

The Effect of Advertising on Children and Adolescents

Matthew A. Lapierre, PhD,^a Frances Fleming-Milici, PhD,^b Esther Rozendaal, PhD,^c
Anna R. McAlister, PhD,^{d,e} Jessica Castonguay, PhD^f

abstract In ~100 years, marketing to children went from a severely frowned upon practice to an integral part of growing up as companies came to realize that investing in marketing to children and adolescents provides excellent immediate and future dividends. Each year, enormous sums of money are spent to reach this valuable audience because children and adolescents spend billions on their own purchases, influence family decisions about what to buy, and promise a potential lifetime of brand loyalty. The channels to reach youth have grown, and marketers are increasingly using them, often blurring the distinction between entertainment and advertising. Because advertising to children and adolescents has become ubiquitous, researchers who study its influence raise significant concerns about the practice, especially as it relates to dietary behavior, family conflict, marketer tactics, and children's potential vulnerability as an audience. In this review by the Workgroup on Marketing and Advertising, we highlight the state of the research in this area and suggest that more research needs to be conducted on understanding the following: the effects of advertising exposure, how psychological development affects children's responses to marketing, the problems associated with advertising in newer media, and how researchers, parents, and practitioners might be able to mitigate the most deleterious advertising effects. We then present avenues of future research along with recommendations for key stakeholders.

^aDepartment of Communication, University of Arizona, Tucson, Arizona; ^bRudd Center for Food Policy and Obesity, University of Connecticut, Hartford, Connecticut; ^cRadboud University, Nijmegen, Netherlands; ^dEndicott College, Beverly, Massachusetts; ^eMichigan State University, East Lansing, Michigan; and ^fTemple University, Philadelphia, Pennsylvania

All authors conceptualized and organized the review, drafted the original manuscript, and approved the final manuscript as submitted.

The analysis, conclusions, and recommendations contained in each article are solely a product of the individual workgroup and are not the policy or opinions of, nor do they represent an endorsement by Children and Screens: Institute of Digital Media and Child Development or the American Academy of Pediatrics.

DOI: <https://doi.org/10.1542/peds.2016-1758V>

Accepted for publication Apr 19, 2017

Address correspondence to Matthew A. Lapierre, PhD, Department of Communication, University of Arizona, P.O. Box 210025, Tucson, AZ 85721. E-mail: mlapierre@email.arizona.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275).

Copyright © 2017 by the American Academy of Pediatrics

FINANCIAL DISCLOSURE: The authors have indicated they have no financial relationships relevant to this article to disclose.

FUNDING: This special supplement, "Children, Adolescents, and Screens: What We Know and What We Need to Learn," was made possible through the financial support of Children and Screens: Institute of Digital Media and Child Development.

POTENTIAL CONFLICT OF INTEREST: The authors have indicated they have no potential conflicts of interest to disclose.

The average young person growing up in the United States sees anywhere from 13 000 to 30 000 advertisements on television each year.¹ However, these figures do not include the marketing content online, in print, at the movies, in video games, or at school. It is important to note that advertising and marketing can serve a useful purpose for children. Marketing may help socialize children as consumers, inform them about products, and help them carve out unique identities as they reach adulthood.² Yet, as scholars who study advertising and children have found, there are legitimate reasons to be concerned with how marketers approach young audiences.

Some of the most pressing concerns are as follows: whether young people represent a vulnerable audience in need of protection; how marketers are reaching children in online and social networking environments; what parents, practitioners, and policy makers can do to help children contend with these messages; and what the marketing industry can teach various stakeholders about encouraging protective behaviors in young people. Moreover, there are issues related to marketing and young people that can have serious implications, and they deserve careful research attention because there are both short- and long-term negative consequences connected with exposure to marketing messages for products that are not healthy for children³⁻⁵ and the idealized images and messages within the advertising that youth see.^{6,7} In the following pages, we discuss the current state of research in this area, offer suggestions for future research, and provide recommendations to key stakeholders regarding children, adolescents, and marketing.

CURRENT STATE

Influence of Marketing Communications on Children

The marketing of unhealthy products, including unhealthy food as well as alcohol and tobacco, is linked to various negative outcomes for youth. Research shows that food marketing increases children's immediate and future consumption, food brand preferences are influenced by product placements and advergames, and childhood obesity is related to viewing commercial television (not viewing DVDs or public television programming).⁴

Youth exposure to alcohol advertising also delivers unhealthy consequences. Alcohol advertising increases the likelihood that adolescents will start to use alcohol and increases consumption among adolescents who already drink alcohol.³ This is particularly concerning because early alcohol use increases the risk of future alcohol dependence.⁸

Although tobacco marketing has been banned from television for more than 40 years, youth exposure to television advertising for electronic cigarettes (e-cigarettes) doubled from 2011 to 2013.⁵ Contrary to the suggested positive aspects discussed by the manufacturers, research shows that e-cigarette use does not prevent and may increase conventional cigarette use among adolescents.⁹

Harm may also be caused by the overwhelming exposure to all types of marketing, and the images within this marketing, that children and adolescents experience. For example, a review of research found a consistent relationship between advertising exposure, materialism, and parent-child conflict.⁶ Furthermore, a meta-analysis found that advertising and other media portrayals depicting the thin-ideal for women are related to a negative body image among women and girls.⁷

Therefore, there is concern not only for the negative effects associated with the marketing of unhealthy products (ie, food, alcohol, and tobacco) but also for the negative effects associated with the way marketing exposure in general may influence how youth view material possessions and themselves.

Children's Consumer Development

For decades, researchers have recognized children as a vulnerable consumer group because of their budding developmental abilities. Relying on Piaget's theory of cognitive development, researchers in many studies have reported that until children are >7 years old, they do not have the ability to detect persuasive intent in advertising.²

Researchers in modern studies have moved beyond the age-stage theory of cognitive development and have found other variables that play a role in enhancing consumer competencies among young children. For example, research has shown that theory of mind (ie, the ability to think about the thoughts and feeling of others) predicts elementary school-aged children's ability to understand selling intent and the social symbolism of brands.^{10,11} Similarly, preschool-aged children with developed theory of mind are better equipped to detect persuasive intent.¹² Furthermore, executive functioning (ie, the form of cognitive development that explains impulse control, planned behavior, and categorization skills) has been linked to children's ability to process brand messages.¹¹

What remains unknown is how children move from basic consumer competencies to being critical thinkers capable of defending against persuasion. Children's readiness to learn from their social world renders them vulnerable until they develop skepticism.¹³ The protracted development of executive functions (which continues into

adolescence) may explain why this skepticism is slow to emerge.¹⁴ By late adolescence, children's ability to cope with advertising should surface.¹³ However, even as adults, we may be capable of skepticism but still fail to use our critical-thinking skills at all times.¹³ Hence, further research is needed to understand what (if any) individual differences characterize mindful child and adolescent consumers.

Marketing to Children in New Media Environments

As marketing to children has moved to new media platforms, researchers have struggled to keep up with these changes. In the past, researchers could record a few hours of television to get a sense of how marketers were selling to children. However, monitoring new media is fraught with logistical issues because Web sites can be altered in a matter of hours and social networks can privately reach out to young people with commercial appeals.

What we do know about marketing appeals in newer media is that they are often qualitatively different from traditional advertisements. Instead of receiving messages passively, online advertisements engage children actively through advergames platforms (ie, games featuring branded content) and/or through solicitation as brand ambassadors (eg, encouraging children to reach out to friends about a product).^{15,16} These practices are particularly problematic because evidence shows that children have more difficulty understanding that they are being marketed to in these online settings.¹⁷

Research also shows that marketers reaching children in online settings are acting with little oversight and are often more aggressive with their marketing strategies. For example, although companies are legally forbidden from collecting data on children <13 years old

in the United States, evidence suggests that marketers do engage in this practice.¹⁶ Moreover, content analyses of food product Web sites show that many companies feature food products that are substantially less beneficial to children.¹⁸

Mitigating Advertising Effects

Because of the concerns regarding the appropriateness and possibly harmful consequences of advertising targeting youth, various initiatives have been taken to protect and empower them. On a policy level, advertising regulations have been implemented to restrict certain types of advertising targeted at children. However, many of these policies (such as those related to alcohol and food marketing) are self-regulated, and convincing evidence for the efficacy of these policies is still lacking.^{19,20} Moreover, as noted above, the boundless and simultaneously subtle nature of the online media landscape makes it increasingly difficult to implement and control advertising policies.

In response to the difficulties related to advertising policies, there have been calls to invest in the development of educational interventions to empower children by increasing their advertising knowledge. However, research indicates that possessing advertising knowledge does not necessarily enable children to cope with advertising in a conscious and critical manner.¹⁴ Because of the types of appeals used and children's growing cognitive abilities, young people may not be motivated or able to evaluate advertising and make well-informed consumer decisions.¹⁴ Therefore, further investigation is needed to understand how best to use education interventions.

However, there is research that shows parents can play a key role in increasing their children's comprehension of advertising and counteract potentially

undesirable advertising effects by actively talking with their children about advertising.²¹ Yet, in the contemporary media landscape, it has become increasingly difficult for parents to guide their children, particularly in online environments.²² This makes it far more difficult for parents to recognize current advertising practices, which thereby restricts their ability to talk to their children about them.²³

Using Marketing Insights to Help Children

Despite frequent criticism, child-targeted marketing has the potential to encourage positive behaviors. The effectiveness of social marketing confirms that identical techniques used to sell commercial products can sell positive attitudes, ideas, and behaviors.²⁴ Still, whereas there is a vast research base looking at adults and persuasion, little is known regarding the theoretical foundations of persuasion as applied to youth or the potential to effectively market healthful commercial products to young audiences.

One reason is that few theoretical frameworks were developed with children in mind. For example, the Theory of Planned Behavior presents a concise way to assess and then target precursors to behavior. Although it has been used in research with youth ≥ 9 years old, these studies often suggest the need to adjust the model to explain children's behaviors.²⁵ In addition, it is unclear how this and other theoretical models apply to younger children.

Similarly, there is scant evidence regarding effective message design for young audiences. One example of this gulf in the research surrounds message framing. Some research suggests that adults typically respond best to gain-framed messages (ie, messages that highlight the advantages of performing a behavior), yet young children respond equally favorably to

both gain- and loss-framed content (ie, messages that emphasize the negative repercussions of not taking action).²⁶ Furthermore, adolescents may respond differently to message framing because of developmental characteristics. For example, it is argued that adolescents are more influenced by loss-framed messages because these messages enhance cognitive dissonance in youth, yet adults are likely to experience this dissonance regardless of the message frame.²⁷

Lastly, whereas social marketing has frequently been investigated from a public health perspective, little has been done to assess how commercial media messages can have a positive impact on children. Certain marketing tactics, such as the use of licensed characters, have been recognized as being particularly influential.²⁸ A recent review of research regarding the use of characters in child-targeted food marketing acknowledged that although particularly effective at promoting unhealthy foods, children's characters can encourage fruit and vegetable consumption as well.²⁹ In addition, children have been shown to find a vegetable dish more desirable when it is named attractively, although this has not been investigated in mediated contexts.³⁰ Nevertheless, to help children and families, researchers need a better understanding of how persuasive theories and message design apply to children to create effective messages for these audiences.

FUTURE RESEARCH

Based on the current gaps in the research literature, we recommend the following:

- An interdisciplinary-focused content analysis dedicated to quantifying and tracking youth exposure to marketing messages across mobile and new media

platforms. By considering the challenges associated with tracking advertising on new media devices, such a study would include insights from ethnographers, computer scientists, behavioral scientists, and public health specialists;

- Longitudinal research exploring how youth process marketing messages across media platforms and across ages, with a particular focus on the following:
 - Understanding the link between persuasive-intent understanding and message perception and reception by using both direct and indirect measures that can reveal the processes through which children are persuaded by different forms of marketing messages;
 - Identifying developmental (eg, executive function and theory of mind abilities) and ecological factors (eg, socioeconomic status) that may moderate these effects; and
- Based on the results of the first 2 proposals, determining the most effective ways to enhance receptivity to healthy messages and increase protection against unhealthy marketing messages.

RECOMMENDATIONS

Clinicians and Providers

Educate parents about the subtle pervasiveness of marketing (particularly in new media settings) along with the negative effects of increased commercial exposure in children. Medical professionals should also strongly encourage parents to monitor their children's exposure to marketing communication.

Policy Makers

By considering the challenges that children face in negotiating an ever-changing and often confusing persuasion environment, increased

pressure should be applied to marketers to ensure that their practices are developmentally appropriate and transparent (eg, alcohol advertising).

Educators

Those working directly with children and/or developing curricula for children should focus on interventions that increase children's advertising knowledge and help them engage critically with commercial messages in ways that are developmentally appropriate. Educators should also engage directly with young people to learn about the multitude of ways marketers target this audience.

REFERENCES

1. Gantz W, Schwartz N, Angelini JR, Rideout V. Food for thought: television food advertising to children in the United States. 2007. Available at: <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/7618.pdf>. Accessed September 30, 2015
2. John DR. Consumer socialization of children: a retrospective look at twenty-five years of research. *J Consum Res*. 1999;26(3):183–213
3. Anderson P, de Bruijn A, Angus K, Gordon R, Hastings G. Impact of alcohol advertising and media exposure on adolescent alcohol use: a systematic review of longitudinal studies. *Alcohol Alcohol*. 2009;44(3):229–243
4. Harris JL. Demonstrating the harmful effects of food advertising to children and adolescents. In: Jordan AB, Romer D, eds. *Media and the Well-Being of Children and Adolescents*. New York, NY: Oxford University Press; 2014:44–51
5. Duke JC, Lee YO, Kim AE, et al. Exposure to electronic cigarette television advertisements among youth and young adults. *Pediatrics*. 2014;134(1). Available at: www.pediatrics.org/cgi/content/full/134/1/e29
6. Buijzen M, Valkenburg PM. The effects of television advertising on materialism, parent-child conflict, and

- unhappiness: a review of research. *J Appl Dev Psychol*. 2003;24(4):437–456
7. Grabe S, Ward LM, Hyde JS. The role of the media in body image concerns among women: a meta-analysis of experimental and correlational studies. *Psychol Bull*. 2008;134(3):460–476
 8. Hingson RW, Heeren T, Winter MR. Age at drinking onset and alcohol dependence: age at onset, duration, and severity. *Arch Pediatr Adolesc Med*. 2006;160(7):739–746
 9. Dutra LM, Glantz SA. Electronic cigarettes and conventional cigarette use among U.S. adolescents: a cross-sectional study. *JAMA Pediatr*. 2014;168(7):610–617
 10. Lapierre MA. Development and persuasion understanding: predicting knowledge of persuasion/selling intent from children's theory of mind. *J Commun*. 2015;65(3):423–442
 11. McAlister AR, Cornwell TB. Children's brand symbolism understanding: links to theory of mind and executive functioning. *Psychol Mark*. 2010;27(3):203–228
 12. McAlister AR, Cornwell TB. Preschool children's persuasion knowledge: the contribution of theory of mind. *J Public Policy Mark*. 2009;28(2):175–185
 13. Moses LJ, Baldwin DA. What can the study of cognitive development reveal about children's ability to appreciate and cope with advertising? *J Public Policy Mark*. 2005;24(2):186–201
 14. Rozendaal E, Lapierre MA, van Reijmersdal EA, Buijzen M. Reconsidering advertising literacy as a defense against advertising effects. *Media Psychol*. 2011;14(4):333–354
 15. Culp J, Bell RA, Cassidy D. Characteristics of food industry web sites and "advergames" targeting children. *J Nutr Educ Behav*. 2010;42(3):197–201
 16. Dahl S, Eagle L, Carlos B. Analyzing advergames: active diversions or actually deception. an exploratory study of online advergames content. *Young Consum*. 2009;10(1):46–59
 17. Owen L, Lewis C, Auty S, Buijzen M. Is children's understanding of non-traditional advertising comparable to their understanding of television advertising? *J Public Policy Mark*. 2012;32(2):195–206
 18. Harris JL, Speers SE, Schwartz MB, Brownell KD. US food company branded advergames on the Internet: children's exposure and effects on snack consumption. *J Child Media*. 2012;6(1):51–68
 19. Harris JL, Sarda V, Schwartz MB, Brownell KD. Redefining "child-directed advertising" to reduce unhealthy television food advertising. *Am J Prev Med*. 2013;44(4):358–364
 20. Jernigan DH, Ostroff J, Ross C. Alcohol advertising and youth: a measured approach. *J Public Health Policy*. 2005;26(3):312–325
 21. Buijzen M. Reducing children's susceptibility to commercials: mechanisms of factual and evaluative advertising interventions. *Media Psychol*. 2007;9(2):411–430
 22. Spiteri Cornish L. "Mum, can I play on the internet?": parents' understanding, perception and responses to online advertising designed for children. *Int J Advert*. 2014;33(3):437–473
 23. Evans NJ, Carlson L, Grubbs Hoy M. Coddling our kids: can parenting style affect attitudes toward advergames? *J Advert*. 2013;42(2–3):228–240
 24. Gordon R, McDermott L, Stead M, Angus K. The effectiveness of social marketing interventions for health improvement: what's the evidence? *Public Health*. 2006;120(12):1133–1139
 25. Nigg CR, Paxton R. Conceptual perspectives used to understand youth physical activity and inactivity. In: Smith AL, Biddle SJH, eds. *Youth Physical Activity and Inactivity: Challenges and Solutions*. Champaign, IL: Human Kinetics; 2008:79–113
 26. Bannon K, Schwartz MB. Impact of nutrition messages on children's food choice: pilot study. *Appetite*. 2006;46(2):124–129
 27. Latimer AE, Krishnan-Sarin S, Cavallo DA, Duhig A, Salovey P, O'Malley SA. Targeted smoking cessation messages for adolescents. *J Adolesc Health*. 2012;50(1):47–53
 28. McGinnis JM, Gootman J, Kraak VI; Institute of Medicine. *Food Marketing to Children and Youth: Threat or Opportunity?* Washington, DC: The National Academies Press; 2006
 29. Kraak VI, Story M. Influence of food companies' brand mascots and entertainment companies' cartoon media characters on children's diet and health: a systematic review and research needs. *Obes Rev*. 2015;16(2):107–126
 30. Wansink B, Just DR, Payne CR, Klinger MZ. Attractive names sustain increased vegetable intake in schools. *Prev Med*. 2012;55(4):330–332

The Effect of Advertising on Children and Adolescents

Matthew A. Lapierre, Frances Fleming-Milici, Esther Rozendaal, Anna R. McAlister
and Jessica Castonguay

Pediatrics 2017;140;S152

DOI: 10.1542/peds.2016-1758V

Updated Information & Services	including high resolution figures, can be found at: http://pediatrics.aappublications.org/content/140/Supplement_2/S152
References	This article cites 26 articles, 1 of which you can access for free at: http://pediatrics.aappublications.org/content/140/Supplement_2/S152#BIBL
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.aappublications.org/site/misc/Permissions.xhtml
Reprints	Information about ordering reprints can be found online: http://www.aappublications.org/site/misc/reprints.xhtml

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

The Effect of Advertising on Children and Adolescents

Matthew A. Lapierre, Frances Fleming-Milici, Esther Rozendaal, Anna R. McAlister
and Jessica Castonguay

Pediatrics 2017;140;S152

DOI: 10.1542/peds.2016-1758V

The online version of this article, along with updated information and services, is
located on the World Wide Web at:

http://pediatrics.aappublications.org/content/140/Supplement_2/S152

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2017 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 1073-0397.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

