007). Retrieved from:  
[http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?\\_nfpb=true&\\_ERICExtSearch\\_SearchValue\\_0=ED500012&ERICExtSearch\\_SearchType\\_0=no&accno=ED500012](http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=ED500012&ERICExtSearch_SearchType_0=no&accno=ED500012)

## Literacy

- Parents are concerned that digital devices are distracting children from reading. Among parents of children in every age group, nearly half (49%) feel their children do not spend enough time reading books for fun – the kind of reading practice that is critical for children to build stamina, fluency, vocabulary and comprehension.  
**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from:  
<http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>
- Among girls, there has been a decline since 2010 in frequent readers (42% vs. 36%), reading enjoyment (71% vs. 66%), and the importance of reading books for fun (62% vs. 56%).  
**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from:  
<http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>
- Compared to 2010, boys are more likely to think reading books for fun is important (39% in 2010 vs. 47% in 2012), but they still lag girls on this measure (47% for boys in 2012 vs. 56% for girls in 2012).  
**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from:  
<http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>
- Frequency of reading books for fun is significantly lower for kids age 12-17 than for children age 6-11; frequency for reading books for school is also lower for kids age 12-17 than for kids age 6-11.  
**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from:  
<http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>
- The percentage of boys who read 5-7 days a week drops at every age, whereas girls level off in their teens. 47.5% of both cohorts age 6-8 say they read for fun and it decreases to 18% for boys age 15-17 and 30% for girls.  
**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from:  
<http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>

- Having reading role-model parents or a large book collection at home has a greater impact on kids' reading frequency than does household income.

**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from: <http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>

## Media

- Highly multipurpose technology, such as mobile phones, can have a negative impact on productivity through distraction. Schools that restrict access to mobile phones subsequently experience an improvement in test scores. Banning mobile phones improves outcomes for the low-achieving students the most and has no significant impact on high achievers.

**Source:** Beland, L-P. & Murphy, R. (2015). Ill communication: Technology, distraction & student performance. *Centre for Economic Performance, CEP Discussion Paper No. 1350*.

- Compared to 2010, in 2012 more girls age 12-17 are connecting through technology 5-7 days a week. For girls age 12-14, 61% use a cell phone to text or talk vs. 52% in 2010. Girls age 12-14 smartphone usage is at 24%, compared to 21% in 2010. For girls age 12-14, 53% are using social media sites compared to 38% in 2010.

**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from: <http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>

- Compared to 2010, fewer boys in 2012 age 12-14 are playing video games. 47% of boys age 12-14 are going online for fun, vs. 44% in 2010. There was a 10% drop from 2010-2012 for boys age 12-14 playing video or computer games (58% to 48%). There was a slight drop from 29% in 2010 to 27% in 2012 for boys 12-14 visiting social networking sites.

**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from: <http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>

- Among families with children age 8 and under, there has been a five-fold increase in ownership of tablet devices such as iPads, from 8% of all families in 2011 to 40% in 2013. 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:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from: <http://mediaroom.scholastic.com/files/kfrr2013-wappendix.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:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from: <http://mediaroom.scholastic.com/files/kfrr2013-wappendix.pdf>

- Of the roughly two hours (1:55) average screen media use each day, half (50%) is spent watching on a TV set.

**Source:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from: <http://mediaroom.scholastic.com/files/kfrr2013-wappendix.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:** Scholastic. (2012). Kids and Family Reading Report, 4<sup>th</sup> Edition. Retrieved from: <http://mediaroom.scholastic.com/files/kfrr2013-wappendix.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](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](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>
- The average 8- to 10-year-old spends nearly 8 hours a day with a variety of different media and older children and teenagers spend >11 hours per day. Young people spend more time with media than they do in school.  
**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>

- In a survey of youth ages 8-18, nearly 1 in 4 said they have felt “addicted” to video games.  
**Source:** Harris Interactive (2007). Video Game Addiction: Is it real? Retrieved from: <http://www.harrisinteractive.com/NEWS/allnewsbydate.asp?NewsID=1196>
- Many children younger than the minimum age of 13 years participate in social media activity.  
**Source:** O’Keeffe GS et al. (2011). The impact of social media on children, adolescents, and families. *Pediatrics*. 127:800. Retrieved from [http://pediatrics.aappublications.org/content/127/4/800?ijkey=55d8cf4c87f41acca196bbe649ede6266630149&keytype2=tf\\_ipsecsha](http://pediatrics.aappublications.org/content/127/4/800?ijkey=55d8cf4c87f41acca196bbe649ede6266630149&keytype2=tf_ipsecsha)
- An online survey of 3,641 North American girls ages 8-12 demonstrated that while face-to-face communication was strongly correlated with positive social well-being, use of phone, online communication, video, music, and other media were associated with negative social well-being. Media multitasking was also associated with negative social indicators.  
**Source:** Roy, P., et al. Media use, face-to-face communication, media multitasking, and social well-being among 8- to 12-year-old girls. (2012). *Development Psychology* 48(2): 327-336. Retrieved from <http://psycnet.apa.org/journals/dev/48/2/327/>
- Parents believe the use of electronic or digital devices negatively affects the time kids ages 6-17 spend reading books (41%), doing physical activity (40%), and engaging with family (33%).  
**Source:** Scholastic. (2010). 2010 Kids and family reading report. Retrieved from: <http://mediaroom.scholastic.com/research>
- Nearly one in three (31%) of 8- to 18-year-olds say that “most” of the time they are doing homework, they are also using one medium or another—watching TV, texting, listening to music, etc.  
**Source:** Kaiser Family Foundation. (2010). Generation M2: Media in the lives of 8- to 18-year-olds. Retrieved from: <http://www.kff.org/entmedia/upload/Executive-Summary-Generation-M-Media-in-the-Lives-of-8-18-Year-olds.pdf>

## **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, rather than getting the chores done by a division of labor.  
**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. Students who reported higher levels of over-parenting were more likely to endorse solutions that relied on others rather than taking responsibility oneself.  
**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
- Eating with others, particularly family, is associated with healthier dietary outcomes among children and adolescents of both genders.  
**Source:** Fulkerson, J.A., Larson, N., Horning, M., & Newmark-Sztainer, D. (2014). A review of associations between family or shared meal frequency and dietary and weight status outcomes across the lifespan. *Journal of Nutrition Education & Behavior*, 46, (1), 2-19.
- Family mealtime communication was significantly associated with higher positive affect and engagement and with lower negative affect and stress.  
**Source:** Offer, S. (2013). Assessing the relationship between family mealtime communication and adolescent emotional well-being using the experience sampling method. *Journal of Adolescence*, 36, (3), 577-585.
- 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. (2004). How American children spend their time. *Journal of Marriage and Family*, 63, 295-308.

- Students whose parents read a book with their child every day, almost every day or once or twice a week during the first year of primary school scored 25 points higher on the Program for International Student Assessment test than students whose parents read a book with their child never, almost never, or once or twice a month.  
**Source:** OECD (2011). What can parents do to help their children succeed in school? *PISA IN FOCUS* 2011/10 (November), pp 1-4.
- In 2002/2003, American children aged 6-17 spent 6-7 hours a day in school, depending on their age/level of schooling. Twenty years prior, in the early 1980s, the time spent in school ranged from 5-6 hours a day in school. The direct result has been less time for extracurricular activities, sleeping, and family time.  
**Source:** Juster, F.T., Ono, H., & Stafford, F. (2004). Changing times of American youth: 1981-2003. Ann Arbor, MI: Institute for Social Research, University of Michigan. Retrieved from [http://www.umich.edu/news/Releases/2004/Nov04/teen\\_time\\_report.pdf](http://www.umich.edu/news/Releases/2004/Nov04/teen_time_report.pdf)
- Play is linked to foundational skills and complex cognitive activities such as memory, self-regulation, distancing and de-contextualization, oral language abilities, symbolic generalization, successful school adjustment, and better social skills.  
**Source:** Bodrova, E. & Leong, D.J. (2003). Chopsticks and Counting Chips. *Young Children*, 1-8.
- Up to 40% of school districts in the United States have reduced or entirely eliminated recess in order to devote more time to core academic activities.  
**Source:** Zygmunt-Fillwalk, E. & Bilello, T.E. (2005). Parents' victory in reclaiming recess for their children. *Childhood Education*, 82(1), 19-23.
- One in four elementary schools do not provide a regularly scheduled recess time for students in all grades.  
**Source:** McKenzie, T. L., & Kahan, D. (2008). Physical activity, public health, and elementary schools. *The Elementary School Journal*, 108(3), 171-180.
- In a survey of almost 2,000 principals nationwide, more than 8 out of 10 principals reported that recess has a positive impact on academic achievement. Two-thirds of principals reported that students listen better after recess and are more focused in class, and virtually all principals believed that recess has a positive impact on children's social development (96 %) and general well-being (97 %).  
**Source:** Robert Wood Johnson Foundation. (2010). The state of play: Gallup survey of principals on school recess. Retrieved from: [www.playworks.org/files/StateOfPlayFeb2010.pdf](http://www.playworks.org/files/StateOfPlayFeb2010.pdf)
- In a study of 11,000 third-graders (8-9 years-old), comparing those who had little or no daily recess with those that had more than 15 minutes of recess per day, teachers reported that children who have at least 15 minutes of recess behaved better in the classroom.  
**Source:** Barros, R. M., Silver, E. J., & Stein, R. E. (2009). School recess and group classroom behavior. *Pediatrics*, 123(2), 431-436.



## Sleep

- Children 5-12 years old need 10-11 hours of sleep. At the same time, there is an increasing demand on their time from school, friends, and extracurricular activities as well as media and caffeine products—all of which can disrupt sleep. Watching TV too close to bedtime has been linked to bedtime resistance, difficulty falling asleep, anxiety around sleep, and sleeping fewer hours.  
**Source:** National Sleep Foundation. (2014). Children and Sleep. Retrieved from <http://sleepfoundation.org/sleep-topics/children-and-sleep/page/0%2C2/>
- 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>
- Students in 4th-6th grade who went to bed an average of 30-40 minutes earlier improved in memory, motor speed, attention, and other abilities associated with math and reading test scores.  
**Source:** Bergin, C. & Bergin, D. (2010). Sleep: The E-Z Z Z Intervention. *Educational Leadership* 67(4), 44-46.
- The American Academy of Pediatrics has warned of the links between social media and sleep deprivation and encourages parents to regularly supervise online activities.  
**Source:** O'Keeffe, G.S., et al. (2011). The impact of social media on children, adolescents, and families. *Pediatrics*. 127:800. Retrieved from [http://pediatrics.aappublications.org/content/127/4/800?ijkey=55d8cf4c87f41acca196bbe649ede6a266630149&keytype=tf\\_ipsecsha](http://pediatrics.aappublications.org/content/127/4/800?ijkey=55d8cf4c87f41acca196bbe649ede6a266630149&keytype=tf_ipsecsha)

## Sports and Extracurriculars

- 1.24 million kids were seen in emergency rooms for sports injuries in 2013. 23% of coaches, 28% of athletes, and 31% of parents said they don't do anything to prevent injuries. Fewer than half the coaches surveyed said they had received certification on how to prevent and recognize sport injuries. 54% of youth athletes said they have played injured, and 42% said they have hidden or downplayed an injury during a game so they could keep playing. 53% of coaches said they felt pressure from a parent or player to put an athlete back into a game even if the child had been injured.  
**Source:** SafeKids Worldwide. (2014). *Changing the culture of youth sports*. Retrieved from <http://www.safekids.org/research-report/research-report-changing-culture-youth-sports-august-2014>
- Participation in an in-school fitness program not only increased aerobic fitness but demonstrated increases in brain and behavioral indices of executive control.  
**Source:** Hillman, C.H., Pontifex, M.B., Castelli, D.M., Khan, N.A., Raine, L.B., Scudder, M.R.... Kamijo, K. (2014). Effects of the FITKids randomized controlled trial on executive control and brain function. *Pediatrics*, 134(4), 1063-1071.

- 8 studies about recess time and academic achievement found one or more positive associations between recess and indicators of cognitive skills, attitudes, and academic behavior; none of the studies found negative associations. 19 studies examining the relationship between participation in extracurricular physical activities and academic performance found one or more positive associations.  
**Source:** Centers for Disease Control and Prevention. (2010). *The association between school-based physical activity, including physical education, and academic performance*. Atlanta, GA: U.S. Department of Health and Human Services.
- Moderate to vigorous physical activity was positively associated with higher GPAs of both males and females.  
**Source:** Bradley, B.J. & Greene, A. C. (2013). Do health and education agencies in the United States share responsibility for academic achievement and health? A review of 25 years of evidence about the relationship of adolescents' academic achievement and health behaviors. *Journal of Adolescent Health, 52*, 523-532. Retrieved from: <http://teensneedsleep.files.wordpress.com/2011/05/bradley-et-al-do-health-and-education-agencies-in-the-us-share-responsibility-for-academic-achievement-and-health.pdf>
- Children who are more physically fit also tend to have higher cognitive functions and academic achievement.  
**Source:** Fedewa, A.L. & Ahn, S. (2011). The effects of physical activity and physical fitness on children's achievement and cognitive outcomes: A meta-analysis. *Research Quarterly for Exercise and Sport, 82*(3), 521-535.
- Elementary-age children were also found to reap the largest cognitive benefit from physical activity. The nature of elementary-age children's physical activity centers on play and on small groups, which may have implications for interventions.  
**Source:** Fedewa, A.L. & Ahn, S. (2011). The effects of physical activity and physical fitness on children's achievement and cognitive outcomes: A meta-analysis. *Research Quarterly for Exercise and Sport, 82*(3), 521-535.
- A TBI is an injury caused by a blow to the head or rapid acceleration – deceleration forces, and such an injury may lead to decreased levels of consciousness, amnesia, neurologic or neuropsychological abnormalities, or other consequences including death. Symptoms and effects are wide-ranging from mild headaches to memory loss to significant neurological deficits. In athletics, individuals who suffer TBI and resume play too soon may be at greater risk of re-injury.  
**Source:** Harvey, H.H. (July 2013). Reducing traumatic brain injuries in youth sports: Youth sports traumatic brain injury state laws, January 2009-December 2012. *American Journal of Public Health, Vol. 103, issue 7*, p. 1249-1254.
- Sports activities account for an estimate 20% of all TBI's among youths and young adults. Children and young teens are at greatest risk of TBIs and they take longer to heal in part because youths' brains are still growing and developing. Sports associated with TBI include football, hockey, cheer, dance, lacrosse, baseball, and soccer.  
**Source:** Harvey, H.H. (July 2013). Reducing traumatic brain injuries in youth sports: Youth sports traumatic brain injury state laws, January 2009-December 2012. *American Journal of Public Health, Vol. 103, issue 7*, p. 1249-1254.

- Between 2009-2012 44 states (and DC) enacted 1 or more youth sports TBI laws. 6 states have no TBI laws as of July 2013.  
**Source:** Harvey, H.H. (July 2013). Reducing traumatic brain injuries in youth sports: Youth sports traumatic brain injury state laws, January 2009-December 2012. *American Journal of Public Health, Vol. 103, issue 7*, p. 1249-1254.
- The American Academy of Pediatrics recommends that children not specialize in a single sport before adolescence, lest they be denied the benefits of varied activity while facing additional physical, physiological, and psychological demands from intense training and competition.  
**Source:** American Academy of Pediatrics Committee on Sports Medicine and Fitness (2000). Intensive training and sports specialization in young athletes. *Pediatrics, 106*(1), 154-157.
- In a study of age-group swimmers, the greater the value placed on the outcome of the swim race by a significant other, the more the race outcome mattered to youth swimmers, whereas if swimmers perceived their parent as being more concerned with the swimmer's mastery of skills, the swimmer also became more intrinsically motivated.  
**Source:** Swain, A.B., & Harwood, C.G. (1996). Antecedents of state goals in age-group swimmers: An interactionist perspective. *Journal of Sports Sciences, 14*(2), 111-124.