Appetite 81 (2014) 253–260

Contents lists available at ScienceDirect

Appetite

journal homepage: www.elsevier.com/locate/appet

Research report

Nutritional quality, labelling and promotion of breakfast cereals on the New Zealand market ☆

Anandita Devi [a], Helen Eyles [b], Mike Rayner [c], Cliona Ni Mhurchu [b], Boyd Swinburn [a,d], Emily Lonsdale-Cooper [b], Stefanie Vandevijvere [a,*]

[a] School of Population Health, The University of Auckland, Auckland, New Zealand
[b] National Institute for Health Innovation, The University of Auckland, Auckland, New Zealand
[c] British Heart Foundation Health Promotion Research Group, University of Oxford, Oxford, UK
[d] WHO Collaborating Centre for Obesity Prevention, Deakin University, Victoria, Australia

ARTICLE INFO

Article history:
Received 12 February 2014
Received in revised form 11 June 2014
Accepted 14 June 2014
Available online 19 June 2014

Keywords:
Breakfast cereals
Nutritional quality
Labelling
Claims
Promotional characters
New Zealand

ABSTRACT

Breakfast cereals substantially contribute to daily energy and nutrient intakes among children. In New Zealand, new regulations are being implemented to restrict nutrition and health claims to products that meet certain 'healthy' criteria. This study investigated the difference in nutritional quality, labelling and promotion between 'healthy' and 'less healthy' breakfast cereals, and between breakfast cereals intended for children compared with other breakfast cereals on the New Zealand market. The cross-sectional data collection involved taking pictures of the nutrition information panel (NIP) and front-of pack (FoP) for all breakfast cereals (n = 247) at two major supermarkets in Auckland in 2013. A nutrient profiling tool was used to classify products into 'healthy'/'less healthy'. In total 26% of cereals did not meet the 'healthy' criteria. 'Less healthy' cereals were significantly higher in energy density, sugar and sodium content and lower in protein and fibre content compared with 'healthy' cereals. Significantly more nutrition claims (75%) and health claims (89%) featured on 'healthy' compared with 'less healthy' cereals. On the 'less healthy' cereals, nutrition claims (65%) were more predominant than health claims (17%). Of the 52 products displaying promotional characters, 48% were for 'cereals for kids', and of those, 72% featured on 'less healthy' cereals. In conclusion, most breakfast cereals met the 'healthy' criteria; however, 'cereals for kids' were 'less healthy' and displayed more promotional characters than other cereal categories. Policy recommendations include: food composition targets set or endorsed by government, strengthening and enforcing current regulations on health and nutrition claims, considering the application of nutrient profiling for nutrition claims in addition to health claims, introducing an interpretative FoP labelling system and restricting the use of promotional characters on 'less healthy' breakfast cereals.

Abbreviations: INFORMAS, International Network for Food and Obesity/non-communicable diseases Research, Monitoring and Action Support; FSANZ, Food Standards Australia New Zealand; NPSC, Nutrient Profiling Scoring Criterion.

☆ *Acknowledgements:* The authors would like to acknowledge A. Chand and R. Megill for the collection of the data and R. George for contribution to data cleaning and analysis. S. Vandevijvere and H. Eyles originated the study idea and design. H. Eyles and C. Ni Mhurchu developed the New Zealand Nutritrack database. H. Eyles provided the nutrition information from NIP and photos of FoP for breakfast cereals from the Nutritrack database for the purposes of this study. H. Eyles and E. Lonsdale-Cooper analysed the nutritional composition of breakfast cereals. M. Rayner developed the INFORMAS taxonomy for classifying health-related food labelling components. A. Devi and S. Vandevijvere analysed the results on food labelling and promotion of breakfast cereals. A. Devi drafted the manuscript. S. Vandevijvere supervised the study. All authors were involved in the interpretation of results and subsequent edits of the manuscript. This study was funded by the Faculty Research Development Fund of the University of Auckland (Grant no. 3704413). *Conflict of interest:* Helen Eyles holds a National Heart Foundation of New Zealand postdoctoral research fellowship (Grant 1463). The other authors declare that they have no competing interests.

* Corresponding author.
E-mail address: s.vandevijvere@auckland.ac.nz (S. Vandevijvere).

http://dx.doi.org/10.1016/j.appet.2014.06.019
0195-6663/

Introduction

Breakfast consumption has been associated with higher fibre and calcium intakes (Barton et al., 2005), as well as a reduced risk of becoming overweight or obese, compared with skipping breakfast (De La Hunty, Gibson, & Ashwell, 2013; Szajewska & Ruszczyński, 2010). In New Zealand, the latest national nutrition surveys indicate that 79% of children and young people usually consume breakfast on five or more days a week (Clinical Trials Research Unit, 2010), and 40% of children reported eating breakfast cereals at least once a day (Parnell, Scragg, Wilson, Schaaf, & Fitzgerald, 2003). However, ready-to-eat (RTE) cereals tend to be highly processed (Cordain et al., 2005) and high sugar cereals have been found to increase children's total sugar consumption and decrease the overall nutritional quality of their breakfast (Harris, Schwartz, Ustjanauskas, Ohri-Vachaspati, & Brownell, 2011). Additionally, breakfast cereals marketed directly to children have been found to contain significantly more added sugar than those marketed to adults (Schwartz, Vartanian, Wharton, & Brownell, 2008).

High sugar RTE breakfast cereals are the most frequently promoted food products on television for child-targeted food advertising (LoDolce, Harris, & Schwartz, 2013). Promotional characters on food packages, are also used as an attractive lure for advertising to children (Neeley & Schumann, 2004; Tang, Newton, & Wang, 2007). Licenced or spokes characters on food packages, have been reported to influence young children's taste, food preferences and purchases compared with the same products without such characters (Roberto, Baik, Harris, & Brownell, 2010; Smits & Vandebosch, 2012). It has been found that constant exposure of children to promotional characters encourages them to recognise and like the related brands (Neeley & Schumann, 2004). On-pack nutrient content claims and sport celebrity endorsements made pre-adolescents more likely to choose energy-dense and nutrient-poor products and increased perceptions of their nutrient content compared with healthier products (Dixon et al., 2014). There are currently no regulations or effective policies in place in New Zealand to reduce exposure of children to advertising of 'less healthy' foods through any type of medium in New Zealand.

Nutrition and health claims are regulated by the Australia New Zealand Food Standards Code (FSC) and implemented by the Ministry for Primary Industries (MPI) in New Zealand (Food Standards Australia New Zealand, 2013a, 2013b). In accordance with the FSC, it is mandatory in New Zealand to display a nutrition information panel (NIP) on most packaged foods (displaying energy, protein, total fat, saturated fat, carbohydrate, sugars, and sodium per serving, and per 100 g or 100 mL) and if nutrition claims are made, the nutrition information for that nutrient must be displayed on the NIP. A new mandatory food standard (Standard 1.2.7) was passed in January 2013 on the regulation of nutrition and health claims on food labels and in advertisements by the Food Standards Australia New Zealand (FSANZ), which all food companies must comply with from 18 January 2016 (Food Standards Australia New Zealand, 2013a). This standard aims to reduce false and misleading nutrition claims and ensure that claims are only present on foods meeting certain 'healthy' criteria (Food Standards Australia New Zealand, 2013a). The 'healthy' criteria are set by the FSANZ Health Claims Nutrient Profiling Scoring Criterion (NPSC), a nutrient profiling tool that has been tested on more than 10,000 New Zealand and Australian food products (Food Standards Australia New Zealand, 2007, 2013b). Currently the NPSC only applies to foods displaying health claims and not to foods displaying nutrition claims. Using FSANZ's NPSC, overall, 59% of products (n = 550) from seven food groups and 51 food categories in supermarkets previously met the 'healthy' criteria in New Zealand (Eyles, Gorton, & Ni Mhurchu, 2010).

Interpretative, consumer-oriented front-of-pack (FoP) nutrition labels (Health Star Rating or traffic light labelling system) have recently been introduced in some countries to help consumers identify healthier food options (Watson et al., 2014). While Australia recently approved the voluntary implementation of the Health Star Rating system (Australian Government Department of Health and Ageing, 2013; Watson et al., 2014) and in the UK the Multiple Traffic Light (MTL) labelling system has also been implemented by several retailers (United Kingdom Food Standards Agency, 2007), there is no consumer-oriented, interpretative FoP labelling system implemented in New Zealand (Rosentreter, Eyles, & Mhurchu, 2013). Currently various industry and agency-initiated labelling systems operate in New Zealand, which can be interpretive or non-interpretive, including the Australian Food and Grocery Council's multi-icon Daily Intake Guide (DIG) system, individual logos and icons that relate to a particular issue (e.g., fair trade, organic, glycaemic index (GI), heart health) of which some are licence-based such as the GI symbol and the Heart Foundation Tick (HF Tick) (Blewett, Goddard, Pettigrew, Reynolds, & Yeatman, 2011; MPI Food Safety, 2013). The HF Tick aims to allow consumers to identify healthier options within a specific food category and encourages the food industry to reformulate and improve nutrition quality of foods and labelling (Heart Foundation NZ, 2013; Young & Swinburn, 2002). Approximately 500 products currently display the DIGs thumbnails in New Zealand; however, display of percentage dietary intake (DI) information is only mandatory for energy intake, while the use of additional percentage DI information (fat, protein, saturated fat, carbohydrate, sugars and sodium) is voluntary (New Zealand Food & Grocery Council).

Given the significant contribution of breakfast cereals to children's diet in New Zealand and the lack of strong policies on food reformulation, labelling and promotion, the aim of this study was to investigate the difference in nutritional quality, labelling and promotion between 'healthy' and 'less healthy' breakfast cereals, and between cereals intended for children compared with other breakfast cereals on the New Zealand market.

Materials and methods

Sampling

Two of the biggest supermarkets (one representing each of the two major chains) in Auckland, New Zealand were chosen as sites for data collection (Countdown and PakNSave). From these supermarkets, details of all breakfast cereals available for purchase were recorded. Where the same product was sold in more than one supermarket that product was included only once in the product sample.

Data collection

Data collection took place from February to August 2013. A supermarket audit for breakfast cereals was conducted at each site by two research assistants using a specially developed smart phone application. Photos were taken of the front, side and back of all breakfast cereal packages (n = 247).

For each product the company name, product name, and barcode were recorded. Nutrition labelling information recorded included the HF Tick, DIG, packet size, packet unit, serving size, serving unit and per 100 g content of energy, protein, total fat, saturated fat, carbohydrates (CHO), sugar, fibre (only when present) and sodium. Supermarket data were entered directly into the smartphone in the supermarket, and exported to an Excel spreadsheet (Microsoft Excel 2010). Photo and nutrient data from the NIP were entered into the Nutritrack supermarket database, a University of Auckland branded food and nutrient database which contains package and nutrient information for the majority of the packaged foods for sale in NZ supermarkets (National Institute for Health Innovation, 2011).