

EDITORIAL

If You can't beat It–Use It: why and how clinicians need to consider social media in the treatment of adolescents with obesity

European Journal of Clinical Nutrition (2016) 70, 977–978;
doi:10.1038/ejcn.2016.126

BACKGROUND

Obesity is a prevalent, costly and severe health concern among adolescents.¹ Although the incidence of overweight and obesity among children and adolescents in countries such as the United States, France and Sweden seems to have plateaued in recent years, rates remain high.² It is important to focus on adolescents as the probabilities of an obese child to develop into an obese adult are much higher than for a healthy weight child.³ One potent environmental factor influencing the rise in obesity is the pervasive presence of food and beverage marketing to young people.⁴ Today, much of the food marketing relies on social media, and adolescents are heavy users of social media. In countries such as the USA and Sweden, more than 70% of adolescents at ages 13–17 use a social media site on a daily basis.^{5,6} Food marketing in social media works through a range of mechanisms, and the sight of food elicits a variety of brain responses related to preparation for food intake, desire to eat and cognitive processes such as hedonic evaluation.⁷ Food advertisements is powerful as brain reactivity to visual food cues has been shown to predict future weight gain in adolescents⁸ and to predict snack consumption.⁹

PERSUASIVE FOOD MARKETING IN SOCIAL MEDIA

Snack and beverage companies are utilizing a wide range of sophisticated social media marketing techniques targeting adolescent consumers.¹⁰ Previous studies analyzing television advertisements seen by children showed that these promoted unhealthy foods,¹¹ and the same seems to be true in social media. In a study on Instagram, a widely used media-sharing application, almost half of the food-related images shared by Scandinavian adolescent users contained references to food and beverage brands.¹² The foods were mostly high in calories but low in nutrients and normally presented with positive descriptions. The results indicate that these uploaders were not aware, or simply agreed with the persuasive intent of food manufacturers. The impact of incorporated campaigns, which underline commercial messages across numerous platforms, and of social media, which engage individually with potential consumers, is likely to be greater than that of traditional marketing.¹³ When meeting and treating adolescent patients with obesity, it is therefore important that clinicians are aware of these new and emerging advertising techniques.

RECOMMENDATIONS FOR ACTION

With this background, I wish to present a window of opportunity to create a new framework for social media marketing to youth. Much of the current work to limit exposure to high-calorie low-nutrient food advertising centers around restricting advertisements during children's television programs.¹⁴ An updated framework will need

to include the full spectrum of advertising and marketing practices across all media platforms. Social media marketing needs to be regulated, such that corporations are constrained to market unhealthy brands directly to minors. But a key role will also be played by clinicians, such as dietitians, nutritionists, nurses and physicians working with adolescents undergoing treatment for obesity. As social media's influence over adolescents is not likely to decline in the near future, we also need to learn from it and make better use of it. I propose three ways in which this can be done, with the clinic as base:

First, clinicians should assess the dietary influences their adolescent patients engage with in social media. Are the patients or their parents following any blogs, online forums or patient-led organization online that provides nutritional recommendations contradicting the ones we provide from the clinic? Social media is a growing influence when it comes to non-conventional dietary regimes, that can be potentially harmful,¹⁵ and online dietary resources are used by a range of patient groups.^{16,17} These assessments should preferably be incorporated into the structured patient talks as we bring up overall nutritional issues and problems. By engaging in these matters and raise our own awareness, clinicians will understand their patients' health information needs better, and will also be able to meet their patients with applicable arguments in regard to specific sites and recommendations. One example is the low-carb high-fat diet that has been popular in the Nordic countries for some years and has been subject to national and international public health concern.¹⁸ The diet promoters have made effective use of social media to establish their authority.¹⁵ If patients are following this diet, it is important that clinicians talk about it in regard to specific health concerns characterizing the dietary regime, such as the drastic restriction of total carbohydrates and largely unrestricted intakes of saturated fats.¹⁹ Long-term risks can be difficult to grasp for adolescents, which is why clinicians should explain the mechanisms by which their diet can raise the risk for atherosclerosis and cardiovascular disease. It is also vital that clinicians elucidate how online diet promoters frame their arguments and what evidence base they are using in doing so. It is common that diet promoters in social media use anecdotal evidence (for example, weight-loss success stories) and powerful personal narratives²⁰ that can be appealing and tempting for adolescents struggling with obesity. But clinicians need to clarify why and how anecdotal evidence is not scientifically credible.

Second, we also need to make adolescents aware of how they themselves contribute to the promotion of high-calorie low-nutrient food items and how they are exposed to online advertisements unwarily regarding unhealthy foods. Food marketing often targets children and adolescents, as they are more receptive and as it is harder for them to distinguish advertising claims from the truth.²¹ Therefore it is important that we emphasize the adolescents' ability to comprehend and assess health information from online sources; that is, that we consider and encourage their eHealth literacy skills. An important concept in our clinical practice is to educate and guide our patients in how to independently and autonomously manage and handle their dietary habits in everyday life. Instructing our patients on how food and beverage companies operate online

is important, and previous studies have showed that children who recognize the persuasive intent of commercial messages are more critical towards advertisements, for instance by developing counter-argumentation.²² Clinicians can assist in deconstructing food advertisement to inform adolescents what the aim of advertising is and how manufacturers try to affect them in various ways: for example, by using an illustrative advertisement (for example, billboards, online ads) and asking the adolescents if they can identify marketing techniques in these, such as animation, filming tricks or the use of celebrities. It is also important to explain and exemplify that when the adolescents see friends share images of, for example, Coca-Cola bottles in their Instagram accounts,¹² Coca-Cola aims to make money and that the company want the adolescents to identify with their brand, to form a personal relationship. Online materials aimed to improve media and advertising literacy among adolescents and how they can cope with persuasion in media are available in, for example, English²³ and Swedish.²⁴ Clinicians could use this material or develop and tailor their own educational materials and workshops to explain how persuasive marketing operate in this day and age. The information should be adapted according to the patients' age and skill level.²⁵

Lastly, we could use social media proactively in our clinical practice. For example, it can be to inspire adolescents to eat and cook at home, as cooking meals at home is associated with consumption of a healthier diet.²⁶ Social media applications can be used to encourage adolescents to photograph and share their endeavors in the kitchen with clinic staff for feedback. We can also create a hashtag (#)—which in social media functions as a label and as a searchable keyword—that is specific for the clinic, wherein patients can tag their images of health meal ideas. Other patients can easily access these images by searching on Twitter or Instagram for the tag and get inspiring meal ideas from others in the same situation. Social reinforcement and social modeling are important aspects to consider in influences of adolescents' food habits.^{27,28} Another more focused and potentially more time-consuming strategy is to create a private group on Facebook that is moderated from the clinic. Social networks can provide obese patients social support through online communities, and enable peer support, as well as individualized interactions and the exchange of personal data and recommendations between patients and providers.²⁹ The adolescents would need to get the invitation for the group from the clinic, to assure privacy and to only allow patients from the clinic as members, as it can be sensitive to share and disclose to peers.

Social media have considerable potential as tools in the clinical practice, but they require careful application to achieve their desired outcomes. It is important to be sensitive and aware of the individual needs of patients, and to respect privacy issues. Clinicians need to delve into this online landscape, however, in order to be aware of the nutritional risks associated with these emerging new media and potentially misleading and misguiding information that their patients are exposed to, or voluntarily engage in. It is also important that clinicians see the potential in harnessing these new media as they are bound to increase in influence over pediatric patients.

CONFLICT OF INTEREST

The author declares no conflict of interest.

DISCLAIMER

The views expressed above are those of the author.

ACKNOWLEDGEMENTS

This investigation was undertaken with support from EpiLife, Gothenburg's center for epidemiologic studies (Forte #2006-1506).

C Holmberg
Department of Food and Nutrition, and Sport Science, University of
Gothenburg, Gothenburg, Sweden
E-mail: christopher.holmberg@gu.se

REFERENCES

- 1 World Health Organization *Population-based Approaches to Childhood Obesity Prevention*. WHO: Geneva, 2012.
- 2 Rokholm B, Baker JL, Sorensen TI. The levelling off of the obesity epidemic since the year 1999—a review of evidence and perspectives. *Obes Rev* 2010; **11**: 835–846.
- 3 Styne DM. Childhood and adolescent obesity. Prevalence and significance. *Pediatr Clin N Am* 2001; **48**: 823–854 vii.
- 4 Chandon P, Wansink B. Does food marketing need to make us fat? A review and solutions. *Nutr Rev* 2012; **70**: 571–593.
- 5 Swedish Media Council. English summary: kids & media 2015, 2015.
- 6 Pew Research Center. Teens, social media & technology overview 2015, 2015.
- 7 Van der Laan LN, De Ridder DTD, Viergever MA, Smeets PAM. Appearance matters: neural correlates of food choice and packaging aesthetics. *PLoS ONE* 2012; **7**: e41738.
- 8 Yokum S, Ng J, Stice E. Attentional bias to food images associated with elevated weight and future weight gain: an fMRI study. *Obesity (Silver Spring)* 2011; **19**: 1775–1783.
- 9 Lawrence NS, Hinton EC, Parkinson JA, Lawrence AD. Nucleus accumbens response to food cues predicts subsequent snack consumption in women and increased body mass index in those with reduced self-control. *NeuroImage* 2012; **63**: 415–422.
- 10 Montgomery K, Chester J. Digital food marketing to children and adolescents: problematic practices and policy interventions. National Policy & Legal Analysis Network to Prevent Childhood Obesity; Public Health Law & Policy, 2011. Available at http://case-studies.digitalads.org/wp-content/uploads/2011/10/DigitalMarketingReport_FINAL_web_20111017.pdf
- 11 Powell LM, Schermbeck RM, Chaloupka FJ. Nutritional content of food and beverage products in television advertisements seen on children's programming. *Child Obes* 2013; **9**: 524–531.
- 12 Holmberg C, Chaplin EJ, Hillman T, Berg C. Adolescents' presentation of food in social media: an explorative study. *Appetite* 2016; **99**: 121–129.
- 13 Kelly B, Vandevijvere S, Freeman B, Jenkin G. New media but same old tricks: food marketing to children in the digital age. *Curr Obes Rep* 2015; **4**: 37–45.
- 14 Powell LM, Harris JL, Fox T. Food marketing expenditures aimed at youth: putting the numbers in context. *Am J Prev Med* 2013; **45**: 453–461.
- 15 Holmberg C. Politicization of the LOW-CARB HIGH-FAT Diet in Sweden, promoted on social media by non-conventional experts. *Int J E-Politics* 2015; **6**: 27–42.
- 16 Gage H, Williams P, Von Rosen-Von Hoewel J, Laitinen K, Jakobik V, Martin-Bautista E *et al*. Influences on infant feeding decisions of first-time mothers in five European countries. *Eur J Clin Nutr* 2012; **66**: 914–919.
- 17 Faith J, Thorburn S, Smit E. Body mass index and the use of the Internet for health information. *Health Educ J* 2015; **75**: 94–104.
- 18 Mann J, Nye ER. Fad diets in Sweden, of all places. *Lancet* 2009; **374**: 767–769.
- 19 Mann J, McLean R, Skeaff M, Morenga LT. Low carbohydrate diets: going against the grain. *Lancet* 2014; **384**: 1479–1480.
- 20 Huovila J, Saikkonen S. Establishing credibility, constructing understanding: the epistemic struggle over healthy eating in the Finnish dietetic blogosphere. *Health* 2015; e-pub ahead of print 28 July 2015; doi: 10.1177/13634593155595849.
- 21 Termini RB, Roberto T, Hostetter S. Food advertising and childhood obesity: a call to action for proactive solutions. *Minnesota Journal of Law. Sci Technol* 2011; **12**: 619–651.
- 22 Verhellen Y, Oates C, De Pelsmacker P, Dens N. Children's responses to traditional versus hybrid advertising formats: the moderating role of persuasion knowledge. *J Consum Policy* 2014; **37**: 235–255.
- 23 Buckingham D, Willett R, Banaji S, Cranmer S. *Media Smart Be Advise 2: An Evaluation*. Centre for the Study of Children, Youth and Media: University of London, UK, London, 2007.
- 24 Swedish Media Council. In English — About the Swedish Media Council 2016 [updated 2015-12-10; cited 2016 June 1]. Available from <http://statensmedierad.se/ovrigt/inenglish.579.html>.
- 25 Mogford E, Gould L, DeVoght A. Teaching critical health literacy in the US as a means to action on the social determinants of health. *Health Promotion Int* 2011; **26**: 4–13.
- 26 Wolfson JA, Bleich SN. Is cooking at home associated with better diet quality or weight-loss intention? *Public Health Nutr* 2015; **18**: 1397–1406.
- 27 Centola D. The spread of behavior in an online social network experiment. *Science* 2010; **329**: 1194–1197.
- 28 Bevelander KE, Anschutz DJ, Creemers DH, Kleinjan M, Engels RC. The role of explicit and implicit self-esteem in peer modeling of palatable food intake: a study on social media interaction among youngsters. *PLoS One* 2013; **8**: e72481.
- 29 Ashrafian H, Toma T, Harling L, Kerr K, Athanasiou T, Darzi A. Social networking strategies that aim to reduce obesity have achieved significant although modest results. *Health Affairs (Project Hope)* 2014; **33**: 1641–1647.