

Marketing foods to children through product packaging: prolific, unhealthy and misleading

Kaye Mehta^{1,2,*}, Clare Phillips¹, Paul Ward¹, John Coveney¹, Elizabeth Handsley³ and Patricia Carter⁴

¹Department of Public Health, Flinders University, Bedford Park, South Australia, Australia: ²Department of Nutrition and Dietetics, School of Medicine, Flinders University, Bedford Park, South Australia 5042, Australia:

³School of Law, Flinders University, Bedford Park, South Australia, Australia: ⁴Health Promotion Branch, South Australia Department of Health, Adelaide, South Australia, Australia

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Abstract

Objective: To investigate marketing techniques used on the packaging of child-oriented products sold through supermarkets.

Design: Food and beverage products which met criteria for ‘marketed to children’ were recorded as child-oriented. The products were analysed for food categories, nutritional value, and type and extent of marketing techniques used.

Setting: A major supermarket chain in Adelaide, South Australia.

Subjects: Child-oriented food and beverage products.

Results: One hundred and fifty-seven discrete products were marketed to children via product packaging; most (75.2%) represented non-core foods, being high in fat or sugar. Many marketing techniques (more than sixteen unique marketing techniques) were used to promote child-oriented food products. Claims about health and nutrition were found on 55.5% of non-core foods. A median of 6.43 marketing techniques per product was found.

Conclusions: The high volume and power of marketing non-core foods to children via product packaging in supermarkets should be of concern to policy makers wanting to improve children’s diet for their health and to tackle childhood obesity. Claims about health or nutrition on non-core foods deserve urgent attention owing to their potential to mislead and confuse child and adult consumers.

Keywords
Marketing
Children
Supermarkets

There is little dispute among public health professionals that the marketing of unhealthy foods and beverages to children plays a role in the rising prevalence of childhood obesity across the globe^(1–3). Television advertising is the dominant means of marketing food and beverage products to children⁽⁴⁾; however, a trend has been observed towards increasing investment in marketing on new media such as the Internet, video games and children’s magazines⁽⁵⁾. Children’s lives, and in particular their leisure activities, have been systematically transformed into marketing opportunities for corporations to exploit⁽⁶⁾.

Supermarkets are lucrative sites for food and beverage companies to market their products. In 2002, more money was spent on supermarket sales promotions in the USA (\$US 234 billion) than was spent on television advertising (\$US 212 billion)⁽⁷⁾. While supermarket sales promotions include marketing techniques other than product packaging such as shelf-talkers, dump-bins, end-of-aisle displays, bundling, product sampling and positioning of products on shelves and checkouts, nevertheless product packaging most readily meets the

criterion of ‘child-oriented marketing’ due to the use of lettering, iconography and themes of interest to children, and cross-promotions, tie-ins, competitions and premium offers that appeal to children⁽⁷⁾.

Product packaging is significant as a marketing method because it is the primary means of communicating information to the consumer at point of sale about product attributes and branding⁽⁸⁾. Up to 85% of supermarket purchases are made on impulse, and packaging is known to play a crucial role in purchasing decisions⁽⁹⁾. Children are considered to be the demographic most influenced by product packaging and investment in child-oriented product packaging has been put at \$US 3 billion annually⁽¹⁰⁾.

A number of international studies on product packaging aimed at children have found more child-oriented marketing techniques on unhealthy products than on healthy products^(9,11–13). However, these studies were limited in their examination of product categories (e.g. breakfast cereal alone)^(9,11) or marketing techniques (e.g. cartoon iconography and cross-promotions alone)^(12,13). Only one

*Corresponding author: Email kaye.mehta@flinders.edu.au

study by Elliott in Canada investigated child-oriented marketing in all product categories, finding 90% of the products to be unhealthy, 84% to use cartoon characters and 63% to have misleading health or nutrition claims⁽¹⁴⁾.

Marketers particularly use ‘visual cues’ that children respond to, for example cartoon characters, colour, graphics and premiums. In this way they take advantage of children’s visual and associative memory to sell products⁽¹¹⁾. A study by McNeal and Ji requiring children to ‘draw a cereal box’ resulted in 97% of children drawing pictures with detailed brand imagery, thereby revealing the extent of detailed brand symbolism stored in children’s memories⁽¹⁵⁾.

Supermarket promotions are known to increase overall food sales significantly⁽¹⁰⁾. Parents reportedly spend more in supermarkets when they are shopping with children than when they shop alone⁽¹²⁾. Cartoon characters are known to positively influence children’s product recognition⁽¹⁶⁾ and premium offers increase positive attitudes towards, and preference for, supermarket products⁽¹⁷⁾.

The only known Australian study on supermarket sales promotions targeting children was done by Chapman *et al.* in 2006⁽¹⁸⁾. They examined product categories that were heavily promoted to children, such as sweet biscuits, snack foods, confectionery and crisps, and recorded the use of particular child-oriented marketing techniques such as premium offers, competitions, cartoon characters and celebrities⁽¹⁸⁾.

The present study aimed to broaden the scope of Chapman *et al.*’s study⁽¹⁸⁾ by investigating the nature and extent of marketing via packaging, on child-oriented food and beverage products, sold through a major supermarket chain in Adelaide, South Australia, in October 2009.

Methods

Selection of supermarket

In Australia, the supermarket sector is essentially a duopoly represented by Coles and Woolworths who together control 80% of the supermarket trade*. Woolworths was selected as the representative supermarket for the present study because: (i) it carries similar products to Coles; (ii) it has over 700 supermarkets nationwide; and (iii) it services 13 million customers each week†. The Woolworths store chosen for the study (Westfield Marion) is one of the larger stores in metropolitan Adelaide. While Woolworth stores vary in size between metropolitan and rural settings, we were assured that food and beverage product lines are very similar‡.

* Information obtained from the National Association of Retail Grocers of Australia, <http://www.johnston-independent.com/narga.html> (accessed February 2010).

† Information obtained from Woolworths website, <http://woolworths.com.au/AboutUs/OurStory/> (accessed February 2010).

‡ Personal communication with Woolworths Marketing Manager, 30 September 2009.

Sampling

For the purpose of assessing the likely orientation of products to children, we adopted the definition of children used in a number of child-focused policies, for example the recent regulations governing advertising to children put forward by the Office of Communications, UK; this is taken to be 0–16 years of age⁽¹⁹⁾.

Every aisle and section of the Woolworths supermarket at Westfield Marion was assessed for child-oriented products using the following five criteria, which were adapted from previous studies^(10,14,18). To be included in the present study, products had to meet at least two of the following:

1. Words referring to children, fun, play, physical activity or school.
2. Images of cartoon characters, popular personalities/celebrities or children, or pictures that appeal to children.
3. Emphasis on unusual shapes, unconventional flavours or bright colours.
4. Cross-promotions and tie-ins with children’s television programmes, merchandise, films or websites.
5. Premium offers (competitions, games, puzzles, toys or other giveaways targeting children).

Units of data

A unit of data was a branded product which met the criteria for ‘child-oriented’. The following decisions were made about inclusion and exclusion:

1. Multiple-sized packages of the same product were recorded as a single item.
2. Baby food and seasonal products (e.g. Christmas food) were excluded.
3. Products with the same nutritional content but with variations in the packaging (e.g. Allens Party Mix had fourteen variations of essentially similar products) were recorded as a single item.
4. Products with slight variations to content (e.g. Coco Pops also has a Coco Pops Chex variation) were recorded as a single item.

Units of data are referred to as ‘discrete products’.

Data collection

The data collection tool was adapted from Hawkes⁽¹⁰⁾ and Chapman *et al.*⁽¹⁸⁾. The following data were collected from product packages.

1. Marketing techniques that were observable on product packages – on all sides of the package. These included: product identification, package semiotics (graphics, text, colour, iconography, popular personalities), cross-promotions (tie-ins with television/films, directed to websites), packaging form (lunch box-size packaging and unusual shapes), premium promotions (competitions, toys, games) and price promotions (discounts, bonus offers).

2. Nutrition information from the Nutrition Information Panel; this covered fat and sugar content per 100 g.
3. All claims or statements about health or nutrition.

Assessing nutritional value of products

Food products were divided into core and non-core categories, following the classification system used by Kelly *et al.*⁽²⁰⁾. Non-core foods are those high in fat and sugar and recommended for 'sometimes' consumption by the Australian Guide to Healthy Eating, whereas core foods are recommended for daily consumption because of the provision of essential nutrients⁽²¹⁾. Adaptations to Kelly *et al.*'s classification system⁽²⁰⁾ included the following.

1. Removal of eight categories: alcohol; baby food/formula; tea and coffee; vitamins and minerals; and other miscellaneous categories.
2. Dairy: all milk, yoghurt and cheese products were classified as core foods, in line with the National Schools Canteen Project, classification system⁽²²⁾. Other dairy products such as custards and dairy desserts were classified as core foods only if they met the criteria of <20 g fat/100 g and <15 g sugar/100 g⁽²³⁾. Custards and dairy desserts that contained >20 g fat/100 g and >15 g sugar/100 g were designated 'dairy non-core'. The dairy category was given special attention by the National Schools Canteen Project because of the beneficial effects of calcium and protein, that were considered to compensate for detrimental effects of sugar and fat⁽²²⁾.

This resulted in twenty food categories, eight core and twelve non-core.

Data collection period

Data were collected over the period 13–15 October 2009.

Pilot study

Data collection was piloted by two research assistants at Woolworths (Marion), independently coding the same aisle in the supermarket. They achieved a Cohen inter-coder reliability test score of $\kappa = 0.2$, which represented slight agreement⁽²⁴⁾. The results were analysed and discussed and the criteria were clarified to enable more accurate interpretation. The data collection was repeated on a different aisle in the same supermarket, and this time achieved $\kappa = 0.647$, signifying substantial agreement⁽²⁴⁾. All discrepancies were discussed and resolved.

Data analysis

Data were entered into the SPSS statistical software package version 17 and subjected to descriptive and inferential analysis. Descriptive statistics were used to reveal: the extent of child-oriented food products; the proportion of core and non-core products; the type and extent of marketing techniques; and the application of

aggregated marketing techniques to each product. Marketing techniques were aggregated into the following five categories.

1. Semiotics: child-oriented graphics, child-oriented cartoons and celebrities, and claims about health and nutrition.
2. Cross-promotions: links to television, movies and websites.
3. Packaging form: lunch box/kids-size packaging and unusual shapes.
4. Premiums: giveaways (toys and games) and competitions.
5. Price promotions: discounts and bonus offers.

The top marketing category (semiotics) was further sub-categorized as follows.

1. Child-oriented graphics: bright colours; images of children or animals; childish script; references to play, education, flavours, colour or shapes; captions exaggerating attributes, e.g. 'bliss bombs', 'dangerously cheesy'.
2. Child-oriented cartoons and celebrities: images of licensed cartoon characters, e.g. Simpsons; images of unlicensed cartoon characters, e.g. generic cartoons; images of sporting or entertainment celebrities.
3. Claims about health and nutrition.

All data were categorical and therefore were subjected to inferential analysis using χ^2 tests to compare: the use of aggregated marketing techniques on core and non-core foods groups; and the use of semiotics on core and non-core food groups.

Results

Descriptive analysis of food marketing via product packaging

The study found 157 discrete child-oriented products. Core foods comprised thirty-nine (24.8%) products, while non-core foods comprised 118 (75.2%) products. The most prominent child-oriented products were confectionery and chocolate ($n = 43$, 27.4%), snacks ($n = 28$, 17.8%) and dairy core ($n = 18$, 11.5%; see Fig. 1). Together these three groups accounted for more than half of all food products marketed to children.

There were sixteen unique marketing techniques used on $\geq 10\%$ of child-oriented products (see Table 1).

An examination of the number of individual marketing techniques per product revealed a median of 6.43 (SD 2.21) techniques per product, with a maximum of 12 techniques per product (used on two products: Coco Pops and Simpsons Sour Bombs) and a minimum of 1 technique per product (used on one product: Smiley Fritz; see Fig. 2).

The number of marketing techniques per product was descriptively explored for any difference between promotion of core and non-core foods. The core food

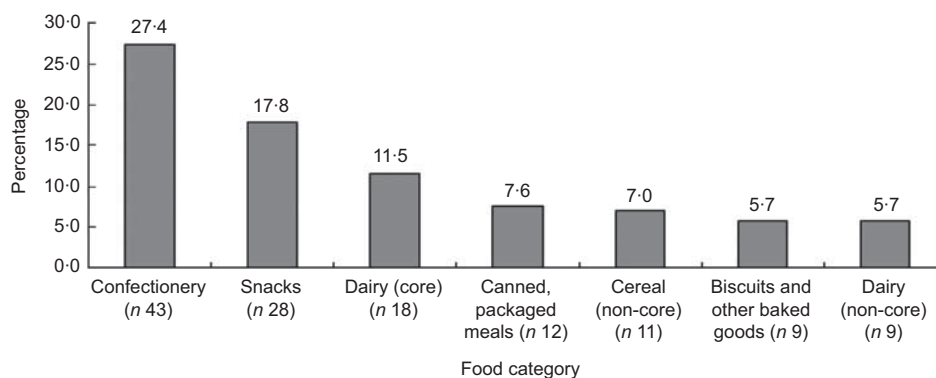


Fig. 1 Food categories marketed to children; survey conducted in a major supermarket chain in Adelaide, South Australia, October 2009

Table 1 Techniques used to market child-oriented products (n 157); survey conducted in a major supermarket chain in Adelaide, South Australia, October 2009

Technique	Products employing the technique	
	n	%
Bright colours	147	93.6
Childish script	133	84.7
Lunch box/kids-size packs	84	53.5
Directed to food company website	83	52.9
Cartoon characters unlicensed, i.e. generic cartoons, sports equipment	81	51.6
References to play or education	76	48.4
References to flavour	73	46.5
Captions exaggerating attributes, e.g. 'bliss bombs', dangerously cheesy'	55	35.0
Cartoon characters licensed	49	31.2
Discounts	38	24.2
Directed to brand website	35	22.3
Unusual packaging shape	22	14.0
Links to movies or television	22	14.0
Bonus offers	22	14.0
Images of children	21	13.4
Celebrities – sports or entertainment	18	11.5
Other: puzzles, games, novelty items, etc.	52	33.1

Note: Only techniques used on 10% or more of products marketed to children are shown; all other techniques are grouped as 'Other'. The table does not add up to 100% because multiple marketing techniques are used on each product.

group showed a median of 6.66 marketing techniques, whereas the non-core food group revealed a median of 6.90 techniques; which was not statistically significant.

Inferential analysis of marketing of foods to children

Semiotics (comprising child-oriented graphics, child-oriented cartoons and celebrities, and claims about health and nutrition) was used as a marketing technique on 99% of products. Cross-promotion (comprising television, movies and websites) was used on 77% of products, and packaging design (comprising lunch box-size packaging, novelty packaging) was used on 55% of products. Premium promotions were the least used marketing

techniques, observed in 25% of products. The χ^2 analysis revealed no statistical significance between the use of these aggregated marketing categories on core and non-core food groups (see Table 2).

Further analysis of 'semiotics' revealed that child-oriented graphics were used on 156 products (99.4%), followed by child-oriented cartoons and celebrities on 133 products (84.7%) and claims about health and nutrition on 100 products (63.7%). No statistical difference was found between the use of child-oriented graphics and child-oriented cartoons and celebrities on core and non-core food groups. Statistical difference was found, however, for the use of claims about health or nutrition on core and non-core food groups. As expected, claims about health or nutrition were used significantly more often to promote healthy foods ($P < 0.000$). However, claims about health or nutrition were also found on sixty-six non-core foods (55.5%; see Table 3).

Discussion

The present study of supermarket product packaging found 157 discrete food and beverage products marketed to children, of which 75% were non-core foods. There was high use of marketing techniques that appeal to children, such as graphics (99%) and cartoons and celebrities (85%). Claims about health and nutrition were found on 64% of products and cross-promotions were found on 77% of products; there was no significant difference between the application of marketing techniques to core foods and non-core foods, except for claims about health and nutrition. More than six marketing techniques were found to be used per product (no significant difference between core and non-core foods). The finding of similar types and numbers of marketing techniques used to promote core and non-core foods suggests that companies do not bias marketing towards non-core foods only; this may be exploited in the future for the social marketing of core foods to children⁽²⁵⁾.

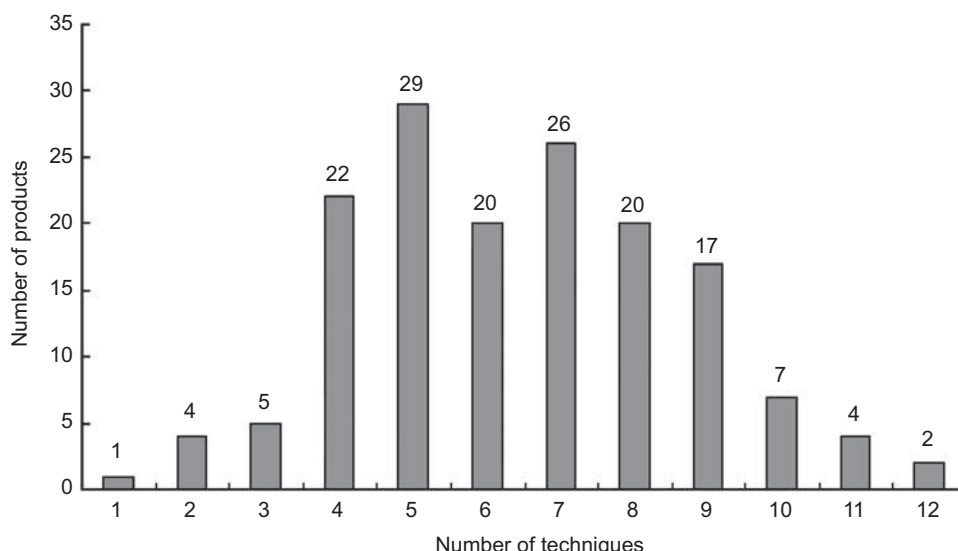


Fig. 2 Number of marketing techniques per product; survey conducted in a major supermarket chain in Adelaide, South Australia, October 2009

Table 2 Aggregated marketing techniques used to promote foods; survey conducted in a major supermarket chain in Adelaide, South Australia, October 2009

Aggregated marketing techniques	All foods (n 157)		Core foods (n 38)		Non-core foods (n 119)		P
	n	%	n	%	n	%	
Semiotics	156	99.4	39	100.0	117	99.2	0.564
Cross-promotion	121	77.1	32	82.1	89	75.4	0.393
Packaging design	87	55.4	22	56.4	65	55.1	0.885
Price promotions	52	33.1	11	28.2	41	34.7	0.452
Premium promotions	39	24.8	6	15.4	33	28.0	0.115

Table 3 Use of semiotics to promote healthy and unhealthy foods; survey conducted in a major supermarket chain in Adelaide, South Australia, October 2009

Semiotics	All foods (n 157)		Core foods (n 38)		Non-core foods (n 119)		P
	n	%	n	%	n	%	
Child-oriented graphics	156	99.4	39	100.0	117	99.2	0.564
Child-oriented cartoons and celebrities	133	84.7	31	79.5	102	86.4	0.295
Claims about health and nutrition	100	63.7	35	89.7	65	55.5	0.000

These findings concur with previous studies^(9,10,12–14,16,17), which found higher proportions of non-core foods marketed to children compared with core-foods, notwithstanding differences in research methods between studies. Children are known to be highly attracted to cartoon characters, celebrities and animals⁽²⁶⁾, and to prefer foods with cartoon packaging, over foods with plain packaging iconography⁽²⁷⁾. Parents have indicated strong concerns about the use of cartoon and celebrity characters in marketing foods and beverages to children, and they have called for restrictions on these practices^(28,29). While the use of premiums has also been cited as a particular concern by parents^(28,30), the present study

found a relatively low occurrence of premiums on child-oriented products (25%). Cross-promotions (found on 77% of products) are a good example of integrated marketing, whereby the same product line is marketed on a number of media, thereby reinforcing product recognition and desire⁽³¹⁾. Parents in a qualitative study by Mehta *et al.*⁽³²⁾ reported on purchase requests made by their children during supermarket trips which linked directly to current television advertisements and product placement in television programmes and movies; this exemplifies integrated marketing.

Supermarkets are a major site of purchase requests by children, and packaging is known to influence children's

purchasing decisions, as well as parents' acquiescence to children's requests⁽²⁶⁾. Child-oriented marketing has been identified by parents as one of the factors influencing their children's food preferences and purchase requests^(30,33,34). The process of refusing or acquiescing to children's purchase requests is a complex one, involving the assessment of a range of parenting goals⁽³⁵⁾. Conflict in the parent-child negotiation process around purchase requests is a common phenomenon⁽³⁶⁾, and co-shopping has been described by parents as stressful due to the purchase demands, particularly of young children⁽³³⁾.

One disturbing finding from the present study was the use of 'claims about health and nutrition' on more than half (55.5%) of non-core foods; in other words, unhealthy foods were portrayed, in some way, as healthy. This finding is serious because of the significance of product packaging in point-of-purchase food decisions⁽⁸⁾. In the qualitative study by Mehta *et al.*⁽³²⁾, parents expressed concerns about nutrition and health claims exploiting their children's credulity, while children, on the other hand, described using the very same claims to persuade their parents to purchase products. Adult shoppers are increasingly interested in referring to nutrition information on labels to guide their purchase decisions⁽³⁷⁾, and misleading information signals intent on the part of companies to deceive and confuse consumers.

In its recommendations to Member States to take action on the problematic nature of food and beverage marketing to children, the WHO identified exposure (reach, frequency and impact of marketing messages) and power (content, design and execution of marketing messages) as two separate dimensions requiring attention⁽³⁾. The 157 products marketed to children constitute exposure to predominantly non-core foods and beverages. On the question of power, the finding of more than six marketing techniques per product and the high use of child-oriented graphics, child-oriented cartoons and celebrities that appeal to children, claims about health and nutrition, and cross-promotions are examples of the power of marketing. While marketing techniques appear to have been applied equally to core and non-core foods, nevertheless children are exposed to more marketing of non-core foods by a factor of 3:1. Children's high exposure to marketing of non-core foods via product packaging, and the concomitant power of the marketing techniques used, should be of concern to policy makers in Australia, who want to reduce childhood obesity and improve children's diets generally.

Australian food and beverage corporations have pledged to be more socially responsible, by reducing their marketing to children⁽³⁸⁻⁴⁰⁾. However, the self-regulatory codes do not apply to labels and packaging⁽⁴⁰⁾, which supports doubts held by public health advocates about the adequacy of self-regulation to protect children from the impact of unhealthy food marketing⁽⁴¹⁾. The findings

of the present study suggest that marketing via product packaging needs to be included in self-regulatory codes, or legislative regulations.

Study limitations

The study limitations are similar to those mentioned by Harris *et al.* in that only the number of promotions on product packaging was counted, not the total number of child-oriented products on the supermarket shelves⁽¹²⁾. Counting the number of products, in other words shelf-space, would add to our knowledge about children's exposure to marketing. The other limitation cited by Harris *et al.*'s study was the absence of a broader range of supermarkets⁽¹²⁾. While from an international perspective the use of only one supermarket may be considered a limitation, given the duopoly situation of Australian supermarkets, and the fact that both supermarkets stock similar products, we do not consider this to be a limitation of our study. As one of the largest supermarket chains in Australia, Woolworths could be expected to carry the largest range of child-oriented products. Doubtless, there would have been some products marketed to children that did not meet our criteria for 'child-oriented' (e.g. small packs of sultanas); nevertheless, the present study set out to use objective criteria to capture those products specifically targeting children. In hindsight, the study would have been strengthened by collecting data on all products marketed to children, including those that did not meet the criteria of 'child-oriented', in order to determine the proportion of child and non-child-oriented products. While our study establishes the highest level of knowledge about the nature and extent of marketing to Australian children via product packaging, it does also point to the need for more research into the areas of pester power, cross-promotions, food labelling and misleading health claims on product packaging, as well as the actual effects of this type of marketing on children's consumption behaviour.

Conclusions

The marketing of unhealthy foods and beverages is widely recognized as contributing to an obesogenic environment for children. Marketing food and beverages to children in supermarkets adds to that which already exists on the well-studied broadcast media, resulting in children being exposed to ever increasing encouragements to consume non-core foods. The integrated nature of simultaneous marketing on multiple media increases the power of persuasive messages that encourage children to consume particular products. There is considerable marketing of non-core foods via product packaging in supermarkets which is highly salient to children and which influences their food preferences and purchase behaviour – in other words, requests to parents. Parents have to resist their

children's purchase requests for unhealthy foods, adding stress to parenting and the parent-child relationship. Parents are particularly concerned about the use of cartoon characters, celebrity endorsements, premiums, competitions and nutrition claims on children's product packages. The present study provides reinforcement that regulations governing marketing to children should include packaging, by legislative or self-regulatory approaches.

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References

- Hastings G, McDermott L, Angus K *et al.* (2006) *The Extent, Nature, and Effects of Food Promotion to Children: A Review of the Evidence. Technical Paper Prepared for World Health Organization*. UK: Institute for Social Marketing, University of Stirling and The Open University.
- McGinnis M, Gootman J & Kraak V (2006) *Food Marketing to Children and Youth: Threat or Opportunity?* Washington, DC: National Academies Press.
- World Health Organization (2010) *Prevention and Control of Noncommunicable Diseases: Implementation of the Global Strategy*. Geneva: WHO.
- Federal Trade Commission (2008) *Marketing Food to Children and Adolescents: A Review of Industry Expenditures, Activities, and Self-regulation*. Washington, DC: FTC.
- Harris J, Pomeranz J, Lobstein T *et al.* (2008) A crisis in the marketplace: how food marketing contributes to childhood obesity and what can be done. *Annu Rev Public Health* **30**, 211–225.
- Linn S & Novosat C (2008) Calories for sale: food marketing to children in the twenty-first century. *Ann Am Acad Polit Soc Sci* **615**, 133–155.
- Hawkes C (2004) *Marketing Food to Children: The Global Regulatory Environment*. Geneva: WHO.
- Silayoi P & Speece M (2004) Packaging and purchase decisions. An exploratory study on the impact of involvement level and time pressure. *Br Food J* **106**, 607–628.
- Page R, Montgomery K, Ponder A *et al.* (2008) Targeting children in the cereal aisle: promotional techniques and content features on ready-to-eat cereal product packaging. *Am J Health Educ* **39**, 272–282.
- Hawkes C (2009) Sales promotions and food consumption. *Nutr Rev* **67**, 333–342.
- Berry B & McMullen T (2008) Visual communication to children in the supermarket context: health protective or exploitive? *Agric Hum Values* **25**, 333–348.
- Harris JL, Schwartz MB & Brownell K (2009) Marketing foods to children and adolescents: licensed characters and other promotions on packaged foods in the supermarket. *Public Health Nutr* **13**, 409–417.
- Which? (2007) *Cartoon Heroes and Villains. Campaign Report*. London: Which?.
- Elliott C (2008) Marketing fun foods: a profile and analysis of supermarket food messages targeted at children. *Can Public Policy* **34**, 259–273.
- McNeal JU & Ji MF (2003) Children's visual memory of packaging. *J Consum Mark* **20**, 400–427.
- Henry J. Kaiser Family Foundation (2004) *The Role of Media in Childhood Obesity. Issue Brief February 2004*. Menlo Park, CA: KFF.
- Story M & French S (2004) Food advertising and marketing directed at children and adolescents in the US. *Int J Behav Nutr Phys Act* **1**, 3.
- Chapman K, Nicholas P, Banovic D *et al.* (2006) The extent and nature of food promotion directed to children in Australian supermarkets. *Health Promot Int* **21**, 331–339.
- Office of Communications (2007) *Television Advertising of Food and Drink Products to Children – Statement*. London: OfCom.
- Kelly B, Bochynska K, Kornman K *et al.* (2008) Internet food marketing on popular children's websites and food product websites in Australia. *Public Health Nutr* **11**, 1180–1187.
- Kellett E, Smith A & Schmerlaib Y (1998) *The Australian Guide to Healthy Eating*. Canberra: Commonwealth Department of Health and Family Services.
- Australian Government Department of Health and Ageing (2010) *The National Healthy School Canteens. Guidelines for healthy foods and drinks supplied in school canteens*. Canberra: Government of Australia.
- CHOICE (2010) Food for kids nutrition guide, Australian Consumers Association. <http://www.choicefoodforkids.com.au/page/our-criteria> (accessed April 2010).
- Landis J & Koch G (1977) The measurement of observer agreement for categorical data. *Biometrics* **33**, 159–174.
- Hastings G (2007) *Social Marketing: Why Should the Devil Have All the Best Tunes?* Oxford: Butterworth-Heinemann.
- Hill H (2002) Packaging of children's breakfast cereal: manufacturers versus children. *Br Food J* **104**, 766–777.
- Roberto CA, Baik J, Harris J *et al.* (2010) Influence of licensed characters on children's taste and snack preferences. *Pediatrics* **126**, 88–93.
- Morley B, Chapman K, Mehta K *et al.* (2008) Parental awareness and attitudes about food advertising to children on Australian television. *Aust N Z J Public Health* **32**, 341–347.
- CHOICE (2006) *Little Bellies, Big Problems: How Parents, Industry and Government Can Solve Australia's Childhood Obesity Crises*. Marrickville, NSW: Australian Consumers Association; available at <http://www.choice.com.au/~media/Files/Consumer%20Action/Food/Fed%20up%20with%20junk%20food%20marketing/f126310.ashx>
- Ip J, Mehta K & Coveney J (2007) Exploring parents' perceptions about the influence of television food advertising on children's food choices. *Nutr Diet* **64**, 50–58.
- Kitchen PJ, Brignell J, Li T *et al.* (2004) The emergence of IMC: a theoretical perspective. *J Advertising Res* **44**, 19–30.
- Mehta K, Coveney J, Ward P *et al.* (2010) *Parents' and Children's Awareness and Experience of Food and Beverage Marketing on Non-Broadcast Media. Report to SA Health, South Australian Government*. Adelaide: Flinders University.
- Pettigrew S & Roberts M (2007) Mothers' perceptions of control over their children's diet. *Adv Consum Res* **34**, 306–311.
- Pocock M, Trivedi D, Wills W *et al.* (2010) Parental perceptions regarding healthy behaviours for preventing overweight and obesity in young children: a systematic review of qualitative studies. *Obes Rev* **11**, 338–353.
- Roberts EML (2006) Negotiating food choice: parent's perception of children's eating behaviour. *Anthropol Notebook* **12**, 63–77.

36. Turner J, Kelly J & McKenna K (2006) Food for thought: parents' perspectives of child influence. *Br Food J* **180**, 181–191.
37. Kelly B, Hughes C, Chapman K *et al.* (2009) Consumer testing of the acceptability and effectiveness of front-of-pack food labelling systems for the Australian grocery market. *Health Promot Int* **24**, 120–129.
38. Australian Association of National Advertisers (2009) Australia's Leading Quick Service Restaurants Agree to Advertise Only Healthier Options to Children. <http://www.aana.com.au/QuickServiceRestaurantInitiative.htm> (accessed April 2010).
39. Australian Food and Grocery Council (2008) The Responsible Children's Marketing Initiative. <http://www.afgc.org.au/industry-codes/advertising-kids.html> (accessed April 2010).
40. Australian Association of National Advertisers (2006) Food & Beverages Advertising and Marketing Communications Code. <http://www.aana.com.au/documents/CodeFoodBeverage.pdf> (accessed April 2010).
41. Swinburn B (2008) Obesity prevention: the role of policies, laws and regulations. *Aust N Z Health Policy* **5**, 12.