

Interdisciplinary Summit on Children and Screen Time

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Children and Screens Guidelines for Parents by Topic

Cognitiveⁱ

- Limit TV exposure (especially background TV) before age 2 years.
- Be aware of the impact of your own media use on your toddlers.
- Interact with toddlers and touchscreen devices (including e-books) in the same way you would interact with children while reading traditional books.
- Media diets should be rich in educational content, but heavy screen media use should be discouraged.
- Science of learning approaches should be used in creating educational media programming. Much current app development is ad hoc and intuitive.

Media Multitaskingⁱⁱ

- Turn mobile devices off during class and other learning activities. College students learn less when dividing attention between listening to lectures and interacting with handheld devices, such as when sending/receiving text messages or when using social media. Media multitasking with mobile devices and computer applications also appears to reduce reading efficiency as well as problem-solving accuracy. Therefore, encourage children to leave mobile devices (or at least notifications) off or put devices away during classes and other learning activities. Children should use planned breaks after completing a given activity to respond to text and social-media messages, rather than letting device notifications disrupt them in the middle of that activity.ⁱⁱⁱ
- Turn television off during schoolwork time. Just as intermittent device notifications and task-switching can disrupt learning activities, so too can background television. School-age children complete work more slowly and less accurately when they work with a television program in the background. Background television also reduces reading comprehension. Therefore, discourage children from doing homework while watching television or in a room where someone else is watching television. Remind children that they will complete their homework more quickly if they do it distraction-free, leaving them more time to watch television or do other entertainment activities later on.^{iv}
- Turn television off when no one is watching. Background television affects even the youngest children, particularly during toy play — the cognitive work of infancy and early childhood. For instance, infants' attentional focus is reduced when they play in the presence of background television. Save television

programs for naptimes and bedtimes to the extent possible. Of course, it can be a challenge to completely avoid screens throughout the day. In these cases, turn off the television when no one is watching it rather than leave it running all day long. The most important goal should be ensuring that children have at least some time every day to play with toys and interact with caregivers without the distraction of background television.^v

Anxiety and Depression^{vi}

- Ensure that children’s media use is directed (used for a specific purpose and not as a default activity) and is balanced with other important activities, such as face-to-face interactions with friends and family, physical activities, hobbies, school work, and sleep.
- Guide children to age-appropriate content using ratings, reviews, plot descriptions, and prior screening.
- Be aware of the content children are viewing and the social media apps they are using.
- Be engaged with your child’s online life by setting up their social media accounts with them, friending and following them on the platforms they use, and communicating with them regularly about their experiences on social media and online.
- Encourage children to avoid screen media (and especially scary or intense media experiences) near bedtime, and make bedrooms media-free zones (this includes smartphones!).
- Be sensitive to children’s moods and be prepared to engage in discussions of negative emotions that may be the result of media use.
- Carefully monitor the internet use of young people with signs of depression and self-injurious behaviors and seek advice from your child’s mental health provider or clinician on how to best to ensure your child is safe online.

Addiction and Internet Gaming Disorder^{vii}

There are several different aspects of Internet Gaming Disorder where guidelines and recommendations could be valuable, and we do not imply that the following is a comprehensive list:

- Trust your intuitions. If you believe there is a problem, it is worth investigating more carefully and having a clinical screening conducted by a professional therapist.^{viii}
- Be empowered to make household rules around media and gaming and set and maintain limits on children’s engagement in these activities. Studies show that setting limits on the amount and content of children’s media is a powerful protective factor for a wide range of health and wellness indicators.
- For children/adolescents who screen positive for online and gaming addiction, work with health care providers or counselors to determine the best intervention strategy. This may include screening for other common disorders such as anxiety or depression, seeing a counselor, and having restrictions on online time.

Sleep^{ix}

- Plan a bedtime that allows for adequate sleep.
- Use a bedtime routine that includes calming activities and avoids electronic media use.
- Limit media use in the hour or two before bedtime.
- Turn off electronic media devices in the evening and charge them in a central location outside bedrooms.
- Be a healthy sleep and media role model for your child or adolescent.
- Remove all electronic media from your child or teen’s bedroom, including TVs, video games, computers, tablets, and cell phones.

Obesity^x

- Limit the amount of time your children and teens spend with screen media: Set a daily or weekly limit of screen time for and/or with your child. The strongest evidence for reducing the effects of screen media on obesity comes from randomized controlled experiments of school curricula and family behavioral counseling to reduce total screen time.^{xi} These studies involved children from age 4 to 13 years of age. The goals in those studies were to limit total screen time, television watching, video game playing, and computer use (excluding computer use for school homework, when applicable) to no more than 7 hours per week in one study and no more than half of the original amount in another study. In one of the studies the children participated in choosing the 7 hours per week goal with the help of their classroom teachers. Non-experimental studies of relationships between screen time and body fatness find no clear optimal threshold of hours of screen time to stay below, with every increment in less screen time being associated with lower risks of obesity. As an added bonus, some experimental studies have shown that reducing screen media time also reduces children's aggression and their requests to parents to buy them things advertised in screen media.^{xii}
- Limit eating with screen media, reduce exposure to food advertising, and ensure that your children and teens get enough sleep:
 - Reduce or eliminate eating with screens. Studies find the children consume large amounts of calories while using screen media.^{xiii} Children tend to consume higher calorie foods and beverages while using screens and watching or playing screen media may act as a reminder or prompt for children to eat. In addition, there is evidence that being distracted by screen media while eating may prolong the eating episode and obscure normal feelings of fullness (for example, eating until the show or game is over or eating until the box, bag or bowl is empty).^{xiv}
 - Monitor your children's media use for content. Exposure to high-calorie, low-nutrient food and beverage advertisements and marketing influences your children's preferences, purchase requests and consumption habits.
 - Obesity is also linked to reduced sleep duration. Turn off your children's media 1-2 hours prior to bedtime, remove the screens from their bedrooms and understand how much sleep children need at different ages of their development in order to ensure that they get an adequate night's sleep.
- Set a good example by limiting your own screen media use: Set your own daily or weekly limit of screen time and reduce or eliminate your own eating with screens. Parents are the most important models for their children. Parents can set a good example by limiting their own screen time and not eating with screens. It will make it much easier for your children to learn healthful behaviors if they see you acting the same way you want them to act. It also may help lower your own risk of obesity.

Risky Behaviors^{xv}

- Encourage moderate use of digital media, given that excessive use is related to some health risks, such as inadequate sleep and depressed mood.
- The American Academy of Pediatrics has guidelines for parents that are helpful regarding the new world of online media (see <http://pediatrics.aappublications.org/content/138/5/e20162593>).

Driving Safety^{xvi}

- You are the willpower system for your child. A fully functional willpower system will not develop until your child is in her or his early 20s. They are faced with technologies that are designed to hijack their attention; that requires strong willpower to ignore. You have to set rules and boundaries and enforce them. For example, require your child to put their phone in the trunk when they drive, and enforce consequences if they fail to do so. If the phone is someplace the driver can access it, like the glove compartment, it needs to be turned off to prevent incoming prompts that will encourage a driver to get to it even if it's put away.
- Encourage your child to set a good example for their friends. Explain why overuse of small screens is a problem and encourage your child to share that with others when they limit their own use. Set a good example yourself.
- Recognize that these devices are a primary means of communicating with friends for the digital generation. Be empathetic in your approach. Completely eliminating the use of devices that your child uses to connect with their peers is not practical, so design your own plan to provide reasonable use and healthy alternatives.

Parenting^{xvii}

- Watch media together with kids and use developmentally appropriate parental mediation strategies (active mediation, restrictive mediation, co-viewing) to help kids understand what they're seeing.
- Be proactive about using media, and create a family media plan with rules for what type of content your children will view, how much time, and digital manners.
- Avoid “technoference:” Try to not allow individual media use to interfere with family relationships — particularly at mealtimes, playtime, and bedtime. Try to be aware of the role media is playing in your family dynamics (for example, stress relief, calming down, avoiding social interactions, or causing more stress).
- Parents and children should consider utilizing media to connect with each other, including texting, video chatting, engaging on social media together, and more. This should supplement rather than replace face to face interactions and should be developmentally appropriate.
- We also support the recommendations made by the American Academy of Pediatrics and encourage families to implement these in their homes.

Privacy^{xviii}

- While the burden of responsibility for ensuring privacy is often placed on parents (as exemplified, for instance, in the Children's Online Privacy Protection Act), it may be difficult for you to keep track of the increasingly complex digital environments and understand data collection practices as specified in companies' often convoluted privacy policies.
- Faced with competing discourses on what it means to be a good parent with respect to digital technology (on the one hand techno-panic, which proposes that children's innocence and childhood is somehow robbed by technology and on the other hand, the discourse on learning and socialization-related benefits offered by new technologies), it can be difficult for parents not to feel continuously guilty and at a loss about their choices regarding their children's uses of digital technology.

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- With respect to privacy and commercial data collection, be aware of the process of “datafication of childhood” and that consumers engage in this process by, for instance, purchasing baby wearables (Mascheroni & Holloway, 2017; Mascheroni, 2017; Montgomery, Chester & Milosevic, 2017; Holloway & Green, 2016). Also, be aware that in order to be able to use these devices and the full range of services they offer, you may be left with little control over your children’s personal data (Mascheroni & Holloway, 2017). It is important that you become aware of this process, and the possible implications of such data collection and processing.

Civic Engagement^{xix}

- Create an open dialogue with teens about their online activities. Adolescence is a time of expanding cognitive capacity and increased desire for autonomy and privacy. Teens are learning to manage risk on their own in a whole range of activities from relationships to driving to online risks. Too much parental control or invasions of privacy lead to increased lying and negative psychosocial outcomes. However, when parents are present, interested, and involved, teens can learn through dialogue to understand and develop strategies to make good decisions. Furthermore, when parents are present and involved but not intrusive, teens are more likely to come to them for advice. Keep in mind that parents do not need to be experts on digital, mobile, and social media. Respectfully expressing curiosity about a teen’s online experiences can be a great way to open a conversation.
- Model critical media literacy. Teens are not the only group who struggle with knowing whether the facts they encounter online are accurate or biased. Parents can educate themselves and model a variety of practices, such as asking questions about the sources of evidence behind news, questioning why two news sources come to very different conclusions, and exploring how social media platforms seem to present different information to different people based on algorithms that reflect information back to people that is aligned with what they already think. Resources like Common Sense Media and the Washington Post’s Fact Checker are useful for checking out rumors and untruths related to politics.
- Support educational initiatives in your schools and informal learning environments. Most school districts now recommend the incorporation of digital media literacy into the curriculum. Check with your child’s school to learn more about their initiatives taking place both inside and outside the classroom. Encourage your child to talk with you about what they have learned in school about media and technologies, and find ways to build on that knowledge at home. Also, encourage the school to engage in efforts to press for greater accountability on the part of social media platforms such as Facebook, Instagram, and YouTube, so that we can be sure that the decisions they make are in the best interests of our young people.

Digital Inequality^{xx}

- Child’s learning ecosystem: School and teachers are important components of children’s learning ecosystems, but so are their families. Our own research shows that parents and children support each other in learning about technology, and in using technology as a tool to learn (Rideout & Katz, 2016). Siblings are also important learning partners, though they are often overlooked. We find that these relationships are even more intense amongst families with the lowest household incomes, those in which parents have less than a high school diploma, and those in which parents are not English proficient (Katz, Moran, & Gonzalez, 2017). These findings speak to the importance of family members in children’s technology experiences—they also reveal how important it is for families to have high-quality, trusted people and organizations in the community that can support their digital skills development and access to consistent, quality internet connectivity and devices in good working condition (Katz, Moran, & Ognyanova, 2017). Family members and community resources are crucial to

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children’s learning ecosystems, so digital equity initiatives that only focus on youth as end users cannot be sufficient for closing the “digital divide.”

- Children as creators: According to Dale’s Cone of Learning (1969) people retain 10% of what they read, 20% of what they hear, and 30% of what they see. Additionally, people retain 50% of what they see and hear, 70% of what they say, and 90% of what they say and do. Media can be used to facilitate and support learning by supporting knowledge construction, acting as a vehicle for the exploration and access to information, supporting contextual and real-life learning situations, acting as a medium for collaboration and dialogue, and providing a mechanism to reflect on and represent their knowledge (Roschelle, et. al., 2000). Because media helps to create cognitive and affective environments that describes and portray people, places, and things that influence how and what young people learn, youth should be more involved in using media to determine what they hear, see, and experience in their everyday lives.
- Diversity in media: One-third of African American youth report that they often encounter online content that is disrespectful to African Americans, and one-quarter often encounter disrespectful online content about women (Rideout et. al, 2016). This frequent exposure to negative content, along with stereotypical and imbalanced representations, may lead to lower self-esteem for minority youth (Martins and Harrison, 2012). Children need to see different types of people, characteristics, physical attributes, a variety of family structure, lifestyles, and power/working relationships. Children need to hear a variety of sounds, voices, and music. Parents should not only be concerned about diversity (or lack thereof) is heard, seen, and done in one particular media product, but also, across a collection of media products; that is, not in one book, but throughout a library of books, when 85% of children’s books (Horning, 2016) feature main characters who are white. Diversity in content and creation yields more authentic products, which is a welcome change to media consumers. According to the Hollywood Diversity Report (Hunt, 2016), television shows and movies with diverse casts typically have better ratings and perform better at the box office.

Global Perspectives^{xxi}

- We cannot understand children’s engagement with digital media without taking into account their life contexts. Socioeconomic, cultural, demographic, technological, geographical, political, and religious factors all play a significant role in influencing the meaning and impact of their engagement with digital media. Therefore, we require additional cross-cultural and multidimensional research worldwide, especially in the face of globalization and intensifying media use.
- There is an urgent need for collaboration among all stakeholders — parents, educators, policy-makers, media organizations, medical organizations, international organizations, and children themselves — to work towards the goal of maximizing positive digital opportunities for children worldwide, especially in relation to children’s education and participation. This is important to the UN Sustainable Development Goals, and it goes far wider than working for internet safety.
- In designing national policies, including ways that parents and teachers can mediate and support children’s digital engagements, it is important to draw on research evidence that can guide the balance — in policy and practice between concerns for potential harms and hopes for the benefits that digital media use may bring.

Violent Content^{xxii}

- How can you tell if a video game is potentially harmful?
 - First, play the game, or have someone else demonstrate it for you. You can also watch videos of others playing the game on YouTube. After watching gameplay for a sufficient amount of time (e.g., 15 minutes), ask yourself the following 6 questions:

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- (1) Does the game involve some characters trying to harm others?
 - (2) Does this happen frequently, more than once or twice in 30 minutes?
 - (3) Is the harm rewarded in any way?
 - (4) Is the harm portrayed as humorous?
 - (5) Are nonviolent solutions absent or less “fun” than the violent ones?
 - (6) Are realistic consequences of violence absent from the game?
- If two or more answers are “yes,” think very carefully about the lessons being taught before allowing your child access to the game.
 - Make sure the game is age-appropriate. Video games have age-based labels (e.g., “M” for mature players 17 and older), and content codes (e.g., “graphic violence”). But just because a video game is age appropriate does not mean it is harmless. Many parents also think the age-based labels and content codes are not strict enough. Some games rated “E” by the video game industry as appropriate for “Everyone” contain violent content. Many video games rated “T” for teens 13 and older are very violent.
 - What else can you do?
 - Be a wise consumer:
 - Do buy video games that are helpful to your children.
 - Don't buy video games that are potentially harmful to your children.
 - Be a wise parent/grandparent:
 - Know what your children are playing.
 - Don't allow access to violent video games.
 - Restrict time spent on video games.
 - Make sure all televisions and computers are in public locations, not in private space such as bedrooms.
 - Use passwords on TVs to block out programs containing violence.
 - Use software on computers to block sites with violent content.
 - When your child visits a friend's home, tell that parent that your child is not allowed to play or watch age inappropriate video games.
 - Explain to your children why violent games are harmful.
 - Teach nonviolent problem solving at every opportunity.
 - Be an involved community member:
 - If you learn that a retailer is selling violent games to children, complain to the owner/manager.
 - If you learn that a retailer is doing a good job of screening sales or rentals of violent material to children, thank the owner/manager and support the business, perhaps by purchasing nonviolent educational video games.
 - Help educate others in your community (parents, youth, and public officials).
 - Let your public officials know that you are concerned.
 - Consider not purchasing products from companies that sponsor violent video games, and tell them why.

Cyberbullying^{xxiii}

- As with other parts of your child's life, the golden rule about digital technology is simply to talk about it with your child. Talking about what they're doing online, what digital activities they enjoy, and what (if any) problems they're having will help your child learn to think about their digital activities and to communicate with you for any support or help they may need.

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- Don't be afraid to ask your child to explain or demonstrate some digital activity. Kids often enjoy showing their skills to their parents (as we all know!). You're not necessarily bringing computer expertise to this conversation — you're bringing your life experience.
- When there is a social problem online, you may not always need to take direct action. Research shows that just listening and being supportive, and sometimes providing a different perspective, is among the most helpful things that adults do, according to youth who are being bullied.^{xxiv}
- If a social problem persists, work with your child to notify the website or app maker about the problem. Even when the problem is only happening online, it can be a good idea to notify your child's school, where the adults can keep an eye on interactions, support your child, and make sure that there's no "spill-over" into school.
- If your child appears to be struggling emotionally, seek help from your pediatrician or the school counselor.
- Encourage your child's school to use programs and curricula designed to increase internet safety and reduce cyberbullying and online social conflict. There are many resources for schools.

Advertising and Marketing^{xxv}

- Monitor and limit your child's exposure to marketing content across media platforms including online platforms.^{xxvi,xxvii,xxviii} Carefully monitor and (within reason) limit your child's exposure to advertising messages on the internet, on social networks, and on television. Practical initiatives include limiting the use of laptops, tablets, and smartphones to common areas within the home, encouraging children to view commercial free shows and movies (e.g., via Netflix and DVDs), and removing televisions from children's bedrooms.
- Keep in mind that children (even older ones) struggle to understand and respond to marketing messages.^{xxix,xxx,xxxi} Remember that your child's ability to understand persuasive content is shaped by their cognitive development. As such, even though your child may have developed some advertising literacy, they will still experience difficulty calling upon certain cognitive competencies to help them cope with marketing appeals.
- When possible, encourage children to think critically about persuasive messages by providing cues to help them process these messages.^{xxxii,xxxiii} While it is still important to talk with your children about the purposeful intent of advertising and the tactics marketers use, there are two other things that parents can do to possibly help children handle persuasive messages. First, when children are using commercial based media with parents, parents should cue children's commercial awareness (for example, by making comments about advertising), which will likely encourage children to critically evaluate messages. Second, parents should offer evaluative assessments of the commercial message (e.g., that food looks terrible) in addition to factual statements about the nature of the message. This will increase children's skepticism about advertising, which motivates them to critically evaluate advertising messages. Given that many adults are still learning about how new media (such as social media) work as commercial vehicles, it may be especially helpful for parents and children to work together to uncover the ways in which persuasive marketing messages are embedded in new media environments.

Stereotypes^{xxxiv}

- Remember that media stories make a difference in the lives of children as well as adults as they play a significant role in shaping the way we understand ourselves and others. Maintain open dialogue with children and teens about the media content they are consuming and its role in their self-image and aspirations for the future. Listen and learn from children’s own perspectives and engage in age-appropriate discussions of media use that is in line with your family’s values and with your children’s well-being. More specifically:
 - Analyze racial and gender stereotypes in content consumed by the child/teen, as well as stereotypes of people with disabilities, varied sexual identities, the elderly, religious groups, etc.
 - What is stereotypical about their appearance, behavior, characteristics, occupations, family structure, and the like? Openly and critically analyze misrepresentations, biased language use, and stereotypical assumptions in the media that you encounter.
 - Point out examples of counter stereotypes in the real world — among acquaintances and friends, public and historical figures. Introduce children/teens to media content that provides positive examples of diversity representations.
 - Talk to your children about their self-presentation on social media and what image it portrays to others, potential higher education institutions and future employers. Call their attention to their own internalization of stereotypes about themselves and their identities.

Sexual Content^{xxxv}

- Ensure that the “sex education” provided by media is supplemented (and countered) by accurate information regarding sexual health and healthy sexual relationships.
- As often as possible, spend time using media with your children, co-viewing and also observing what messages youth create, and commenting on what you see as appropriate or inappropriate, accurate or inaccurate, sexual messages. Sharing media provides opportunities not only to counter unhealthy sexual media but to open conversations about sex that parents sometimes find difficult to begin.
- Seek out positive gender role models and healthy relationship examples in media to share with their children and help them to avoid viewing sexual objectification and relationship game-playing as normal. Discuss sexting and online pornography before children go online unsupervised and repeat discussions regularly. Keep in mind that youth need to feel comfortable coming to you if they see something inappropriate or are being pressured to participate in sexting.
- Tools to help parents manage their children’s media use and the messages media contain and to discuss media issues are available at commonsensemedia.org and healthychildren.org/English/family-life/Media.

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- ⁱ Anderson, D.R., Subrahmanyam, K. Digital Screen Media and Cognitive Development.
- ⁱⁱ Uncapher, M.R., et al. Media Multitasking and Cognitive, Psychological, Neural, and Learning Differences.
- ⁱⁱⁱ Uncapher, M.R., et al. Media Multitasking and Cognitive, Psychological, Neural, and Learning Differences.
1. Adler, R. F., & Benbunan-Fich, R. (2013). Self-interruptions in discretionary multitasking. *Computers in Human Behavior*, 29(4), 1441-1449.
 2. Bowman, L. L., Levine, L. E., Waite, B. M., & Gendron, M. (2010). Can students really multitask? An experimental study of instant messaging while reading. *Computers & Education*, 54(4), 927-931.
 3. Carrier, L. M., Rosen, L. D., Cheever, N. A., & Lim, A. F. (2015). Causes, effects, and practicalities of everyday multitasking. *Developmental Review*, 35, 64-78.
 4. Rosen, L. D., Carrier, L. M., & Cheever, N. A. (2013). Facebook and texting made me do it: Media-induced task-switching while studying. *Computers in Human Behavior*, 29(3), 948-958.
 5. Rosen, L. D., Lim, A. F., Carrier, L. M., & Cheever, N. A. (2011). An empirical examination of the educational impact of text-message induced task switching in the classroom: Educational implications and strategies to enhance learning. *Psicologia Educativa (Spanish Journal of Educational Psychology)*, 17, 163-177.
 6. Wood, E., Zivcakova, L., Gentile, P., Archer, K., De Pasquale, D., & Nosko, A. (2012). Examining the impact of off-task multitasking with technology on real-time classroom learning. *Computers & Education*, 58(1), 365-374.
- ^{iv} Uncapher, M.R., et al. Media Multitasking and Cognitive, Psychological, Neural, and Learning Differences.
1. Adler, R. F., & Benbunan-Fich, R. (2013). Self-interruptions in discretionary multitasking. *Computers in Human Behavior*, 29(4), 1441-1449.
 2. Lee, J., Lin, L., & Robertson, T. (2012). The impact of media multitasking on learning. *Learning, Media and Technology*, 37, 94-104.
 3. Lin, L., Lee, J., & Robertson, T. (2011). Reading while watching video: The effect of video content on reading comprehension and media multitasking ability. *Journal of Educational Computing Research*, 45, 183-201.
 4. Pool, M. M., Van der Voort, Tom HA, Beentjes, J. W., & Koolstra, C. M. (2000). Background television as an inhibitor of performance on easy and difficult homework assignments. *Communication Research*, 27(3), 293-326.
- ^v Uncapher, M.R., et al. Media Multitasking and Cognitive, Psychological, Neural, and Learning Differences.
1. Schmidt, M. E., Pempek, T. A., Kirkorian, H. L., Lund, A. F., & Anderson, D. R. (2008). The effects of background television on the toy play behavior of very young children. *Child Development*, 79, 1137-1151.
 2. Setliff, A. S., & Courage, M. L. (2011). Background television and infants' allocation of their attention during toy play. *Infancy*, 16, 611-639.
- ^{vi} Hoge, E., et al. Digital Media, Anxiety, and Depression in Children.
- ^{vii} Gentile, D.A., et al. Internet Gaming Disorder.
- ^{viii} Gentile, D.A., et al. Internet Gaming Disorder.
- Parents desire some guidelines to know how seriously to take this issue, and how to know when their child has a problem. The former of these is easier to address than the latter. The research focusing both on problematic video game or Internet use is clear — some people end up causing damage to their lives, schooling, occupations, and relationships due to their gaming and online habits. It is therefore worth considering seriously. How to tell if your child is having a problem, however, is trickier, because there is no single set of risk factors or warning signs. Some children may show very different patterns of problems from others, and some may be better at hiding the problem than others (e.g., one symptom is lying about the problem).
- ^{ix} LeBourgeois, M.K., et al. Digital Media and Sleep in Childhood and Adolescence.
- ^x Robinson, T.N., et al. Screen Media Exposure and Obesity in Children and Adolescents.
- ^{xi} Robinson, T.N., et al. Screen Media Exposure and Obesity in Children and Adolescents.
1. Epstein LH, Roemmich JN, Robinson JL, et al. A randomized trial of the effects of reducing television viewing and computer use on body mass index in young children. *Arch Pediatr Adolesc Med* 2008;162:239-45.
 2. Gortmaker SL, Peterson K, Wiecha J, et al. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Arch Pediatr Adolesc Med* 1999;153:409-18.
 3. Robinson TN. Reducing children's television viewing to prevent obesity. *JAMA* 1999;282:1561-7.
 4. Robinson TN, Borzekowski DLG. Effects of the SMART classroom curriculum to reduce child and family screen time. *Journal of Communication* 2006;56:1-26.
- ^{xii} Robinson, T.N., et al. Screen Media Exposure and Obesity in Children and Adolescents.
1. Robinson TN, Saphir MN, Kraemer HC, Varady A, Haydel KF. Effects of reducing television viewing on children's requests for toys: A randomized controlled trial. *J Dev Behav Pediatr* 2001;22:179-84.
 2. Robinson TN, Wilde ML, Navratil LC, Haydel KF, Varady A. Effects of reducing children's television and video game use on aggressive behavior: A randomized controlled trial. *Arch Pediatr Adolesc Med* 2001;155:17-23.
- ^{xiii} Robinson, T.N., et al. Screen Media Exposure and Obesity in Children and Adolescents.
1. Matheson DM, Wang Y, Klesges LM, Beech BM, Kraemer HC, Robinson TN. African-American girls' dietary intake while watching television. *Obes Res* 2004;12:32S-7S.
- ^{xiv} Robinson, T.N., et al. Screen Media Exposure and Obesity in Children and Adolescents.
1. Robinson TN, Matheson DM. Environmental strategies for portion control in children. *Appetite* 2015;88:33-8.
- ^{xv} Romer, D., Moreno, M. Digital Media and Risks for Adolescent Substance Abuse and Problematic Gambling.
- ^{xvi} Atchely, P., Strayer, D.L. Small Screen Use and Driving Safety.

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^{xvii} Coyne, S.M., et al. Parenting and Digital Media.

^{xviii} Montgomery, K.C., et al. Children's Privacy in the Big Data Era: Research Opportunities.

1. Holloway, D. & Green, L. (2016). The Internet of toys. *Communication Research and Practice*, 2(4), pp.506–519.
2. Mascheroni, G. (2017). The Internet of Things and the Quantified Child. In S. Chaudron, R. Di Gioia, M. Gemo, D. Holloway, J. Marsh, G. Mascheroni, J. Peter, D. Ymanada-Rice, Kaleidoscope on the Internet of Toys. JRC.
<http://publications.jrc.ec.europa.eu/repository/handle/JRC105061>
3. Mascheroni, G., & Holloway, D. (Eds.) (2017). The Internet of Toys: A report on media and social discourses around young children and IoT. DigiLitEY.
4. Montgomery, K., Chester, J., & Milosevic, T. (2017). Ensuring young people's digital privacy as a fundamental right. In B. De Abreu, A. Lee, J. McDougall, J. Melki, & P. Mihailidis (Eds.), *International Handbook of Media Literacy*. New York, NY: Routledge.

^{xix} Middaugh, E., et al. Digital Media, Participatory Politics, and Positive Youth Development.

1. Ballard, P. What motivates youth civic involvement? *Journal of Adolescent Research* 29(4): 439-463.
2. Clark, L.S. *The Parent App: Understanding Families in the Digital Age*. Oxford University Press, 2013.
3. Clark, L.S. & Marchi, R. (2017). *Young People and the Future of News*. Cambridge University Press.
4. Gardner, H. & Davis, K. (2014). *The App Generation: How Today's Youth Navigate Identity, Intimacy, and Imagination in the Digital World*. Yale University Press.
5. Jenkins, H., Shresthova, S., Gamber-Thompson, L., Kligler-Vilenchik, N., & Zimmerman, A. (2016). *By Any Media Necessary: The New Youth Activism*. New York University Press.
6. Kurana A, Bleakely A, Jordan A, & Romer D. The protective effects of parental, monitoring and internet restriction on adolescents' risk of online harassment. *J Youth Adolescence* (2015) 44:1039–1047 DOI 10.1007/s10964-014-0242-4.
7. Hobbs, R. *Digital and Media Literacy*. Corwin, 2011.
8. Kahne J. & Bowyer B. Educating for democracy in a partisan age: Confronting the challenges of motivated reasoning and misinformation. *Am Ed Research J*, Vol 54, Issue 1, 2017
9. Livingstone, S. & Blum-Ross, A. (forthcoming). Parenting for a Digital Future. See the blog,
<http://blogs.lse.ac.uk/parenting4digitalfuture/>
10. Livingstone, S. & Sefton-Green, J. (2016). *The Class: Living and Learning in the Digital Age*. New York University Press.
11. Levine, P. (2013). *We are the Ones We Have Been Waiting For: The Promise of Civic Renewal in America*. Oxford University Press.
12. Middaugh, E., Bowyer, B., & Kahne, J. (2017). U Suk! Participatory Media and Youth Experiences with Political Discourse. *Youth & Society* 49(7): 902-922.
13. Miller, P., Bobkowski, P., Maliniak, D., & Rapoport, R. (2015). Talking Politics on Facebook: Network Centrality and Political Discussion Practices in Social Media. *Political Research Quarterly* 68(2): 377-391.
14. Parenting for a Digital Future. The London School of Economics British Politics and Policy Blog.
<http://blogs.lse.ac.uk/parenting4digitalfuture/>

^{xx} Katz, V.S., et al. Digital Inequality and Developmental Trajectories of Low-income, Immigrant, and Minority Children.

1. Clark, K. (2016). Technology tools for family engagement: The role of diversity. In C. Donohue (Ed.), *Family Engagement in the Digital Age: Early Childhood Educators as Media Mentors*. New York, NY: Routledge Publishing.
2. Horning, K. (2016). Publishing statistics on children's books about people of color and first/native nations and by people of color and first/native nations authors and illustrators. Cooperative Children's Book Center, University of Wisconsin-Madison, WI. Available at: <https://ccbc.education.wisc.edu/books/pcstats.asp>
3. Hunt, D., Ramon, A., and Tran, M. (2016). 2016 Hollywood Diversity Report: Business as usual. Ralph J. Bunche Center for African American Studies at University of California – Los Angeles (UCLA).
4. Katz, V.S., Moran, M., & Gonzalez, C. (2017). Connecting with technology in lower-income U.S. families. *New Media & Society*. Advance online publication. DOI: 10.1177/1461444817726319
5. Katz, V.S., Moran, M., & Ognyanova, K. (2017). Contextualizing connectivity: How internet connection type and parental factors influence technology use among lower-income children. *Information, Communication & Society*. Advance online publication. DOI: 10.1080/1369118X.2017.1379551
6. Low, J. and Ehrlich, H. (2015). Where is the diversity in publishing? The 2015 Diversity Baseline Survey results. Lee & Low Books, Available at: <http://blog.leeandlow.com/2016/01/26/where-is-the-diversity-in-publishing-the-2015-diversity-baseline-survey-results/>
7. Martins, N. and Harrison, K. (2012). Racial and gender differences in the relationship between children's television use and self-esteem: A longitudinal panel study. *Communication Research*, 2011; 39 (3).
8. Rideout, V.J., & Katz, V.S. (2016). Opportunity for all? Technology and learning in lower-income families. New York: Joan Ganz Cooney Center at Sesame Workshop. Available at www.digitalequityforlearning.org.
9. Rideout, V., Scott, K., & Clark, K. (2016). The digital lives of African American tweens, teens, and parents: Innovating and learning with technology. Available at <https://cquest.asu.edu/digitallives>

^{xxi} Livingstone, S., et al. Global Perspectives on Children's Digital Opportunities: An Emerging Research and Policy Agenda.

^{xxii} Anderson, C.A., et al. Screen Violence and Youth Behavior.

^{xxiii} Englander, E., et al. Defining Cyberbullying.

- Kids and parents sometimes experience digital technology differently. Don't be too concerned if a social problem online (fighting, cyberbullying) upsets you more than it bothers your child. By explaining their thoughts and values and listening to your child's feelings about a situation, both parents and kids may feel better about social problems. Look for educational materials that can

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help educate your child about the risks involved in some digital behaviors.

- Online, it's often harder to know for sure why someone is being hurtful. Sometimes a person may be trying to hurt someone's feelings, but at other times, they might simply be thoughtless or careless. It's important to keep this in mind before jumping to any conclusions.
- Different kids respond differently when they have social problems online. Some are able to shrug off these problems, but other situations may be too hurtful to disregard. Talking about what's going on and how you feel about it, and emphasizing the people who care (e.g., friends, family) can make many kids feel better.
- In a digital environment, even small actions can become quickly amplified. For example, an innocent remark can be misconstrued and spread around very quickly.
- Research has shown that sometimes kids are pressured by their peers to engage in online activities that they don't really want to do – such as passing on rumors, or posting inappropriate photos. If your child talks about an incident with you, it may be worthwhile to ask about peer pressure.
- It's important to remember that the behaviors we see on social media – both positive and negative – are all part of, and influenced by, the larger culture we live in. What happens on the Internet doesn't happen in isolation. Media affects our behavior in all kinds of situations.

^{xxiv} S Davis and C Nixon, "The Youth Voice Project" (Penn State Erie, StopBullyingNow.Org, March 2010),

<http://www.youthvoiceproject.com/>

^{xxv} Lapierre, M.A., et al. The Effect of Advertising on Children and Adolescents.

1. Research exploring the relationship between advertising exposure and negative outcomes has consistently shown that there are reasons for parents, practitioners, and educators to be concerned about child exposure. This is true for advertising directed at both children and adults:
 - a. Child dietary behavior
 - i. Dixon, H. G., Scully, M. L., Wakefield, M. A., White, V. M., & Crawford, D. A. (2007). The effects of television advertisements for junk food versus nutritious food on children's food attitudes and preferences. *Social Science & Medicine*, 65(7), 1311-1323.
 - ii. Harris, J. L., Bargh, J. A., & Brownell, K. D. (2009). Priming effects of television food advertising on eating behavior. *Health Psychology*, 28(4), 404-413.
 - iii. Wiecha, J. L., Peterson, K. E., Ludwig, D. S., Kim, J., Sobol, A., & Gortmaker, S. L. (2006). When children eat what they watch: impact of television viewing on dietary intake in youth. *Archives of Pediatrics & Adolescent Medicine*, 160(4), 436-442.
 - iv. Zimmerman, F. J., & Bell, J. F. (2010). Associations of television content type and obesity in children. *American Journal of Public Health*.
 - b. Parent-child conflict
 - i. Buijzen, M., & Valkenburg, P. M. (2003). The effects of television advertising on materialism, parent-child conflict, and unhappiness: A review of research. *Journal of Applied Developmental Psychology*, 24(4), 437-456.
 - ii. Buijzen, M., & Valkenburg, P. M. (2003). The unintended effects of television advertising a parent-child survey. *Communication Research*, 30(5), 483-503.
 - iii. Goldberg, M. E., & Gorn, G. J. (1978). Some unintended consequences of TV advertising to children. *Journal of Consumer Research*, 22-29.
 - c. Psychological well-being
 - i. Buijzen, M., & Valkenburg, P. M. (2003). The effects of television advertising on materialism, parent-child conflict, and unhappiness: A review of research. *Journal of Applied Developmental Psychology*, 24(4), 437-456.
 - ii. Buijzen, M., & Valkenburg, P. M. (2003). The unintended effects of television advertising a parent-child survey. *Communication Research*, 30(5), 483-503.
 - iii. Goldberg, M. E., Gorn, G. J., Peracchio, L. A., & Bamossy, G. (2003). Understanding materialism among youth. *Journal of Consumer Psychology*, 13(3), 278-288.
 - iv. Grabe, S., Ward, L. M., & Hyde, J. S. (2008). The role of the media in body image concerns among women: a meta-analysis of experimental and correlational studies. *Psychological Bulletin*, 134(3), 460-476.
 - d. Alcohol use
 - i. Anderson, P., De Bruijn, A., Angus, K., Gordon, R., & Hastings, G. (2009). Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies. *Alcohol and Alcoholism*, 44(3), 229-243.
 - ii. Snyder, L. B., Milici, F. F., Slater, M., Sun, H., & Strizhakova, Y. (2006). Effects of alcohol advertising exposure on drinking among youth. *Archives of Pediatrics & Adolescent Medicine*, 160(1), 18-24.
 - iii. Winpenny, E. M., Marteau, T. M., & Nolte, E. (2014). Exposure of children and adolescents to alcohol marketing on social media websites. *Alcohol and Alcoholism*, 49(2), 154-159.
2. Parents, educators, and practitioners should also know that children, even older children, do not have the same cognitive capabilities that adults do and that these differences reduce a child's ability to understand the nature of persuasive messages and to engage in critical thinking about such messages. Due to their immature cognitive capabilities, children have trouble with self-regulation regarding their affective and behavioral responses to persuasive messages. Furthermore, children are often susceptible to marketing strategies in ways that shape consumer behavior.

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- a. Child development and persuasion understanding
 - i. Lapierre, M.A. (2015). Development and persuasion understanding: Predicting knowledge of persuasion/selling intent from children's theory of mind. *Journal of Communication*, (65)3, 423-442.
 - ii. McAlister, A. R., & Cornwell, T. B. (2009). Preschool children's persuasion knowledge: The contribution of theory of mind. *Journal of Public Policy & Marketing*, 28(2), 175-185.
 - iii. McAlister, A. R., & Cornwell, T. B. (2010). Children's brand symbolism understanding: Links to theory of mind and executive functioning. *Psychology & Marketing*, 27(3), 203-228.
 - iv. Moses, L. J., & Baldwin, D. A. (2005). What can the study of cognitive development reveal about children's ability to appreciate and cope with advertising?. *Journal of Public Policy & Marketing*, 24(2), 186-201.
 - v. Rozendaal, E., Buijzen, M., & Valkenburg, P. (2011). Children's understanding of advertisers' persuasive tactics. *International Journal of Advertising*, 30(2), 329-350.
 - vi. Carter, O. B., Patterson, L. J., Donovan, R. J., Ewing, M. T., & Roberts, C. M. (2011). Children's understanding of the selling versus persuasive intent of junk food advertising: Implications for regulation. *Social Science & Medicine*, 72(6), 962-968.
 - b. Marketing strategies and child attitudes towards products/brands
 - i. Castonguay, J. (2015). Sugar and sports: Age differences in children's responses to a high sugar cereal advertisement portraying physical activities. *Communication Research*, doi: 10.1177/0093650215587357
 - ii. Lapierre, M. A., Vaala, S. E., & Linebarger, D. L. (2011). Influence of licensed spokescharacters and health cues on children's ratings of cereal taste. *Archives of Pediatrics & Adolescent Medicine*, 165(3), 229-234.
 - iii. Roberto, C. A., Baik, J., Harris, J. L., & Brownell, K. D. (2010). Influence of licensed characters on children's taste and snack preferences. *Pediatrics*, 126(1), 88-93.
 3. While this area of research is not as developed as the areas noted above, there is mounting evidence that simply teaching children about advertising does not necessarily result in children developing coping strategies that are necessary to deal with and defend against persuasion. Instead, interventions may require an affective and motivational component or external cues to help children become more conscious and critical of marketing content.
 - a. Advertising literacy and unclear links to consumer behavior
 - i. Livingstone, S., & Helsper, E. J. (2006). Does advertising literacy mediate the effects of advertising on children? A critical examination of two linked research literatures in relation to obesity and food choice. *Journal of Communication*, 56(3), 560-584.
 - ii. Rozendaal, E., Buijzen, M., & Valkenburg, P. (2009). Do children's cognitive advertising defenses reduce their desire for advertised products?. *Communications*, 34(3), 287-303.
 - iii. Rozendaal, E., Lapierre, M. A., Van Reijmersdal, E. A., & Buijzen, M. (2011). Reconsidering advertising literacy as a defense against advertising effects. *Media Psychology*, 14(4), 333-354.
 - b. Improving children's conscious and critical persuasion processing
 - i. Brucks, M., Armstrong, G. M., & Goldberg, M. E. (1988). Children's use of cognitive defenses against television advertising: A cognitive response approach. *Journal of consumer research*, 471-482.
 - ii. Buijzen, M. (2007). Reducing children's susceptibility to commercials: Mechanisms of factual and evaluative advertising interventions. *Media Psychology*, 9(2), 411-430.
 - iii. Buijzen, M., & Valkenburg, P. M. (2005). Parental mediation of undesired advertising effects. *Journal of Broadcasting & Electronic Media*, 49(2), 153-165.
 - iv. Rozendaal, E., Buijzen, M., & Valkenburg, P. M. (2012). Think-aloud process superior to thought-listing in increasing children's critical processing of advertising. *Human Communication Research*, 38(2), 199-221.
- ^{xxvi} Buijzen, M., & Valkenburg, P. M. (2003). The effects of television advertising on materialism, parent-child conflict, and unhappiness: A review of research. *Journal of Applied Developmental Psychology*, 24(4), 437-456.
- ^{xxvii} Snyder, L. B., Milici, F. F., Slater, M., Sun, H., & Strizhakova, Y. (2006). Effects of alcohol advertising exposure on drinking among youth. *Archives of Pediatrics & Adolescent Medicine*, 160(1), 18-24.
- ^{xxviii} Zimmerman, F. J., & Bell, J. F. (2010). Associations of television content type and obesity in children. *American Journal of Public Health*, 100(2), 334.
- ^{xxix} McAlister, A. R., & Cornwell, T. B. (2009). Preschool children's persuasion knowledge: The contribution of theory of mind. *Journal of Public Policy & Marketing*, 28(2), 175-185.
- ^{xxx} Moses, L. J., & Baldwin, D. A. (2005). What can the study of cognitive development reveal about children's ability to appreciate and cope with advertising?. *Journal of Public Policy & Marketing*, 24(2), 186-201.
- ^{xxxi} Rozendaal, E., Lapierre, M. A., Van Reijmersdal, E. A., & Buijzen, M. (2011). Reconsidering advertising literacy as a defense against advertising effects. *Media Psychology*, 14(4), 333-354.
- ^{xxxii} Buijzen, M. (2007). Reducing children's susceptibility to commercials: Mechanisms of factual and evaluative advertising interventions. *Media Psychology*, 9(2), 411-430.
- ^{xxxiii} Rozendaal, E., Lapierre, M. A., Van Reijmersdal, E. A., & Buijzen, M. (2011). Reconsidering advertising literacy as a defense against advertising effects. *Media Psychology*, 14(4), 333-354.
- ^{xxxiv} Dill-Shackleford, K.E., et al. Social Group Stories in the Media and Child Development.
- ^{xxxv} Collins, R.L., et al. Sexual Media and Childhood Well-Being and Health.