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Nutritional quality of biscuits, breakfast cereals and sweet snacks sold in Italy: the Food Labelling of Italian Products (FLIP) study

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Abstract

In Europe, the label information on food is regulated by the Reg. (EU) n.1169/2011 but many other regulated declarations (e.g. nutrition or health claims (NHC), presence of gluten) can be provided on the pack. All this information could influence the perception of food quality and thus the consumers' intention-to-buy. However, whether the nutritional quality of food products is comparable among products with different characteristics (e.g. presence/absence of NHC, gluten free (GF) declaration, brand) has been barely studied.

Based on these premises, the Food Labelling of Italian Products (FLIP) Study aims to systematically investigate the overall nutritional quality of the main food categories sold on the Italian market. The present work focused on sweet cereal-based products (biscuits, breakfast cereals, and sweet snacks).

Products were selected from the website of thirteen retailers present on the Italian market and data were collected from the complete images of all the sides of the pack. Then, biscuits, breakfast cereals, and sweet snacks were further sub-grouped for specific comparisons considering i) descriptive name reported, ii) presence/absence of GF declaration, iii) presence/absence of NHC declaration, iv) brand/own label. Data of energy, nutrient and salt contents per 100 grams of product for each product category were considered and comparisons among the sub-groups were performed (Mann Whitney test or Kruskal Wallis one-way ANOVA based on two or multiple independent samples, respectively) (ver. 25.0, SPSS Inc., Chicago, IL, USA). In addition, a Principal Component Analysis was performed for all products and for each product sub-category by considering energy and nutrient contents per 100 grams of product to better describe the inter-product nutritional variability.

A total of 814 biscuits, 371 breakfast cereals and 476 sweet snacks were included. Limited differences were found between branded and own label products and between GF and gluten-containing products. Conversely, interesting differences were observed between products with and without NHC. For instance, biscuits with nutrition claims resulted with an overall lower content of total energy, total fats and sugars compared to product without these claims, in agreement with previous investigations. Finally, a high inter-product variability was observed among the different sub-categories for the three product categories.

Future researches performed within the FLIP study will allow to have a clearer picture about the nutritional quality of food products sold in Italy and to understand if specific food characteristics might be considered as a "marker" of the overall quality of food products

Conflict of Interest

There is no conflict of interest