Media Use in School-Aged Children and Adolescents
COUNCIL ON COMMUNICATIONS AND MEDIA
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Introduction
Today's generation of children and adolescents are growing up immersed in media, including broadcast and social media. Broadcast media include television and movies. Interactive media include social media and video games in which users can both consume and create content. Interactive media allow information sharing and provide an engaging digital environment that becomes highly personalized.

Media Use Patterns
The most common broadcast medium continues to be TV. A recent study found that TV hours among school-aged children have decreased in the past decade for children younger than 8 years.[1] However, among children aged 8 years and older, average daily TV time remains over 2 hours per day.[2] TV viewing also has changed over the past decade, with content available via streaming or social media sites, such as YouTube and Netflix.

Overall media use among adolescents has continued to grow over the past decade, aided by the recent increase in mobile phone use among teenagers. Approximately three-quarters of teenagers today own a smartphone,[3] which allows access to the Internet, streaming TV/videos, and interactive "apps." Approximately one-quarter of teenagers describe themselves as "constantly connected" to the Internet.[3] Social media sites and mobile apps provide platforms for users to create an online identity, communicate with others, and build social networks. At present, 76% of teenagers use at least 1 social media site.[3] Although Facebook remains the most popular social media site,[3] teenagers do not typically commit to just 1 social media platform; more than 70% maintain a "social media portfolio" of several selected sites, including Facebook, Twitter, and Instagram.[3] Mobile apps provide a breadth of functions, such as photo sharing, games, and video-chatting.

Video games remain very popular among families; 4 of 5 households own a device used to play video games.[4] Boys are the most avid video game players, with 91% of boys reporting having access to a game console and 84% reporting playing video games online or on a cell phone.[3]

Benefits of Media
Both traditional and social media can provide exposure to new ideas and information, raising awareness of current events and issues. Interactive media also can provide opportunities for the promotion of community participation and civic engagement. Students can collaborate with others on assignments and projects on many online media platforms. The use of social media helps families and friends who are separated geographically communicate across the miles.

Social media can enhance access to valuable support networks, which may be particularly helpful for patients with ongoing illnesses, conditions, or disabilities.[5] In 1 study, young adults described the benefits of seeking health information online and through social media, and recognized these channels as useful supplementary sources of information to health care visits.[6] Research also supports the use of social media to foster social inclusion among users who may feel excluded[7] or who are seeking a welcoming community: for example, those identifying as lesbian, gay, bisexual, transgender, questioning, or intersex. Finally, social media may be used to enhance wellness and promote healthy behaviors, such as smoking cessation and balanced nutrition.[8]

Risks of Media
A first area of health concern is media use and obesity, and most studies have focused on TV. One study found that the odds of being overweight were almost 5 times greater for adolescents who watch more than 5 hours of TV per day compared with those who watch 0 to 2 hours.[9] This study's findings contributed to recommendations by the American Academy of Pediatrics that children have 2 hours or less of sedentary screen time daily. More recent studies have provided new evidence that watching TV for more than 1.5 hours daily was a risk factor for obesity, but only for children 4 through 9 years of age.[10] Increased caloric intake via snacking while watching TV has been shown to be a risk factor for obesity, as is exposure to

advertising for high-calorie foods and snacks.[11,12] Having a TV in the bedroom continues to be associated with the risk of obesity.[13]

Evidence suggests that media use can negatively affect sleep.[14] Studies show that those with higher social media use[15] or who sleep with mobile devices in their rooms[16] were at greater risk of sleep disturbances. Exposure to light (particularly blue light) and activity from screens before bed affects melatonin levels and can delay or disrupt sleep.[17] Media use around or after bedtime can disrupt sleep and negatively affect school performance.[13]

Children who overuse online media are at risk of problematic Internet use,[18] and heavy users of video games are at risk of Internet gaming disorder.[19] The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*,[20] lists both as conditions in need of further research. Symptoms can include a preoccupation with the activity, decreased interest in offline or "real life" relationships, unsuccessful attempts to decrease use, and withdrawal symptoms. The prevalence of problematic Internet use among children and adolescents is between 4% and 8%,[21,22] and up to 8.5% of US youth 8 to 18 years of age meet criteria for Internet gaming disorder.[23]

At home, many children and teenagers use entertainment media at the same time that they are engaged in other tasks, such as homework.[24] A growing body of evidence suggests that the use of media while engaged in academic tasks has negative consequences on learning.[25,26]

Media Influence

Evidence gathered over decades supports links between media exposure and health behaviors among teenagers.[27] The exposure of adolescents through media to alcohol,[28,29] tobacco use,[30,31] or sexual behaviors[32] is associated with earlier initiation of these behaviors.

Adolescents' displays on social media frequently include portrayal of health risk behaviors, such as substance use, sexual behaviors, self-injury, or disordered eating.[33–36] Peer viewers of such content may see these behaviors as normative and desirable.[37,38] Research from both the United States and the United Kingdom indicates that the major alcohol brands maintain a strong presence on Facebook, Twitter, and YouTube.[29,39]

Cyberbullying, Sexting, and Online Solicitation

Cyberbullying and traditional bullying overlap,[40] although online bullying presents unique challenges. These challenges include that perpetrators can be anonymous and bully at any time of day, that information can spread online rapidly,[41] and that perpetrator and target roles can be quite fluid in the online world. Cyberbullying can lead to short- and long-term negative social, academic, and health consequences for both the perpetrator and the target.[42] Fortunately, newer studies suggest that interventions that target bullying may reduce cyberbullying.[43]

"Sexting" is commonly defined as the electronic transmission of nude or seminude images as well as sexually explicit text messages. It is estimated that ∼12% of youth aged 10 to 19 years have ever sent a sexual photo to someone else.[44] The Internet also has created opportunities for the exploitation of children by sex offenders through social networking, chat rooms, e-mail, and online games.[45]

Social Media and Mental Health

Research studies have identified both benefits and concerns regarding mental health and social media use. Benefits from the use of social media in moderation include the opportunity for enhanced social support and connection. Research has suggested a U-shaped relationship between Internet use and depression, with increased risks of depression at both the high and low ends of Internet use.[46,47] One study found that older adolescents who used social media passively (eg, viewing others' photos) reported declines in life satisfaction, whereas those who interacted with others and posted content did not experience these declines.[48] Thus, in addition to the number of hours an individual spends on social media, a key factor is how social media is used.

Social Media and Privacy

Content that an adolescent chooses to post is shared with others, and the removal of such content once posted may be difficult or impossible. Adolescents vary in their understanding of privacy practices[49]; even those who know how to set privacy settings often don't believe they will work.[50] Despite efforts by some

social media sites to protect privacy or to delete content after it is viewed, privacy violations and unwelcome distribution are always risks.[51,52]

Parent Media Use and Child Health

Social media can provide positive social experiences, such as opportunities for parents to connect with children via video-chat services. Unfortunately, some parents can be distracted by media and miss important opportunities for emotional connections that are known to improve child health.[53,54] One research study found that when a parent turned his or her attention to a mobile device while with a young child, the parent was less likely to talk with the child.[55] Parental engagement is critical in the development of children's emotional and social development, and these distractions may have short- and long-term negative effects.

Conclusions

The effects of media use are multifactorial and depend on the type of media, the type of use, the amount and extent of use, and the characteristics of the individual child. Children today are growing up in an era of highly personalized media use experiences, so parents must develop personalized media use plans for their children that attend to each child's age, health, temperament, and developmental stage. Research evidence shows that children and teenagers need adequate sleep, physical activity, and time away from media. Pediatricians can help families develop a Family Media Use Plan (www.HealthyChildren.org/MediaUsePlan) that prioritizes these and other health goals.

Recommendations

Pediatricians

- Work with families and schools to promote understanding of the benefits and risks of media.
- Promote adherence to guidelines for adequate physical activity and sleep via a Family Media Use Plan (www.HealthyChildren.org/MediaUsePlan).
- Advocate for and promote information and training in media literacy.
- Be aware of tools to screen for sexting, cyberbullying, problematic Internet use, and Internet gaming disorder.

Families

- Develop, consistently follow, and routinely revisit a Family Media Use plan (see the plan from the American Academy of Pediatrics at www.HealthyChildren.org/MediaUsePlan).
  - Address what type of and how much media are used and what media behaviors are appropriate for each child or teenager, and for parents. Place consistent limits on hours per day of media use as well as types of media used.
  - Promote that children and adolescents get the recommended amount of daily physical activity (1 hour) and adequate sleep (8–12 hours, depending on age).
  - Recommend that children not sleep with devices in their bedrooms, including TVs, computers, and smartphones. Avoid exposure to devices or screens for 1 hour before bedtime.
  - Discourage entertainment media while doing homework.
  - Designate media-free times together (eg, family dinner) and media-free locations (eg, bedrooms) in homes. Promote activities that are likely to facilitate development and health, including positive parenting activities, such as reading, teaching, talking, and playing together.
  - Communicate guidelines to other caregivers, such as babysitters or grandparents, so that media rules are followed consistently.
- Engage in selecting and co-viewing media with your child, through which your child can use media to learn and be creative, and share these experiences with your family and your community.
- Have ongoing communication with children about online citizenship and safety, including treating others with respect online and offline, avoiding cyberbullying and sexting, being wary of online solicitation, and avoiding communications that can compromise personal privacy and safety.
- Actively develop a network of trusted adults (e.g, aunts, uncles, coaches, etc.) who can engage with children through social media and to whom children can turn when they encounter challenges.