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The combined effect of front-of-pack nutrition labels and health claims on consumers' evaluation of food products

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ABSTRACT

The majority of studies examining the effect of nutrition information on food packets (such as the nutrition information panel (NIP), front-of-pack labels (FoPLs) and health claims) have examined each in isolation, even though they often occur together. This study investigated the relationship between FoPLs and health claims since (i) they both appear on the front of packs and typically receive more attention from consumers than the NIP, (ii) they can convey contradictory messages (i.e., health claims provide information on nutrients that are beneficial to health while FoPLs provide information on nutrients associated with increased health risks) and (iii) there is currently scant research on how consumers trade off between these two sources of information. Ten focus groups ($n = 85$) explored adults' and children's reactions when presented with both a FoPL (the Daily Intake Guide, Multiple Traffic Lights, or the Health Star Rating) and a health claim (nutrient content, general-level-, or high-level). A particular focus was participants' processing of discrepant information. Participants reported that health claims were more likely to be considered during product evaluations if they were perceived to be trustworthy, relevant and informative. Trust and ease of interpretation were most important for FoPLs, which were more likely than health claims to meet criteria and be considered during product evaluation (especially the Health Star Rating and Multiple Traffic Lights). Results indicate that consumers generally find FoPLs more useful than health claims.

1. Introduction

A substantial proportion of consumers report using nutritional information contained on food packets to make decisions about food products (Campos, Doxey, & Hammond, 2011; Grunert, Wills, & Fernández-Celemín, 2010). The three main sources of nutrient information available on food packs are the nutrition information panel (NIP), front-of-pack labels (FoPLs) and health claims. Each of these differs in content, purpose and style of presentation. The NIP appears on the back or side of food packs and reports levels of many key nutrients and, in some cases, their contribution to recommended daily intakes (Gorton, Ni Mhurchu, Chen, & Dixon, 2008). FoPLs and health claims typically appear on the front of packs and provide summary information that may or may not be replicated in the NIP (Hawkes, 2010; Van Der Bend et al., 2014). FoPLs tend to refer to multiple nutrients, whereas health claims generally refer to a single nutrient.

Despite food products in the marketplace commonly featuring multiple forms of nutrition information, most research in this area has examined how each source of nutrition information works independently and the literature on their combined effects is scant. The aim of the present study was to explicitly investigate these combined effects to provide insight into how consumers make food choices when there is competing health information. The context of the study is the Australian marketplace where new regulations

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for health claims are currently being implemented (Food Standards Australia New Zealeand, 2014) and a new government-developed, voluntary FoPL (the Health Star Rating) has been recently introduced (Australian Department of Health, 2015). An example of each of these FoPLs is shown in Fig. 1.

1.1. Independent effects of front-of-pack nutrition information sources

1.1.1. FoPLs

FoPLs provide simplified nutrition information, generally by reporting and/or interpreting the levels of key negative nutrients. FoPLs can be categorised into two main types: *reductive* FoPLs, which provide only numerical information on nutrients and *evaluative* FoPLs, which provide an assessment of a food's health value (Hamlin, McNeill, & Moore, 2014). Evidence suggests that evaluative FoPLs are more effective than reductive FoPLs in assisting consumers identify healthier food choices (Hawley et al., 2013; Hersey, Wohlgenant, Arsenault, Kosa, & Muth, 2013). The Daily Intake Guide (DIG) is a reductive FoPL that is widely used in Australia and details the levels of nutrients such as sugar, total fat, saturated fat and sodium within one serve of a product. The nutrient levels are expressed as a percent of a reference adult's (70 kg male) recommended daily intake. There are multiple forms of evaluative FoPLs. The Multiple Traffic Lights system (MTL), which is currently being used voluntarily in the UK, is the most studied to date (Hawkes, 2010; Hawley et al., 2013; Hersey et al., 2013). This system uses the three colours (red, amber and green) to indicate high, medium and low (respectively) values for specific nutrients (fat, saturated fat, sugar and sodium). As noted above, the Health Star Rating (HSR) is a more recently developed FoPL that combines evaluative and reductive elements. The evaluative component assigns foods a rating between half a star and five stars based on the nutritional profile of the food, while the reductive component details the amount of sugar, saturated fat and sodium per 100 g of product, or per single serving when the pack is less than 100 g (Australian Department of Health, 2015).

1.1.2. Health claims

The term 'health claims' refers to the broad category of nutrient-specific and health-related claims that provide a written description of one or more positive nutritional aspects of the food. There are three types of health claims in Australia (FSANZ, 2014): (i) nutrient content claims, which inform consumers about the presence or absence of a nutrient (e.g., 'Good source of calcium'); (ii) general-level health claims, which relate nutrients within the food to a health function (e.g., 'Contains calcium for healthy bones and teeth'); and (iii) high-level health claims, which relate a nutrient to a specific disease (e.g., 'Contains calcium to reduce the risk of osteoporosis').

Health claims can be beneficial as an educational tool to inform consumers of nutrients that are beneficial in preventing or managing chronic diseases (Ippolito & Mathios, 1991). However, they may also be a public health concern when they prevent consumers from accurately assessing the nutritional value of products, especially nutritionally poor products. Health claims have been criticised as being potentially misleading or deceptive because their purpose is to present products in a positive manner rather than provide a balanced summary of the product's nutritional value (Hastak & Mazis, 2011). Some studies have found that health claims can induce a positivity bias whereby products featuring

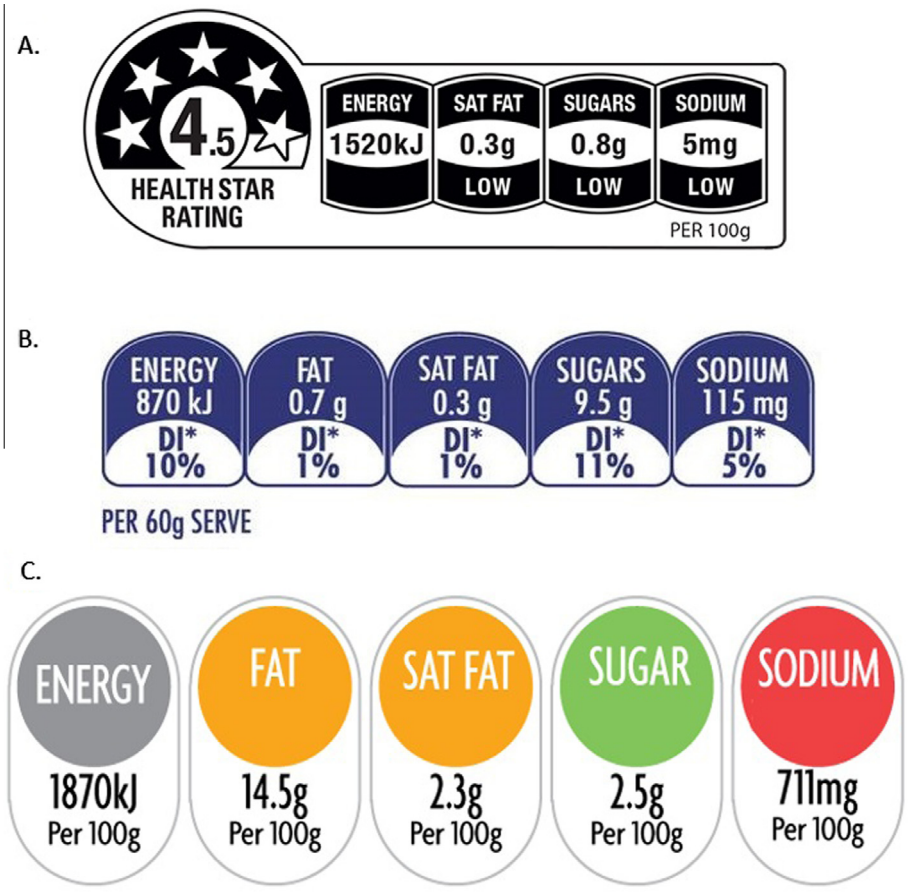

Fig. 1. FoPLs used in mock pack images: A) the Health Star Rating (HSR), B) the Daily Intake Guide (DIG) and C) Multiple Traffic Lights (MTL).