



ELSEVIER

 JOURNAL OF
**ADOLESCENT
 HEALTH**

www.jahonline.org

Editorial

Smartphone Ownership as a Developmental Milestone



Mobile devices and social media present risks and opportunities for adolescent well-being. As media technology has evolved, parental, research, and clinical interest in its uses and effects have grown [1,2]. As such, clinicians are commonly confronted with discussions about device use and the appropriate age at which a child should have their own smartphone. In this issue of the *Journal*, Moreno et al. [3] describe a qualitative study regarding smartphone ownership and use incorporating the voices of early adolescents themselves. In a sample of 45 early adolescents, data from focus group interviews showed that the ideas of maturity, deference to parents, and accountability were important to youth when understanding the decision to have one's own smartphone. Participants pointed out the need to take individual differences into account, rather than a specific age, when determining the appropriate time to own a smartphone. Participants also described a desire to work with their parents to have smartphone ownership and management be a shared decision. The study was strengthened by the inclusion of youth from rural as well as urban areas and of youth with chronic illness. As the authors point out, smartphone ownership can be of unique use to each of these populations.

Negative aspects of smartphone technology may include problematic or excessive Internet use, risky online behavior (e.g., sexting, using pornography), contact with sexual predators, and cyberbullying perpetration and victimization. These negative social media behaviors have been associated with adolescent depression, anxiety, and substance use [4–7]. Comparatively, research focusing on positive outcomes related to social media use is rare [8]. For example, one survey-based report showed that one third of teens reported having experiences online that made them feel closer to another person [9], whereas another showed increased self-esteem associated with positive feedback on social media [10]. The line between online and offline life is blurred or nonexistent for adolescents, and accordingly one's social media “debut” is a milestone of great significance [11–13]. Given the potential negative aspects of such access, parents and clinicians may understandably have trepidation about the timing of initial smartphone access in early adolescence.

Childhood exposure to visual media such as television, movies, and video games has long been associated with both

positive [14] and negative [15–17] outcomes in adolescence. Social media present a new and related but different form of media in which adolescents both consume and create content, leading to presentations of typical adolescent behavior, such as peer interaction and identity exploration, in online settings. In a recent survey, 45% of adolescents aged 13–17 years report being online “constantly,” likely because 95% of these teens own or can access a smartphone [18]. Much of the commentary on age of smartphone ownership and social media use has been from parents and other adults, yet there is often a disconnect between parental knowledge of teens' social media activities and their actual use [19]. Furthermore, although parents are also avid users of screen media, spending over an hour a day on social media on average and 9 h/d with screen media in general, their personal activities may not translate to appropriately informed rules for their teens [20]. As such, the youth perspective on smartphone use is a much-needed addition to the existing adult voices on the subject. The findings of the study by Moreno et al. represent an important contribution to this perspective and raise more issues for future investigation.

Participants in this study had striking insight into a concept that is well known to many parents, researchers, and clinicians: that developmental factors should guide decisions about increasing responsibilities. The ultimate goal with this approach is to optimize socioemotional well-being and guide a child's growth successfully to adulthood. However, such an approach requires an understanding of the childhood factors that contribute to the maturity needed in the new context of smartphone ownership and social media access. For example, childhood self-regulation—that is, the ability to regulate emotions and behaviors—is associated with a large number of important socioemotional outcomes in early childhood and throughout the life course [21–25]. However, no such studies have been conducted in the comparatively new context of social media behavior. If childhood self-regulation predicts specific social media behaviors, interventions that promote the self-regulation could be developed to foster responsible use of smartphones, prevent negative conduct, and promote positive behaviors.

Guidance about smartphone ownership may also benefit from research about the impact of smartphone ownership on

See Related Article on p. 437

Conflict of interest: The authors declare no conflict of interest.

socioemotional well-being at different ages of first ownership. In the study by Moreno et al. [3], one participant remarked, “in terms of like mental health, I think it can really like help you and make you more prideful” to own a smartphone. If ownership of a device in and of itself is considered by youth to be a component of well-being and a symbol of growing up, it also behooves us to look at differences between those who own devices and those who do not. This should be done at different ages and stages of development. Of course, such ownership may also be tied into income status, which in itself is tied to well-being. The study by Moreno et al. did not collect data on socioeconomic status, but the age of acquisition and use of smartphones may be different between low-income and middle- or high-income families or those in single-parent homes. Threats to socioemotional development are higher in low socioeconomic status communities [26–30], and general media use is often high among this population [31–33], yet low-income adolescents are understudied. Further research on smartphone ownership and use in this population can be used to expand and better use digital tools to improve adolescents’ well-being, physical and mental health, and quality of life.

Ellen Selkie, M.D., M.P.H.

*Division of Adolescent Medicine, Department of Pediatrics
University of Michigan
Ann Arbor, Michigan*

References

- [1] Barr R, Linebarger DN. Media exposure during infancy and early childhood. New York: Springer; 2016.
- [2] Reid Chassiakos Y, Radesky J, Christakis D, et al. Children and adolescents and digital media. *Pediatrics* 2016;138. pii: e20162593.
- [3] Moreno MA, Kerr BR, Jenkins M, et al. Perspectives on smartphone ownership and use by early adolescents. *J Adolesc Health* 2019.
- [4] Best P, Manktelow R, Taylor B. Online communication, social media and adolescent wellbeing: a systematic narrative review. *Child Youth Serv Rev* 2014;41:27–36.
- [5] Aboujaoude E, Savage MW, Starcevic V, Salame WO. Cyberbullying: Review of an old problem gone viral. *J Adolesc Health* 2015;57:10–8.
- [6] Tokunaga RS. Following you home from school: A critical review and synthesis of research on cyberbullying victimization. *Comput Human Behav* 2010;26:277–87.
- [7] Selkie EM, Kota R, Chan YF, Moreno M. Cyberbullying, depression, and problem alcohol use in female college students: A multisite study. *Cyberpsychol Behav Soc Netw* 2015;18:79–86.
- [8] Valkenburg PM, Peter J. Social consequences of the internet for adolescents: A decade of research. *Curr Dir Psychol Sci* 2009;18:1–5.
- [9] Madden M, Lenhart A, Cortesi S, et al. Teens, social media, and privacy. Available at: <http://www.pewinternet.org/2013/05/21/teens-social-media-and-privacy/>. 2013. Accessed March 3, 2014.
- [10] Valkenburg PM, Peter J, Schouten AP. Friend networking sites and their relationship to adolescents’ well-being and social self-esteem. *Cyberpsychol Behav* 2006;9:584–90.
- [11] Reich SM, Subrahmanyam K, Espinoza G. Friending, IMing, and hanging out face-to-face: Overlap in adolescents’ online and offline social networks. *Dev Psychol* 2012;48:356.
- [12] Mesch GS, Talmud I. Similarity and the quality of online and offline social relationships among adolescents in Israel. *J Res Adolesc* 2007;17:455–65.
- [13] Subrahmanyam K, Greenfield P. Online communication and adolescent relationships. *Future Child* 2008;18:119–46.
- [14] Anderson DR, Huston AC, Schmitt KL, Linebarger DL, Wright JC, Larson R. Early childhood television viewing and adolescent behavior: The recontact study. *Monographs of the society for Research in Child Development*. 2001 Jan 1:i-154.
- [15] Hancox RJ, Milne BJ, Poulton R. Association of television viewing during childhood with poor educational achievement. *Arch Pediatr Adolesc Med* 2005;159:614–8.
- [16] Pagani LS, Fitzpatrick C, Barnett TA, Dubow E. Prospective associations between early childhood television exposure and academic, psychosocial, and physical well-being by middle childhood. *Arch Pediatr Adolesc Med* 2010;164:425–31.
- [17] Virtual violence. *Pediatrics* 2016;138:e20161298.
- [18] Anderson M, Jiang J. *Teens, Social Media & Technology 2018*. Washington, DC: Pew Research Center; 2018.
- [19] Common Sense Media. Common sense and survey monkey release survey of parents and teens on social media concerns. Available at: <https://www.common SenseMedia.org/about-us/news/press-releases/common-sense-and-survey-monkey-release-survey-of-parents-and-teens-on>. Accessed December 15, 2018.
- [20] Lauricella A, Cingel D, Beaudoin-Ryan L, et al. The common sense census: Plugged-in parents of tweens and teens. San Francisco, CA: Common Sense Media; 2016.
- [21] Jones DE, Greenberg M, Crowley M. Early social-emotional functioning and public health: The relationship between kindergarten social competence and future wellness. *Am J Public Health* 2015;105:2283–90.
- [22] Bronson M. *Self-regulation in early childhood: Nature and nurture*. New York: Guilford Press; 2000.
- [23] Evans GW, Kim P. Childhood poverty, chronic stress, self-regulation, and coping. *Child Dev Perspect* 2013;7:43–8.
- [24] Raffaelli M, Crockett LJ, Shen Y-L. Developmental stability and change in self-regulation from childhood to adolescence. *J Genet Psychol* 2005;166:54–76.
- [25] Moffitt TE, Arseneault L, Belsky D, et al. A gradient of childhood self-control predicts health, wealth, and public safety. *Proc Natl Acad Sci U S A* 2011;108:2693–8.
- [26] McLoyd VC. The impact of economic hardship on black families and children: Psychological distress, parenting, and socioemotional development. *Child Dev* 1990;61:311–46.
- [27] McLoyd VC. Socioeconomic disadvantage and child development. *Am Psychol* 1998;53:185.
- [28] Eamon MK. The effects of poverty on children’s socioemotional development: An ecological systems analysis. *Soc Work* 2001;46:256–66.
- [29] Evans GW, English K. The environment of poverty: Multiple stressor exposure, psychophysiological stress, and socioemotional adjustment. *Child Dev* 2002;73:1238–48.
- [30] Evans GW, Gonnella C, Marcynyszyn LA, et al. The role of chaos in poverty and children’s socioemotional adjustment. *Psychol Sci* 2005;16:560–5.
- [31] Kumanyika S, Grier S. Targeting interventions for ethnic minority and low-income populations. *Future Child* 2006;16:187–207.
- [32] Lenhart A. *Teens, social media and technology overview 2015*. Washington, DC: Pew Research Center; 2015.
- [33] Kabali HK, Irigoyen MM, Nunez-Davis R, et al. Exposure and use of mobile media devices by young children. *Pediatrics* 2015;136:1044–50.