Appetite Special Issue

The Marketing of Foods and Non-alcoholic Beverages to Children:

Setting the Research Agenda

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**Abstract**

The marketing of foods and non-alcoholic beverages to children is a critically important issue in the context of a global childhood obesity pandemic. This special issue reviews the existing evidence and brings together a number of new and exciting research developments on this topic from leading researchers and policy advocates in the field. There is still considerable work to be done to ensure that effective regulatory regimes can be designed and implemented to reduce the impact of promotion of foods high in fat, sugar and/or salt (HFSS) on child health.

**Main text**

In 2003 the Hastings report first highlighted the role of marketing in influencing children’s choice. Hastings concluded, on the evidence up to that date, that children in the UK are exposed to extensive food advertising, and that the diet advertised is considerably less healthy than the diet healthcare experts would recommend. Furthermore, the report stated that advertisements do have an effect on children’s preferences, purchasing behaviour and consumption; and that this modification of behaviour occurs not only at the brand level (changing the preference between two equivalent products such as potato chips) but more importantly at category level (the child being more likely to choose potato chips per se). Despite being well received by both the academic and health communities, these findings took a number of years to make a policy impact in the UK.

Contemporaneous reports from North America (e.g. Institute of Medicine, Kaiser Family Foundation), reviewing largely the same literature base, independently reached very similar conclusions. In the UK, four years after Hastings, regulation was introduced in a phased manner such that by January 2009, television advertising of unhealthy foods and beverages to children during child-specific programming was to be fully curtailed. Although its scope was limited in terms of both the media and the amount of broadcast time it covered, this was a radical deviation from previous policy in that it explicitly acknowledged the link between marketing activities (such as advertising) and child health. In essence, this triggered policymakers globally to seriously consider restrictions to deal with the growing problem of childhood obesity. Key stakeholders including various non-governmental organisations, health ministries, and the World Health Organisation (WHO) collaborated to consider marketing to children in a far wider context. Through work produced by the European Network on Reducing Marketing Pressure on Children and the International Obesity Taskforce-led initiatives (PolMark (<http://www.iaso.org/policy/euprojects/polmarkproject/>) and StanMark (<http://www.iaso.org/policy/euprojects/stanmarkproject/>), the growing body of evidence demonstrating the effects of specific forms of commercial media on children’s patterns of consumption was reviewed. This was done in the context of the proliferation of marketing possible through new technology and the growth of social media – things taken up avidly by the young generation. In light of this, and informed by many of these considerations, the WHO released its Set of Recommendations on the Marketing of Foods and Non-alcoholic Beverages to Children (<http://www.who.int/dietphysicalactivity/marketing-food-to-children/en/>). This was to be a tool for national governments to create the necessary voluntary or statutory regulatory frameworks to ensure that marketing to children promoted a far healthier and balanced diet. These recommendations should soon be followed by WHO guidance to enable national authorities to assess the impact of introducing such sanctions. Since Hastings, the debate has moved on from looking at traditional broadcast media (i.e. television) and now seeks to address marketing activity as a whole. For instance TV advertising, although arguably slightly on the decline, often links to interactive websites which in turn persuade the child to promote the brand through social media which is readily accessible through mobile telephony.

As early as 2006, the International Association for the Study of Obesity released the Sydney Principles (<http://www.iaso.org/iotf/obesity/childhoodobesity/sydneyprinciples/>); these principles were drafted on the basis of responses from all affiliated national obesity research organisations. In 2011, the UK Association for the Study of Obesity (ASO) held a one day meeting (London, 6th June) to evaluate progress 5 years on, in the context of the ongoing debate over what regulation should cover and how it should be implemented. The aim of the meeting was to synthesise the latest scientific evidence base with current policy perspectives. This special issue captures the most important outcomes of that ASO meeting, a number of the original speakers have updated and expanded upon their original presentations to provide wide ranging coverage of some of the most recent policy debates and scientific thinking in the area of marketing to children. Furthermore, we have subsequently been able to include, within this edition, some of the most interesting submissions to the journal on this topic.

In this edition, Cairns and colleagues provide a timely update to the original Hastings review. This strengthens the original conclusions of Hastings and comments that by-and-large the food marketing landscape remains to be rebalanced. However, this review admits that evidence is scarce on what practical policy interventions can effectively tackle the nature and extent of commercial messages that children are exposed to. Cairns and colleagues recognise the plurality of media used to promote to children but what remains constant is the nature of the food promoted. These foods are predominantly high in fat, sugar and/or salt (HFSS) composed largely of sugared cereals, soft drinks, savoury snacks, confectionery and fast food, promoted specifically using themes of taste, humour, action and fantasy. All of these advertisements have an impact on nutritional knowledge, food preferences, purchase and purchase-related behaviour and critically, consumption. As Boyland & Halford detail, exposure to food adverts specifically promotes the intake of HFSS foods but also increases overall caloric consumption, effects related to childhood obesity and mediated by habitual TV viewing.

Cairns’ work is supported by specific case studies, the first from Kim demonstrates that while overall exposure to television food adverts has fallen in South Korea, the extent of advertising to children remains prolific and advertising for fast food and other out-of-home eating opportunities has indeed increased.

This maps on well to previously reported findings by Boyland and colleagues (Boyland *et al*., 2011; 2012) which are examined by them in this current issue. This review is particularly interesting as Boyland and colleagues have managed to capture considerable data on the effects of the introduction of statutory regulation upon HFSS advertising on the UK commercial channels most popular with young people. This analysis has demonstrated that even statutory regulatory regimes have relatively little impact upon the nature of the diet promoted to children through broadcast media. The regulation only targets a small proportion of the television viewed by children (not tackling family viewing which has greater numbers of child viewers than dedicated child programming) but even during child-specific programming the advertising of unhealthy foods dominates, with exposure to messages for healthy options a rarity.

Blades and colleagues draw attention to the specific nature of, and implications of, advertising on the internet. Two important themes are explored; firstly, children are less able to identify promotional material on the internet in comparison to broadcast media. Secondly, existing literature demonstrates that such recognition is not necessary for promotional messages to exert their persuasive influence. The implication of this is that children are influenced by adverts whether they recognise them as such or not. It is well established that advertising is not the only form of marketing on the internet, indeed ‘pop-up’ and side of screen ads are often only the starting point, and as with web addresses in TV adverts, these type of ads are designed to link with sites that actively immerse children in the brand experience (e.g. ‘advergaming’) for prolonged periods of time. Recent data from Culp et al., (2010) demonstrated that television advertisements on the channels Cartoon Network and Nickelodeon (notably those promoting fast foods/ready to eat items) frequently contained website promotion, and that 81% of these websites included advergames with prominent brand identifiers. Similarly, Brady et al., (2010) found that even companies who were signed up to an initiative to limit HFSS food promotion to children in Canada were still targeting children with dynamic online marketing techniques including free website membership, advergames and branded downloadable content to engage child consumers. As Blades *et al*., comment in this edition, current regulatory perspectives still largely focus on broadcast media. Policymakers either remain largely unaware of the nature of online marketing activities or find regulating it a major challenge. Often what is regarded as clear marketing by some is purported by the marketers themselves to be merely providing information for consumers.

Information may be critical in informing consumer choice in the retail and catering environments. However, Serrano *et al*., demonstrate that paradoxically menu labelling did not necessarily decrease energy intake or total fat consumed from combo meal options, but did increase the purchase of healthier a la carte menu items by families. The combo is a critical component of the family dining experience, particularly in the US. As Cornwell points out in her paper, a strong contingent relationship exists between combo meal items such that energy dense drinks (i.e. sugar sweetened soft drinks) are readily paired with energy dense foods in the consumer’s mind following lifelong experience of this association. It is difficult then to alter any one item of a combo without reducing its overall appeal.

When considering the overall healthiness of foods and non-alcoholic beverages, the nutritional composition and energy density of these items is critical. However, defining what is healthy and unhealthy based upon proportion or absolute values of macronutrients per serving size is challenging. The science of nutrient profiling aspires to rank or classify foods in terms of healthiness based on these aforementioned parameters. In its crudest sense it can define food types as healthy or unhealthy and within food categories, specific items as healthier or less healthy options. For the purposes of regulation, nutrient profiling has the potential to allow the marketing of healthy foods and beverages to children to continue while restricting the promotion of those items high in undesirable nutrients. As Rayner and colleagues describe, constructing and developing an effective nutrient profiling model requires reliable analysis of food composition coupled with valid criteria to define distinct categories. A range of nutrient profiling models exist and the particular model used can have diverse effects upon the scope and effectiveness of any regulation of food and beverage marketing.

However, differences in nutrient profiling are not the only potential gaps and weaknesses in regulatory frameworks. As Landon reports, the UK possesses a well recognised regulatory system to control the marketing of food and non-alcoholic beverages to children but a number of studies have indicated that considerable gaps exist. However, a concentration on broadcast media and restriction to child-specific programming has limited its effectiveness. In fact, the mixture of statutory and self-regulation covering all commercial communications and broader marketing activity in the UK is very diverse and no overarching principles appear to inform these. In particular, as Cairns points out, marketing has evolved in the digital age and as researchers and healthcare practitioners, we are struggling to understand its nature, extent, and influence.

As Lobstein comments, marketing via the rapidly changing media environment is of considerable concern to national governments. Opinions on the extent and nature of any regulation widely differ between key stakeholders (as Davó *et al*., show). However policymakers often lack the necessary evidence to justify regulatory intervention. National jurisdictions often differ in their definitions of childhood, and marketing encompasses a broad range of activities. Nonetheless, through identifying evidence gaps the research community can assist in the translation of science into appropriate policy action.

**Recommendations for the direction of future research**

Much has been achieved since the original Hastings (2003) report that was based on only the 200 published studies deemed relevant and of sufficient scientific rigour to be included. Although the evidence base has expanded considerably in the last ten years; there remain many scientific and technical challenges which have proven to be considerable barriers to those wishing to elaborate on the nature of marketing activity and its impact upon child health. One of the most fundamental questions remains - how much marketing are children exposed to and have changes in the nature, media form and extent of this activity altered children’s food preferences and related health outcomes? Manufacturers and advertisers may argue that the extent of marketing focused at children has declined, while rates of childhood obesity appear stubbornly persistent in the Western world. In fact, the picture is far more complicated. Firstly, children’s food preferences are the result of lifelong experience of marketing activity and are therefore likely to be resistant to change, and secondly the switch from traditional broadcast media-based approaches to multimedia campaigns means quantifying exposure has become increasingly difficult. Nonetheless, monitoring of traditional media has continued to show that children are exposed to extensive HFSS advertising although the sources of these messages may be changing. Specific HFSS food items may be less likely to be promoted during child-specific programming but fast food outlet promotion appears to be on the increase as does product placement within the programmes themselves. Monitoring is a time-consuming endeavour but, as the literature demonstrates, data collected either through the direct monitoring of marketing to children or analyses of commercial media data sources show that regulation has often been far less effective than regulators have hoped (Boyland *et al*., 2012; Adams *et al*., 2012). Common methodological approaches to monitoring the extent of exposure and also the nature of the advertising message along with agreed nutrient profiling would help researchers better gauge changing trends in commercial marketing per se and also the impact of regulation. Substantive datasets of existing adverts can also be used to model the effectiveness of differing regulatory proposals. However, the international ‘cross-border’ nature and plurality of much media requires far more sophisticated and global approaches for assessing the promotion of unhealthy foods to children.

In essence, the extent of marketing is only relevant if we assume it has impact and influence upon child consumers. The associations children make between foods and brands from advertising framed within themes of fun, fantasy, popularity and excitement may be critical in explaining the unique appeal of specific forms of advertising to young consumers. However, we remain largely ignorant of how these factors impact on purchasing and consumption. Nor do we fully understand how the purchasing environment and product packaging further influence children’s choices. Research examining the associations between purchasing behaviour, media exposure and its determinants (including socio-economic status), and childhood obesity is certainly warranted. For a definitive picture, this would require both larger scale prospective cohort analyses to examine weight gain and smaller scale experimental paradigms to examine appetitive behaviour.

The psychological mechanisms underpinning the influence of food advertising on appetite expression remain unclear. Understanding the trajectory of the development of children’s food preferences, in the context of their wider social development, should indicate the critical stages at which advertising is most influential. From the time of early schooling, the influence of peers is critical and much social media marketing now directly exploits this. Children are far less likely to recognise this form of marketing as advertising, nor understand its intent. Whilst understanding may not be necessary for children to be influenced, a number of individual differences may mediate the impact of commercial messages on children’s food choice and intake. We know traits in eating behaviour such as neophobia can influence children’s responsiveness to food advertising; however the role of traits such as ‘eating in the absence of hunger’ and underpinning processes such as attentional bias remain to be elucidated. Furthermore, the neurological assessment of the responsiveness to food cues could be expanded to specifically address the role of marketing messages in overwhelming normal homeostatic control of energy intake.

**References**

Adams, J., Tyrrell, R., Adamson, A.J., White, M. (2012). Effect of restrictions on television food advertising to children on exposure to advertisements for 'less healthy' foods: Repeat cross-sectional study. *PLoS One*, 7(2), e31578.

Blades, M., Oates, C., Li, S. Children’s recognition of advertisements on television and on Web pages. *Appetite*. To be completed by editorial office.

Boyland, E.J., Halford, J.C.G. Television advertising and branding: Effects on eating behaviour and food preferences in children. *Appetite*. To be completed by editorial office.

Boyland, E.J., Harrold, J.A., Kirkham, T.C., Halford, J.C.G. (2011). The extent of food advertising to children on UK television in 2008. *International Journal of Pediatric Obesity,* 6(5-6): 455-461.

Brady, J., Mendelson, R., Farrell, A., Wong, S. (2010). Online marketing of foods and beverages to children: A content analysis. *Canadian Journal of Dietetic Practice and Research*, 71, 166-171.

Cairns, G. Evolutions in food marketing, quantifying the impact, and policy implications. *Appetite*. To be completed by editorial office.

Cairns, G., Angus, K., Hastings, G., Caraher, M. Systematic reviews of the evidence on the nature, extent and effects of food marketing to children: A retrospective summary. *Appetite*. To be completed by editorial office.

Cornwell, T.B., McAlister, A.R. Contingent choice: Exploring the relationship between sweetened beverages and vegetable consumption. *Appetite*. To be completed by editorial office.

Culp, J., Bell, R.A., Cassady, D. (2010). Characteristics of food industry web sites and ‘advergames’ targeting children. *Journal of Nutrition Education and Behavior*, 42, 197-201.

Davó et al. The impact of marketing practices and its regulation policies on childhood obesity: opinions of stakeholders in Spain. *Appetite*. To be completed by editorial office.

Gantz, W., Schwartz, N., Angelini, J.R., Rideout, V. (2007). *Food for thought: Television food advertising to children in the United States*. Kaiser Family Foundation. Menlo Park, CA.

Han, E., Powell, L.M., Kim, T.H. Trends in exposure to television food advertisements in South Korea. *Appetite*. To be completed by editorial office.

Hastings, G., Stead, M., McDermott, L., Forsyth, A., MacKintosh, A. M., & Rayner, M. (2003). *Review of research on the effects of food promotion to children.* Centre for Social Marketing, The University of Strathclyde.

Institute of Medicine (2005). *Food Marketing to Children and Youth: Threat or Opportunity?* Washington D.C.: The National Academies Press.

Landon, J. News report: Gaps and weaknesses in controls on food and drink marketing to children in the UK. *Appetite*. To be completed by editorial office.

Lobstein, T. Report of the StanMark project: Research needs on food marketing to children. *Appetite*. To be completed by editorial office.

Rayner, M., Scarborough, P., Kaur, A. Nutrient profiling and the regulation of marketing to children: Possibilities and pitfalls. *Appetite*. To be completed by editorial office.

Serrano, E., Holmes, A., Machin, J., Duetsch, T., Davis, G. Effect of different children’s menu labelling designs on family purchases. *Appetite*. To be completed by editorial office.